

NEWSLETTER

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

NEWTONCONSERVATORS.ORG • FALL 2019

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Beavers Part II: The Penultimate Eco-Engineer

Editor's Note: In this second installment on the beaver, the Newton Conservators delves into the beaver as keystone species and engineer extraordinaire, exploring its dam-building, ecological significance, and its conflicts with that other engineer — humans.

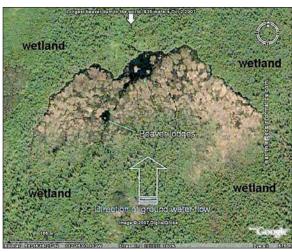
ou can see it from space. It's a 2,790-footlong dam built by beavers in Canada's Wood Buffalo National Park. Beavers build their dams from stones, mud, and branches. Some of the branches, like willow, sprout and start growing on the dam reinforcing the strength of the dam. Historical diaries record dams so wide and strong you could drive wagons across them. Most dams are usually less than 100 feet long, with exceptional ones reaching 500-600 feet.

According to the Mass Audubon Society (MAS), Massachusetts had been beaver-free

since 1750 (trappers extirpated beaver). Then forests reclaimed agricultural land in the early 1900s, renewing the supply of food and dam-building material for beavers. Finally



Beavers are huge rodents that use their formidable teeth to harvest material for their dams



Google Earth image of the longest beaver dam in the world in Northern Alberta, Canada, courtesy of EcoInformatics International, Inc.

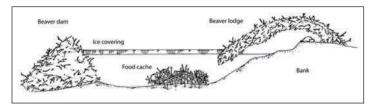
in 1928, a beaver showed up in West Stockbridge. MAS wanted to help restore the beaver population so "three additional beavers were brought from New York and released at Mass Audubon's Pleasant Valley Wildlife Sanctuary in Lenox."

Since then, the beavers have spread across Massachusetts and can be found everywhere except Cape Cod. One hotbed of beaver activity is Prescott Peninsula in the Quabbin Reservoir. The Massachusetts DCR has completed over 65 surveys of beaver activity in this area illustrating how

beaver populations change without extensive trapping. When DCR started the surveys in 1952, there were two beaver colonies in the Prescott Peninsula survey area. This grew to

...Beavers Part II: The Penultimate Eco-Engineer continued from page 1

a high of 39 in 1981, dropped in 2017 to only seven, and recovered in 2018 to 14 active sites. DCR concludes that, "The 20-year average (1998–2018) for number of active sites is ~17, with a high of 23 and a low of 7."



A typical bank lodge is shown in this Washington Department of Fish and Wildlife illustration.

The beaver is a keystone species — its presence enables many diverse plant and animal species to thrive by providing specialized habitat. Once beavers are removed, that web of life depending on the habitat they create crumbles. The only other species with such ecosystem engineering capacity is us — the human being, and all too often we engineer the environment for the worse. But we are learning from the beaver and even employing beavers to restore landscapes we have damaged, especially in the western and Pacific northwestern states, where beavers are helping to restore deeply incised (eroded) streams and salmon and trout fisheries.

Ostensibly, beavers build dams to create ponds to serve as moats protecting their lodges from predators and creating climate-controlled underwater larders to help them survive the winters (see Part I of this series describing beaver anatomy and behavior). However, as Ben Goldfarb explains in his book *Eager*, impounding water has an ecologically systemic effect:

- It kills tall trees in the pond, and the dead spires provide perfect nesting sites for heron colonies.
- It provides habitat for a multitude of small fish (e.g. salmon and trout) to mature and a host of other animals, too: amphibians, insects, birds, moose, and muskrats. The list goes on and on and includes the endangered tundra swan and Saint Francis' satyr butterfly.
- It mitigates spring flooding effects by absorbing water into the wetlands surrounding the pond and releasing it slowly.
- It mitigates stream erosions (deeply incised streams) by slowing water and promoting sedimentation.
- It raises the water table, keeping streams that normally dry up in summer flowing and available for livestock.
- It detoxifies the nitrogen run-off from maintained park



Tree freshly felled in Millennium Park, West Roxbury

and agricultural lands.

