



**NEWTON
CONSERVATORS**

F A L L I S S U E

NEWSLETTER

Preserving open space and connecting people to nature since 1961

NEWTONCONSERVATORS.ORG • FALL 2024

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Newton's Tree Preservation Ordinance

By Marc Welch, Deputy Commissioner/City Forester, Newton



PHOTO: KEN MALLORY

Bullough's Pond with overlying tree canopies

In 1999 the City of Newton became one of two communities (Lexington was the other) in Massachusetts to regulate the removal of trees on private property. Over the next 20 years, Newton's Tree Preservation Ordinance was occasionally updated to address loopholes and to make minor language corrections. Two years ago, the Tree Warden, the Mayor's Office, and the City Council embarked on a significant update to the tree ordinance. The City Council met publicly many times over two years, conducted two public comment meetings, and received substantial amounts of input. The result was a more comprehensive ordinance that was passed in December of 2023, and that took effect on March 1, 2024.

The Tree Preservation Ordinance was originally established to protect the tree canopy in Newton, and the current improved version does just that. The ordinance establishes a procedure that requires all property owners to apply for a permit prior to removal of any tree with a trunk diameter of six inches or larger at breast height (slightly above 4 feet) to ensure review by

the Tree Warden and compliance with the established standards for the replacement of trees and the protection of existing trees. A tree permit is also required any time construction takes place regardless of whether or not trees are involved.

The tree canopy of the City of Newton is a valuable resource critical for the well-being of the city residents, visitors, and businesses. Trees mitigate the effects of climate change, improve air quality, provide habitat for wildlife, and improve physical and mental health. Preserving tree canopy and planting replacement trees is key to enhancing the quality of life and the environment of the city. It protects public health against climate change impacts such as heat, drought, and flooding. The tree ordinance helps preserve the character of wooded and natural areas, contributes to reducing energy consumption, protects air quality, and baffles noise. Wildlife habitat is preserved and enhanced, and topsoil erosion is reduced. Additionally, the tree ordinance and the protection of trees safeguard property values and ensure that trees are part of the character of the city.

Continued on page 2



Tree removal from private property in Newton

With the passage of the updated tree ordinance came new permitting requirements. There are currently three types of permit applications. The type applied for depends on the nature of the work, the tree or trees,

and the type of property. All applications are applied for through the city's online, consolidated permitting portal. The portal is used to apply for everything from tree permits, to building permits, to event permits, and many more. The permit portal can be accessed from the city's website. The link to tree permit applications can be accessed from the Tree Preservation Ordinance website. A link to this site is also at the bottom of this article.



Professional arborists use cranes to prune or remove trees in Newton

The most frequently applied for tree permit is for the removal of Exempt Trees. An Exempt Tree is a tree that is between six inches and thirty-nine inches in trunk diameter located on single- or two-family lots where no exterior work is planned for two years following the removal of the trees. The home must also be occupied. The majority of properties in the city are one- or two-family lots. During the work that was done to update the tree ordinance, it was important

to distinguish between trees being removed for construction purposes on one- and two-family lots and instances where a homeowner wanted to remove an average tree on their property for a reason other than construction, such as adding a bit more sun to their garden, to add a swing set or other routine reasons. This also includes the removal of invasive trees like Norway maples and trees of heaven. Additionally, if a property owner wishes to remove an invasive tree, regardless of trunk diameter or lot type, they can do so as long as the removal of the tree is to benefit other trees and other plants in the area, and they must have the permission of the Tree Warden.

People wishing to remove Exempt Trees can apply for a permit from the city. There is no cost to apply for this

permit, and there is no tree replacement requirement. The application asks a few simple questions and requires the person's contact information. Along with the filled-out form, the application must include a picture of the tree, a sketch of where it is on the lot, and a form completed by the company removing the tree. Filing for the Exempt Tree removal permit can be done by the property owner, tree company, or anyone else authorized by the homeowner.

There are two other Tree Permit types; one is for all construction-related work, and one is for tree removals



Arborists remove branches from a private property

on non-one and two-family lots or for the removal of very large trees on one- and two-family lots. These applications require more detailed information, have a filing fee of \$150, and require the applicant to

work with a certified arborist. Some of the most significant concepts and changes to the Tree Preservation Ordinance are connected with these applications.