Why do beavers create these special environments? It's in their nature. Beavers instinctively build dams to stop the sound of flowing

water. And dispersing beavers widen the area of impact yearly. Breeding adults kick yearling beavers out of the family compound after the yearlings have helped raise a new batch of of beaver kits and maintained the family lodge and dams for two winters, usually in the spring (Aprpil – June). These youngsters disperse, looking for running water to dam, and willow, aspen, and poplar to eat... and another beaver as mate to raise a family. They go anywhere from a couple of miles to 120 miles away to start their own colonies by damming water to form ponds.



Active Beaver Lodge in Kendrick Pond at Cutler Park

Mass Audubon Society's (MAS's) experience at Wachusett Meadow Wildlife Sanctuary in Princeton illustrates the beaver's eco-

engineering capacities well. Originally Wachusett Meadow was an historic farm with two barns and many agricultural/pasture fields fenced by stone walls. With the end of farming, forest reclaimed much of the landscape. MAS noticed the first beavers arriving in 1993. Cindy Dunn, Assistant Sanctuary Director at Wachusett Meadow, explains these animals capitalized on the old stone walls, patching them with mud and using them as dam foundations, flooding an area near the barns.

The beavers also flooded the sanctuary's wetland area. Initially visitors complained of the "barren swamp" the beavers had created. Then herons started a nesting colony in the trees killed by the "barren swamp," and people began to comment on the abundance of other animal and plant life. When the sanctuary completed a capital campaign to build a boardwalk across the wetlands, the beavers submerged the newly built boardwalk! Then the dams failed, the pond drained, and the herons abandoned the rookery. As of May 2019, beavers actively occupied only three or four of the 24





Beaver dams built on old stone walls in Wachusett Meadow Wildlife Sanctuary

lodges in the sanctuary. Such is the ebb and flow of beaver impact.

It is this same instinctive ecoengineering ability that leads to beaver

conflicts with humans in less forgiving environments like cities. Dispersing beavers cannot resist culverts, which are small and easy to dam. In December 2018, the city of Framingham killed beavers that caused a street to flood



Beaver pond with heron rookery at Rocky Hill Mass Audubon Sanctuary

— in winter when only a bit of water turns to ice, the ice becomes a public safety issue. Framingham claimed it had to move quickly.

However, by killing the beavers, Framingham may simply be encouraging next year's dispersing subadults to move in and continue the flooding problem. It's a gamble. Research shows that water flow control devices are likely a more economical, sustainable, and humane measure to combat flooding caused by recurring beaver dams.



Waterflow control device. The culvert fence and pond leveler pipe is still working after beavers attempt to rebuild dam in 2004.

Ted Jerdee, the Director of Utilities for the city of Newton, tells me there has been only one occurrence of beaver-promoted flooding in Newton since 1992. That

flooding happened in 2012 when beavers "constructed a dam inside a ... 60" diameter culvert pipe under Wells Avenue. The city hired an animal control company to capture and kill two beavers, and then the City of Newton Utilities Division removed the dam within the culvert. The city has not installed any flow diverting devices to date [May 2019]."

This doesn't mean there are no more beavers in Newton. Jennifer Steel, Newton's Chief Environmental Planner, has been monitoring the water levels around Kesseler Woods, where she has received emails regarding "ever worsening" water levels. She has discovered that Newton beavers are as savvy as the Wachusett beavers about using man-made stone for foundations. The wily rodents seem to have placed their dam across the Saw Mill Brook atop a sewer line encased in concrete! So far, however, no one has experienced a flooded backyard.



Trees wrapped in wire to deter beaver from ruining Pennypack Ecological Restoration Trust's reforestation efforts in Huntingdon Valley, PA.

Humans describe beavers as hardy, industrious, gregarious, good parents, family-oriented, hard-working, skilled structural and eco-

engineers, even "cute"... the list is long. We might also call them "over-zealous," and not simply because they cause us inconvenience by flooding our roads and parking lots – sometimes beavers cause themselves serious inconvenience.

Dan Clark, Ph. D., Regional Director of the Quabbin/Ware Region DCR – Division of Water Supply Protection, tells an intriguing story of beaver damming prowess gone awry. On a winter's hike in the Quabbin Reservoir area, he noticed the water was unusually high at a particular pond with an active beaver dam. When he investigated further, he saw that the beavers had raised the water level so high they had flooded their own lodge and were now sleeping in a bird's nest affair they had constructed atop their lodge! It was snowing, and the two beavers were covered in snow. He speculates that they probably spent the winter there, quipping that beavers are extraordinarily hardy animals. •

References

To read our Spring 2019 article about beavers, go to https://newtonconservators.org/newsletters/

Goldfarb, Ben. Eager. Chelsea Green Publishing.

Boston Globe - Framingham officials kill beavers who caused flooding By Emily Sweeney Globe Staff, Updated December 13, 2018.

MAS - About Beavers, https://www.massaudubon.org/learn/nature-wildlife/mammals/beavers/about.

Prescott Peninsula Beaver Survey Results 2018, DCR Massachusetts.

& Barbara Bates



🗫 President's Message 🗫

e hope you had a fun and relaxing summer with lots of time to explore the wilds of Newton and afar as well as on vacation. Fall is in the air, and as usual we have a pretty full schedule of upcoming walks, invasive pulls, and other events such as the Harvest Fair in the queue. Along with many of our usual outings, we will be coordinating with Historic Newton on exploration of the forthcoming Riverside Greenway. Check out the enclosed schedules, and always check our website or e-Bulletin for the latest event schedule.

Mayor Fuller has been in discussions with Boston College over the summer on the possible acquisition of sensitive portions of Webster Woods, especially the area surrounding Bare Pond, a vernal pool that has provided habitat for spotted salamanders. The CPC, City Council Committees, and the Council itself will likely be considering the acquisition in the next several months. The Friends of Webster Woods is accepting tax-deductible donations through the Conservators' Fiscal Sponsorship and they will be advocating and raising awareness — newly designed "Save Webster Woods" signs are in the offing! The Conservators have expressed support for acquiring as much of the rear property as feasible including the Bare Pond area, the "Knoll," and the former rear parking lot —- now a salt storage area.

Newton has been planning for a new senior oriented facility, dubbed NewCAL. The committee planning this facility was evaluating possible locations for this and had narrowed the choices from 145 to 24 to six sites. The Conservators had expressed to city officials dismay at siting such a facility on existing green space (see our position on our website). In addition, there had arisen great public support for not using parkland — an online petition had garnered thousands of supporters in a few days. More recently the city seems to have settled on a joint senior and pool facility on the site of the existing Gath Pool and nearby courts, but left open the possibility of a non-park site. A public meeting is scheduled for September 19 at 7 pm. Check our website for the final details.

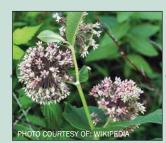
A recent Walden Bioblitz, organized by last year's annual dinner speaker, Peter Alden, turned me on to the power of the iNaturalist application, and it has been great fun taking pictures of great variety of insect and plant life in our garden. It's like having a pile of field guides in your phone backed up by actual expert validation. See Ken Mallory's article and give it a try — you will be amazed!

Hope to see you out and about this fall in Newton!

Ted Kuklinski

Ted Kuklinski President, Newton Conservators

Plant Milkweed!



Asclepias syriaca Common Milkweed



Asclepias incarnata Swamp Milkweed



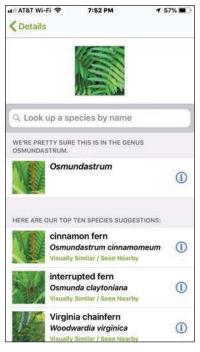
Asclepias tuberosa Butterfly Weed

\$ FALL 2019



iNaturalist: Sharing Nature

or Newton Conservators and other nature lovers, the iNaturalist phone app has much to offer. Begun as a Master's final project at Berkeley School of Information in 2008, iNaturalist has blossomed into an important initiative of the California Academy of Sciences in 2014, joined in 2017 by National Geographic. For those of us who like to pester our walking companions with questions about the name of this tree or that plant or this animal, iNaturalist has come to our rescue.



Equipped with an iPhone, Android smartphone or Android tablet or iPad, go to the App Store, where you can download iNaturalist for free. The iNaturalist website (https://www.inaturalist. org/) describes itself as "an online social network of people sharing biodiversity information to help each other learn about nature." Using its resources, you can take pictures of an unknown plant, tree, or insect, for example, and watch your phone offer its best guess with answers

sorted by the most likely to additional possibilities. In its answers, it shows photos and authoritative background information about each mystery subject as well as maps that show where the photo was taken.