The key concepts of the Tree Preservation Ordinance that ensure better tree protection and more thoughtful projects are:

Greater value was placed on larger trees. The larger the tree, the greater the number of replacement trees are required. The prior version of the tree ordinance required that for every trunk diameter inch that was removed, a diameter inch was to be replaced. Now, trees 25 to 39 inches in trunk diameter require 1.5 inches for each inch removed; trees 40 to 55 inches in trunk diameter must be 2 inches for each inch removed; and trees 56 inches in trunk diameter and larger require 3 inches replaced for each inch removed. Additionally, if an individual chooses to make a payment instead of replacing a tree on site, the ordinance requires that the payment also factors in the environmental impacts due to the loss of the tree.

All applicants for Tree Permits associated with construction must work with a certified arborist any time trees are



PHOTO: KEN MALLORY

Tree removal in process.

present that may be impacted by the work. Often, individuals looking to do construction jump to the conclusion that trees must be removed and do not explore saving trees. This is typically

because they don't know how easy it can be to save trees or make small alterations to their plans that would result in a tree being saved. The ordinance requires that an arborist develop a tree protection plan and review the trees on the site before work occurs. The conversations the arborist has with the property owner often lead to trees being saved that previously would have been removed.

An area of great feedback leading up to the revision of the Tree Preservation Ordinance was the impact of construction on trees located on properties abutting lots where work is

taking place. The ordinance addresses this in two ways. First, it requires that before work occurs, the abutters receive notification about the work that will be done. Second, it requires that trees on neighboring lots be included in the tree protection plan for the project, another change from the prior ordinance.



These provisions, plus several other improvements, have led to much stronger tree protections in the city. The Tree Preservation Ordinance is now a key component in protecting the city's tree canopy, maintaining the city's character, and, over time, improving the environment.

Tree Preservation Ordinance website:
bit.ly/4dQB9bq ♦

Get Involved with the Conservators - Volunteers Needed

Newton Conservators needs volunteers to help with various activities, including annual monitoring of the conservation restrictions we hold on City of Newton properties, pulling invasive plants, updating our inventory of plants and animals on Newton's public lands, and collecting new signups from interested Newton residents on our walks or at community events such as Village Days, the Harvest Fest, and others. You'll work alongside and be trained as needed by experienced Conservators' board members. If you're willing to volunteer for a couple hours, it would be most appreciated. To learn more about volunteer opportunities and contact us about them, go to newtonconservators.org/volunteer/

Thank you.



A Close Look at Bare Pond in Webster Woods

By Richard Primack, long-time Newton resident and Professor of Plant Ecology at Boston University

Bare Pond, a large vernal pool in Webster Woods, has many unique features, including one of Newton's few spring breeding sites for yellow-spotted salamanders.



PHOTO: DAN BRODY

A spotted salamander collected by a scientist at Bare Pond

The Newton Conservators often leads walks to Bare Pond to see the adult salamanders and their egg masses. Inspiring a "Save the Salamanders" rallying cry, this species helped generate public support for Newton to acquire the land from Boston College four years ago.



PHOTO: RICHARD PRIMACK

Bare Pond and its Pyramid Rock during the autumn

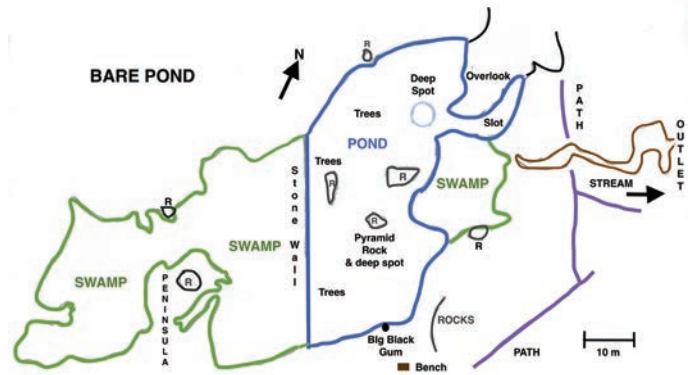


PHOTO: RICHARD PRIMACK

Bare Pond in winter

It is a place to have secluded ice-skating parties in cold winters and look for aquatic insects and other tiny swimming creatures in spring. In mid-summer, concentrations of aquatic beetles and juvenile salamanders can be found in the last remaining pools, making easy pickings for Great Blue Herons and other hungry birds.

Over the last eight months of 2024, I decided to investigate the pond more carefully and systematically. I had been visiting Bare Pond for over 60 years, but had I missed any hidden secrets? Henry David Thoreau studied Walden Pond for years and gained tremendous insights into the natural world; would a study of Bare Pond reveal the same to me?