Want to verify the invasive plant you are hoping to eradicate? Go to iNaturalist. Want to make sure you can distinguish twice-cut, thrice-cut ferns in your back yard? Double check it with the iNaturalist experts from around the world (including Don Lubin, who leads fern walks for the Newton Conservators and participates in iNaturalist). Your encounters with nature will never be the same. •

« Ken Mallory









A Fable: A Story of Nature in Your Own Backyard

nce upon a time, in the year 2009 in Newton,
Massachusetts, there were lots of American Crows.
They would come and pirate suet from our bird feeders. We would see them begin to court and raise their young. That year, members of an American Crow family built their nest in a white pine near our backyard. Their nest was one block away, across Allen Avenue, along the Cochituate Aqueduct. They would make the clucking sounds that warned each other that danger was near the nest. We remember that year because it was the year before most of our American Crows began dying from the West Nile Virus.



Rose-breasted Grosbeak

On a sunny June day of that year, the wildlife in our backyard near our bird feeders began to provide excitement. At 8 o'clock in the morning, a red fox with a splendid bushy tail moseyed up out of our driveway, examining the bushes as he went. He proceeded across the street and vanished

up our neighbor's driveway. At 9, a female Rose-breasted Grosbeak came to our tray feeder and was in and out of this feeder for the rest of the day. At 11, a clueless young Cooper's Hawk was klutzing around the backyard, probably hoping to snag something from a feeder. He ran across the ground as though he was chasing something, but there was

nothing that I could see.

At five in the afternoon, the story's main feature began. A young American Crow chased a gray squirrel out of the yard, running after it instead of flying.



Red Fox

Why did he do that? A Wild Turkey hen called a Tommie showed up and was minding her own business, poking around under the tray feeder. The same young crow buzzed her head several times until he got her enraged attention. He then lit a few feet off the ground in a nearby sapling. The Tommie ran over to the tree and hissed angrily up at him.



A Cooper's Hawk

He watched. After a while, she resumed her feeding under the tray feeder, so he delivered another strafing run landing on the ground near her.

The Wild Turkey raced at him across the ground with her neck stretched straight

out, looking like a serpent on legs. Rather than fly away, the crow ran away this time before finally flying up into the sapling. It looked like some baiting was afoot. This back and forth went on for about 30 minutes. The Wild Turkey seemed really irate, and the young American Crow seemed like a devilish child. Most American Crows were behaving sensibly in the backyard at this time, and the turkey never paid them any mind. But for this young crow, it seemed very personal.



Wild Turkey hens, called Tommies

The next day there were two young American Crows in the backyard, frolicking around and jumping vertically up off the ground. After a while, I looked out the window again to see a crow running toward me, hot on the heels of a cottontail rabbit. The crow did

not fly but ran the rabbit out of the woods and into our open backyard. As the rabbit got out in the open, it felt vulnerable (remember the Cooper's Hawk) and turned on the crow, raising its head, ears, and its fur to look larger.

The rabbit now charged the crow, which did not fly but ran away. They went back and forth a number of times, with neither party seeming too threatened. When this excitement calmed down, the rabbit ended up under a barberry bush, nibbling on some greenery. Soon, like an idle human humming to himself, the crow appeared, walking along and pecking at the ground. It got closer and closer to the barberry bush. The rabbit finally could not take the suspense any longer, and it exploded out from under the bush, charging the crow that ran away, fast.



American Crow

On a third day, the parent American Crows were present in our backyard with their two youngsters. It was apparent that the time had come for the youngsters to learn to

feed themselves. Both parents would find some edible tidbit and turn away from the begging youngsters to eat the food themselves. One young crow then began to look for its own food. The second young crow would not listen to the parents and followed them around, watching closely.



Fish Crow at rest

When one parent found a large beetle and snagged it, the wayward young crow chased the parent and begged for the beetle. The parent turned away and got ready to eat

the beetle. At this point the young crow ran in front of the parent and hurled itself onto its back on the ground. As it did this, it wailed like a baby bird, "Feed me. Feed me." This prompted an instinctive regurgitation by the parent. The young crow leapt up and dashed away with the beetle, being chased a short way by an angry parent.

I was not on medications when I watched these antics unfold. This is a true story from one Newton backyard.

An epilog to the story is now in place. There are no resident American Crows nesting around our house this year, nor have there been for at least three years. There certainly are American Crows nearby. They are rebounding from the West Nile Virus, perhaps with some immunity to that virus. But our neighborhood has been taken over, for nesting purposes, by a different species of crow, the Fish Crow.