In this new map of Bare Pond made by Richard Primack, open water is indicated in blue. The water-filled swamp is indicated in green. Rocks (R) are indicated in black. The stream is brown. Paths are purple.

Mapping Bare Pond



PHOTO: RICHARD PRIMACK

Bare Pond slot



PHOTO: RICHARD PRIMACK

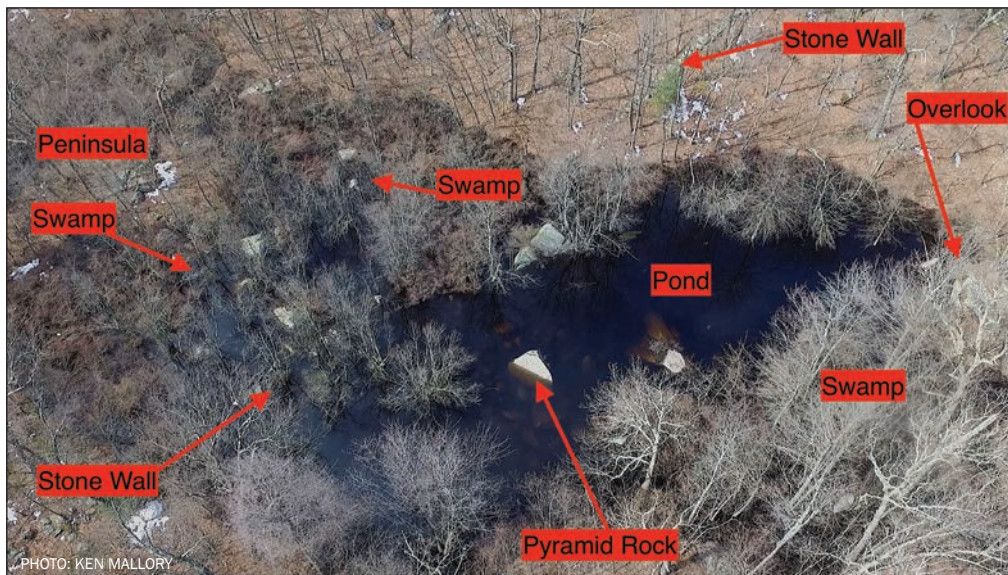
Bare Pond after water has receded

I began by mapping the area. Using a measuring tape, a compass, and flagging, I mapped the outline of the water around Bare Pond. The open water is part of a larger 0.8-acre swampy wetland. The whole wetland is irregularly shaped like a dragon flying southwest (if you use your imagination), and the pond's open water covers about 44% of the wetland. It is about 61 yards long and 30 yards wide.

Among the notable features of the pond and surrounding wetland are a water-filled, rock-edged slot adjacent to a rock overlook, a peninsula that constricts the swamp in the south, and a 19th-century stone wall that

forms the southwest border of the pond. Presumably, the wall was built to mark property boundaries and keep in livestock.

When the pond is dry in the summertime, you can measure the high water line left on swamp trees and rocks. Using this approach, I found that the average pond depth is around 30 inches. The greatest depth is 43 inches around Pyramid Rock in the middle of the pond and at the shallow basin close to the overlook. The basin might have been dug out more than 150 years ago to provide drinking water for domestic animals. If we assume an average depth of 30 inches, the Bare Pond wetland contains around 675,000 gallons (or 3,334 cubic yards) of water.



Drone photo of Bare Pond in winter

warmer summer weather, levels dropped twice as fast on dry days—roughly an inch each day. Starting in the fall of 2024, I will measure the process of the pond filling up again.

Bare Pond Stream

Bare Pond has an outlet on its eastern side along the walking

Tracking changes

Starting in early January, 2023, I measured the water temperature and depth at two points near the rock overlook every few days. I learned that the pond’s water changes even more frequently and rapidly than I had realized.



Bare Pond watermark

— between February 24 and 28 — the water temperature warmed 12 degrees, from 35 to 47 degrees.

After several inches of rain in early March, water levels in the pond rose by 4 inches. When the weather was dry and cold, levels dropped by perhaps a half-inch per day. In

On February 13, 2024, there was no ice on the pond. On February 15, ice covered 95% of the pond. By February 25, there was no ice again.