These are smaller relatives of the American Crow, best identified by their calls. Their vocalizations sound like



Fish Crow in flight

a hybrid between a duck and a crow. They have a very nasal "Awk-Awk" sound. Our close white pines now house Fish Crow

nesting pairs. Since American Crows steal the Fish Crow nestlings to feed their own young, the Fish Crows drive the American Crows away. These Fish Crows are very noisy and social and are fun to watch. They make me smile, but there is some sadness concerning my old friends, the American Crows, who provided so much fun in 2009.

A parting observation: In order to tell whether you are looking at an American Crow or a Fish Crow, my advice is to listen. The field guides describe Fish Crows as having smaller heads and longer wings and tails. They also have more rounded wings in flight and a smaller, faster wingbeat, on average. This is all useless for me, unless the two species are perched, or flying, together. Above are photographs of known American and Fish Crows. The judgment involved in head size, wing and tail length is beyond my capacity to reliably see. lacksquare

& Pete Gilmore

Do You Use Amazon for Purchases for your Home or Business?

As explained in past newsletters, Amazon Smile is a program through which Amazon donates 0.5% of most purchases (yes, \$5 of every \$1000) to a nonprofit (501c3) organization of your choice (the Newton Conservators, we hope!).

How does one use Amazon Smile? Instead of going to Amazon.com, you go to Smile.amazon.com. On your first visit, you will be asked to choose a nonprofit organization to receive the bonus donation. Enter "Newton Conservators," and you are ready to go. The rest of your shopping proceeds exactly the same as if you had logged in to Amazon.com initially.

Even with relatively few members using the program so far, the rewards have grown. For the first quarter we participated in 2014, we received \$22.32. In 2018, we received \$171.04, and it has grown to \$100 per quarter.

If you have any further questions about the program, check the FAQ page: http://smile.amazon.com/about.





Support the Newton Conservators through your IRA

Individuals 70 1/2 and older can make a tax-free gift to the Newton Conservators directly from their IRA. Please consider a gift to the Conservators from your 2019 IRA distributions. The benefits to you include the reduction in income subject to tax, even if you don't itemize, and the amount donated counts toward the Required Minimum Distribution (RMD). The benefits to the Conservators are immense and allow for us to continue to help preserve open space in Newton.

Ask your IRA holder for a simple transfer letter or form. The Newton Conservators is a recognized 501(c)(3) organization.

Thank you.

Newton Conservators P.O. Box 590011 Newton, MA 02459

X-Cel Conservation Corps



Hard working X-Cel group

e've been working with X-Cel Conservation Corps, a Boston-based organization training young adults in the skills to obtain conservation-related jobs and to pass their high school equivalency exams. On our first work day in May, we removed invasive species at Ordway Park and then moved to Sawmill Brook Conservation Area. Our second work day in July was back at Sawmill Brook, where they immediately recognized their old friends glossy and common buckthorn. Our work together has been fun and productive.

For more information about this worthy organization visit: http://www.x-celeducation.org/conservation-corps ◆

« Katherine Howard



FALL WALKS 💌 2019

https://newtonconservators.org/events/

Please note: Walks meet at different times. Some trips are weather dependent. Please call trip leader if in doubt. The website has more information, including maps.

Newton Conservators is a nonprofit working to protect and to preserve natural areas, such as parks, playgrounds, forests, and streams that are open or may be converted to open spaces for the benefit of the environment and the enjoyment of the citizens of Newton. It further aims to share information about these and other environmental matters. Our walks program is part of that effort — and a great way to enjoy nature with the help of knowledgeable guides. We hope that you will attend one or more of the following walks and consider becoming a member to join us in our work to preserve open space in Newton: https://newtonconservators.org/membership

Sunday, Sept. 15 at 2:00 pm

Tour of Riverside Trails with Historic Newton

Explore sites of canoeing activity from the early 20th century and the proposed new Riverside Trail System by following some old pathways from the Lasell Boathouse to the former MDC Police Station on Commonwealth Avenue (where we will look inside). For those interested, after returning to the Lasell Boathouse, the walk will continue south to Riverside Station and across I-95 to the Leo J. Martin Golf Course. This second portion of the walk lasts approximately one hour and has more challenging terrain.

Meet at the Lasell Boathouse, 107 Charles St., Auburndale.

Note: Historic Newton, our co-sponsor, suggests a \$10 donation. You may just show up on the day of the walk or register with them in advance through newtonma.gov/HNwalks.

For more information contact Historic Newton at 617-796-1450.