When the pond was full, its water temperature ranged from 32 degrees Fahrenheit on February 5 to 70 degrees on May 23, a 38-degree shift. Even within just a few days

path, which I call “Bare Pond Stream.” This intermittent stream flows only when the pond is full and there has been rain. The pond can be thought of as a saucer tilted slightly to the side. As long as it is not full, no water spills out into the stream, but when it is full, any rain that falls causes water to spill over the edge and flow into the stream. Heavy rain when the pond is full results in a strong flow in the stream. But after a few days with no rain, the stream stops flowing again.

Bare Pond Stream disappears into the ground before reaching the valley below. In bigger rains, the flow is stronger, and the length of the stream is longer, varying from just a few yards to several hundred yards.

On April 3 and 4, 2024, there was a very heavy rain. I measured the flow rate by measuring the stream width and depth with a ruler and the speed of the water with a small floating plastic bottle. I found that the stream carried 269 gallons of water per minute, or 16,140 gallons per hour, the same rate as about six standard one-third-horsepower sump pumps. After a day without rain, the flow declined to only 23% of the previous day.

Hooked

I have only started to learn the secrets of Bare Pond. It is much more dynamic than I had thought — shifting from ice to water and back again, warming and cooling, and flooding and drying. As I’ve been looking, I’ve found more of the pond’s mysteries to explore, including unusual rock features, peculiar trees, and aquatic creatures.

I’m looking forward to another year of investigation. ♦

Enjoy Nature... with Webinars from Newton Conservators

Join us for our Fall/Winter Webinar Series online from September through February.

Each online program will begin at 7 pm and last approximately one hour. The in-person event on October 22 will begin at 6:30 pm. You may register for the programs using the links below or by going to the event listing at newtonconservators.org. You will receive an email confirmation after you have registered.



PHOTO: BARBARA BATES

Leaves and seeds

Thursday, October 10 ... Fall Color and Seed Dispersal — How Do They Do That?

In New England, we prize our trees' fall color — the reds, yellows, oranges, and purples. And starting in August, we notice how seedy our native plants become — falling nuts dent our cars; burs make grooming pets a challenge. But how and why do they do what they do? Join Barbara Bates as she explores the mechanisms of fall color and seed dispersal timing and strategies.

Barbara is a teacher, naturalist, and Newton Conservators' board member. She loves all things nature.

Sign up: <https://bit.ly/4dObn7z>



PHOTO: SKY & TELESCOPE

Night Sky

Tuesday, October 22 ... In-person Observation of the Night Sky. Rain date is Friday, October 25

The open space of Newton is beautiful by day **and** by night! Join local amateur astronomer and dark-sky defender Kelly Beatty on a tour of the evening sky. He'll provide us with some stargazing basics and show off some interesting sky sights through a small telescope. The sky that night will feature the bright planets Venus and Saturn, along with the Summer Triangle, Andromeda Galaxy, and the Milky Way! **Bring your binoculars to enhance the experience and a dim, red-filtered flashlight if you have one.**

Kelly Beatty has been explaining the science and wonder of astronomy to the public since 1974, when he joined the staff of Cambridge-based *Sky & Telescope* magazine. After 43 years of pounding the keyboard, he retired from full-time work in early 2018, but remains actively involved in many *S&T* articles, tours, and other projects. An award-winning writer and communicator, he holds a Bachelor's degree from the California Institute of Technology and a Master's degree in science journalism from Boston University. Kelly has been active in efforts to reduce light pollution for more than 30 years and presented "Darkness in Distress" for Newton Conservators in the fall of 2022. He is also author of a Newton Conservators' newsletter article entitled "Darkness in Distress" in the summer of 2023.

You must register for this limited-enrollment event in advance: <https://newtonconservators.org/events/in-person-observation-of-the-night-sky/>



PHOTO: AVALON OWENS

Light pollution and insect populations

Thursday, November 21 ... Floodlights and Fireflies: Environmental Sustainability Starts in your Front Yard.

Insect populations around the world are declining rapidly. But why? While habitat loss, pesticide use, and climate change all have something to do with it, Dr. Avalon Owens shows in this talk that light pollution is another important — but too often overlooked — bringer of the insect apocalypse. Light pollution interferes with the development, movement, foraging, courtship, and reproduction of diverse insect species, including many that we know and love to see in our gardens. Fortunately, light pollution can be cheaply, easily, and instantly eliminated. Doing so will help ensure that we live in harmony with our insect friends and neighbors for generations to come.

(continued)

Dr. Avalon Owens is a research fellow at the Rowland Institute at Harvard. Her research group studies the impact of light pollution on organisms and ecosystems, with a focus on firefly conservation and moth evolution. Avalon holds a B.A. in Integrative Biology from Harvard University, an M.S. in Entomology from National Taiwan University, and a Ph.D. in Biology from Tufts University.

Sign up: <https://bit.ly/3YQkz7e>



PHOTO: BETH WILKINSON

Webster Woods

Thursday, December 5 ... Protecting Urban Forested Natural Areas: Making the Case for Conservation

Urban forested natural areas provide numerous ecosystem services and places for urban residents to recreate, interact with nature, and seek respite from the hustle of urban life. Despite these benefits, forests are often cleared and the consequences are severe. Join this webinar to learn more about the benefits of urban forested natural areas, the threats they face, and what you can do to help conserve these spaces.

Sam Lawson, National Partnerships Coordinator at the Natural Areas Conservancy, has made a career helping people share information and support each other to build more resilient networks. He works with the Forests in Cities network, a national initiative to connect professionals who care for urban natural areas. Previously, he conducted community engagement at New York City's Department of Emergency Management. He holds a bachelor's from Bennington College and a master's degree in natural resources from Cornell University.

Sign up: <https://bit.ly/4dvA4Wp>



Animal Love

Thursday, February 13 ... Animals Looking for Love on Valentine's Day – It's Not Just Humans!

Winter is a cold time to find a mate and start a family, but it is also an ideal time for many animals. Join Barbara Bates for a look at some of Newton's larger animals looking for love in February and the myths that surround their quests. We will cover owls, groundhogs, skunks, beaver, foxes, coyotes, and bobcats.

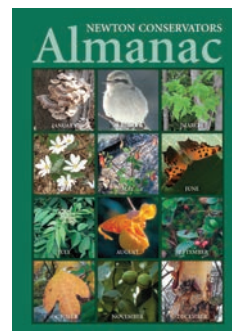
Barbara is a teacher, naturalist, and Newton Conservators' board member.

Sign up: <https://bit.ly/4dRiH2q>

Fall's here. Enjoy the beautiful outdoors!

Shop online at newtonconservators.org/publications/ to purchase Newton Conservators' publications. The Almanac is \$22.45, and the Trail Guide is \$10.95.

- Members receive a discount from these prices when purchasing online.
- New members receive a trail guide free with their first membership.



WALKS SCHEDULE FALL 2024

www.newtonconservators.org

Please note: Walks meet at different times. Some trips are weather dependent. Please call or email trip leader if in doubt.

Saturday, Sept. 14 from 9:30 - 11:30 am

CIRCUMNAVIGATING WEBSTER WOODS



Join Barbara Bates for a two-hour walk, co-sponsored by Arc'teryx Chestnut Hill, that roughly circumnavigates Webster Woods, about 1.5-2 miles. We will see several different habitats, including upland woods, a granite/pudding stone dome, vernal pool, marsh, and a wetlands stream, and we'll discuss each habitat's natural history as we go. There will be rocky places, slippery leaves, and one steep section where you may wish to use trekking pole(s). Registration is required on our website, and a waitlist will be available if registration is filled. Meeting location and directions will be mailed to all registrants before the walk.

Trip Leader: Barbara Bates (B.L.Bates@rcn.com)

Saturday, Sept. 21 from 8:30 - 10 am

NATURE WALK THROUGH SAW MILL BROOK CONSERVATION AREA



We'll walk through upland woods and wetlands, and by old stone fences and dramatic puddingstone outcroppings. We will include the adjoining "new" section acquired in 2004 and blazed in recent years. We will walk from Vine Street to Marla Circle and return back along the brook, about 1.2 miles in total. We'll look out for the dozen ferns Don Lubin has shown

us here, and maybe see the fisher again that he also showed us! The trail is "natural," mostly flat, but uneven and rocky underfoot, and there are parts over wetlands that are traversed on wood planks called "bog bridges".

Meet at the entrance on Vine Street, close to 5 Hollywood Drive. The walk will be canceled in the event of steady rain. Check the website or call the leader if in doubt.

Trip Leader: Katherine Howard (617-721-2571)

Saturday, Sept. 28 from 8:30 - 10 am

A VISIT TO HOUGHTON GARDEN



This wild garden, tucked into Chestnut Hill and abutting Webster Woods, is on the National Register of Historic Places. Its paths wind around a stream and lagoon-like pond with water features designed by Warren Manning, who formerly worked for the Olmsted studio. Explore this hidden gem of a

conservation area with its land steward, Michele Hanss of the Friends of Houghton Garden. The walk will be rescheduled in the event of steady rain.