Saturday, Sept. 28 at 1:00 pm

CANOE AND KAYAK TRIP AT NAHANTON

This canoe/kayak trip will start in Nahanton Park. We'll paddle upstream on the Charles against the current to the far reaches of Needham, Dedham, and Wellesley. Bring your own canoe or kayak, or rent one at the canoe/kayak rental stand in Nahanton Park. The area up-stream is a region of significant beauty and almost pristine conditions. Fall is a good time to view the many turtles and other wildlife along this stretch of water. We should see numerous fish, including pickerel, bass, and carp. We also will see many birds that make their spring/summer/fall homes in this habitat. We'll pass by Powell's Island, Millennium Park, and the large Dedham Ditch, then stop for lunch on Cow Island. On the return trip, the current will help carry us back. It's an interesting trip for adults and children and usually is completed within three hours.

Trip Leaders: Bill & Dottie Hagar (617-964-2644)

Saturday, Oct. 19 at 8:00 am

FALL BIRD WALK AT COLD SPRING PARK



Fall is an excellent time to look for birds. Take an easy walk on fairly flat woodland trails to look for fall migrants like warblers and vireos as well as early winter birds such as White-throated

Sparrows and our resident birds such as Northern Cardinals.

Park at the Beacon St. parking lot and meet at the circle. Bring binoculars if you have them.

Beginners as well as experienced birders are welcome. Boots are recommended. If in doubt about the weather, please call.

Trip Leader: Pete Gilmore (617-610-2477)

Sunday, Oct. 20 at 2:00 pm

NEWTON AQUEDUCTS HIKE

Join a five-mile hike through woods, meadows, and fields along the Newton sections of the Sudbury and Cochituate aqueducts. This is a steady but not fast hike. Participants should be in sufficiently good shape to keep up with the group (there are cutoffs for those who wish to shorten the hike). Meet in front of the Starbucks coffee shop near the Waban MBTA station.

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

Saturday, Oct. 26, 9:00 am - noon

BEDROCK GEOLOGY OF NEWTON AND ENVIRONS

The bedrock geology of the Newton area tells a fascinating story of a time about 585 million years ago when Newton was part of the great southern continent of Gondwana and not far from the south pole. The rocks record a history of great volcanic eruptions and sedimentary basin deposits (the famous puddingstone!) in areas between the volcanoes. Join us and learn a bit about how the rocks tell us their story.

This trip will not be one of the usual Conservator "walks" since we will need to carpool to different sites in and around Newton to see the different rock types. If there is time and interest, we may choose to go a bit beyond Newton to view rocks within a volcanic caldera from that time.

Meet in the parking lot at the entrance to the Hammond Pond MDC Reservation area-east, at the west end of Hammond Pond off of Hammond Pond Parkway near Rt. 9, behind "The Street" complex — near the movie theatre (see *Newton Conservators' Walking Trail Guide, pg. 35*). We will first visit rocks in the woods near here, then carpool to the other exposures. Trip will about 3 hours. If there is moderate rain or worse, the trip will be cancelled. You can call the leader the evening before if in doubt. Most stops are close to a road, but at one stop we will walk a few hundred yards into the woods, and there is a bit of scrambling to reach the exposure.

Trip Leader: Chris Hepburn (617-964-1137)





W Newton Conservators Invasive Plant Sessions Fall 2019 W



Newton Conservators fights invasive plant species to preserve and improve the native habitat at our parks and conservation areas. Call the leader or check the website (https://newtonconservators.org/events/) for updates to this schedule.

Saturday, Sept. 7, 9:30 am - 12:00 noon

Invasives pull at Hemlock Gorge. Near 2 Ellis St., Newton, MA 02464.

We will control garlic mustard, knotweed, and black swallowwort infestations inside beautiful Hemlock Gorge Park, and the adjoining walking trail along the Charles River at Quinobequin Rd. Help keep the invaders out of these beautiful parks! Wear long pants and garden gloves. Some tools and gloves are available but bring your own digging tool and loppers if you can. Meet at the Ellis St parking lot. Leader is Katherine Howard, 617-721-2571.

Sunday, Sept. 8, 9:30 am - 12:00 noon Invasives pull at Crystal Lake.

We will work at the city's small pocket park along Center St. just outside of Newton Center, next to the house at 1429 Centre St. Wear long pants and garden gloves. Some tools and gloves are available, but bring your own digging tool and loppers if you can.

Leader is Beth Wilkinson, 617-966-7491.

Saturday, Sept. 14, 9:30 am - 12:00 noon

Clean up and invasives pull at the path through 15 Bracebridge Rd.

Come see the many native species planted here as habitat restoration of this beautiful site, and help keep up that project and the walking path. Wear long pants and garden gloves. Some tools and gloves are available, but bring your own digging tool and loppers if you can. Leader is Beth Wilkinson, 617-966-7491.

Sunday, Sept. 15, 9:30 am - 12:00 noon

Invasives pull at Nahanton Park Woodcock Meadow.

We will get any stragglers of black swallow-wort, cut the knotweed and bittersweet, and pull seedlings from the meadow. Wear long pants and garden gloves. Some tools and gloves are available, but bring your own digging tools and loppers if you can. Meet at the Woodcock Meadow parking lot on Nahanton St.

Leader is Katherine Howard, 617-721-2571.

About the Plant Invaders



Garlic Mustard arrived from Europe as a medicinal and garden herb, and is now an invader of our backyards, parks, forests, and conservation areas. It quickly covers vast areas and low-light forested areas, shades out other plants, chemically alters the soil to inhibit germination of competitor seeds, and alters habitat for native insects such as butterflies. It is easy to manage by pulling when the second-year plants are flowering in April/May. If not, each plant will scatter hundreds to thousands of seeds that will become first-year plants the next year, or remain as viable seeds for several more years. The plants must be disposed of as trash, not as yard waste.



Japanese Knotweed is a bamboo-like invader from Asia that can create dense 8' tall single-species stands. It is a tough adversary, because any small root fragments left behind spring back to life the following year. Scientists seek biological control agents, but until then we must control by hand. Persistence pays with this species, and eradication is possible, but it takes several years to truly finish the job.



Buckthorn is another non-native shrub that is proliferating in forested areas (see Cold Spring Park), covering the understory and preventing native forests from re-seeding.



Black Swallow-wort is a non-native vine that is appearing in alarming numbers in woodland areas and backyards. It crowds out native species, thereby reducing wildlife habitat. One very unfortunate effect is that monarchs can confuse swallow-wort with milkweed. They lay their eggs, but the larvae cannot survive due to the toxic nature of the swallow-wort leaves.

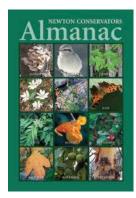
Our sessions also tackle multi-flora rose, tree of heaven, oriental bittersweet, and black locust.



Fall's here! Check out our Fall Walks.

Shop online at newtonconservators.org/publications/ to purchase Newton Conservators' publications. Almanac is \$19.95 + shipping, and the Trail Guide is \$8.95 + shipping.

• Members receive a discount from these prices when purchasing online.







RENEW YOUR MEMBERSHIP OR JOIN TODAY!

YES, count me in! I want to be a nature steward and help Newton Conservators protect and preserve the natural areas in our community.

Please renew/accept my tax-deductible membership at the level checked below:		Want to make an even bigger impact?	
 \$250 Directors' Circle *NEW! \$125 Patron \$100 Donor \$75 Sustaining Member *Contributors at this level receive a copy of 	□ \$35 Individual Membership □ \$15 Student Membership □ Additional Contribution \$	Help us support these conservation areas: Woodcock Meadow \$ Ordway Endowment Fund \$ Land Stewardship Areas (Dexter Rd., Bracebridge Rd.) \$ receive Walking Trails in Newton's Parks and Conservation Lands.	
NAMEADDRESS	EMAIL 2	□ I would like to volunteer! Please email me.	
	servators, Inc. and send to P.O. Box 590011, Newton Ce	ntre, MA 02459, or visit newtonconservators.org/membership/ to	

MISSION

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.

Newton Conservators, Inc.

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 58 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 second Friday of the month before the issue is 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 articles@newtonconservators. org. Digitized photographs, maps and diagrams are also welcome.

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NEWTON CONSERVATORS



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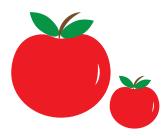
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NEWSLETTER

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

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Honeysuckle at Nahanton Park
photo by Suzette Barbier

Go Green! ...and all the other colors of the rainbow. You can view this newsletter at http://bit.ly/2rXvnit. To elect not to receive a paper copy of the newsletter, update your membership profile at newtonconservators.org/membership