Meet at the park entrance near 207 Suffolk Rd.

Trip Leader: Michele Hanss (617-285-9107)

Sunday, Oct. 6 from 8 - 10:30 am

BIRDING AT NAHANTON PARK



PHOTO: KEN MALLORY

Co-sponsored by Friends of Nahanton Park. Enjoy a leisurely walk through Nahanton Park, Newton, looking especially for migrant warblers and sparrows. Binoculars and waterproof shoes are recommended. Canceled in case of steady rain. Look for a

gathering at the entrance to the path to the lower gardens at the Winchester St. entrance.

Trip Leader: Haynes Miller (617-413-2419)

Saturday, Oct. 19 from 9:30 - 11:30 am

COLD SPRING PARK TOUR



PHOTO: KEN MALLORY

Tour Cold Spring Park with Alan Noguee, President of Friends of Cold Spring Park. See the difference between healthy areas of the park with indigenous plant communities that support local wildlife and degraded sections overrun with invasive species and see where we are

working on ecological restoration. Learn some surprising park history.

Meet at the kiosk at the end of the Beacon St parking lot. Registration is optional to hear of cancellation or rescheduling in bad weather.

Trip Leader: Alan Noguee (617-821-1265)

Saturday, Oct. 26 from 9 - 11 am

RIVERSIDE TRAIL UPDATES



PHOTO: KEN MALLORY

Explore some of the many exciting trail and park updates happening in the Riverside area with Ted Chapman of the Riverside Greenway Working Group. The tour may include Riverside Park at the Lasell Boathouse pedestrian bridge, the Pigeon Hill trail, the Pony Truss trail, the Commonwealth Ave Greenway, or the Marty Sender Trail. The exact itinerary and

meeting spot will be announced in advance on the website's

events page. The walk will be rescheduled in the event of steady rain.

Trip Leader: Ted Chapman (617-680-5278)

Saturday, Nov. 2 @ 2 pm

THE SECRETS OF BARE POND



PHOTO: KEN MALLORY

Bare Pond in the Webster is a remarkable vernal pond that is home to spotted salamanders and other amphibians. It has many other unusual and surprising features of rocks, hydrology, topography, and trees. In this

walk, Richard Primack will share what he has learned about the pond during an intensive study over the past nine months.

Meet at 1:40 pm at the end of Elgin Street and walk from there. Alternatively, meet at 2 pm at the bench at Bare Pond.

Trip Leader: Richard Primack (857-636-8378), Professor of Plant Ecology at Boston University and lifelong Newton resident, primack@bu.edu. If you plan to attend, please let Richard know beforehand by email. Rain date: November 9.



Graphic courtesy of vecteezy.com

► Invasives Update ◀



PHOTO: KEN MALLORY

Black swallow-wort pods in summer and fall

The work of our invasives team continues. We will meet throughout the fall and also plan winter work. Join us for fun, educational, and much-needed work, giving back to our open spaces!

As the Mayor's newsletter recently highlighted, it is now prime black swallow-wort (BSW) season. Be on the lookout for this vine, a non-native invader infesting Newton, often hiding in hedges and shrubs. It reduces biodiversity and degrades our local environment, and, sadly, is fatal to monarch butterflies (it's in the milkweed family, and when monarchs mistakenly lay eggs on it, the larvae die because it is not the right milkweed). Right now, the small purple flowers have turned into large seed pods, which are starting to dry and open. The wind will disperse the seeds on white fibers to make the infestation even worse.



Carolyn van der Laan

Black swallow-wort flowers

The BSW vine has blue-green, glossy, opposite leaves, small purple flowers, and large seed pods that hang down like pea pods. (See our website for many other photos.) You can dig it up, cut it down, or pull off the seed pods to prevent further spread. Put everything into your trash, not into yard waste, to avoid further spread. For more photos and information about this and other common invasive species in Newton, see the invasive plant information on our website (listed under Resources), such as his link for BSW: <https://newtonconservators.org/black-swallow-wort/>

Newton Conservators conducts many work sessions year-round to protect Newton's open spaces and manage invasive species. If you would like to be on the email list for notices of our group activities, please email Invasives@newtonconservators.org. Thank you! ♦

🍃 Katherine Howard

MISSION Newton Conservators, Inc.

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.

Newton Conservators was formed as a not-for-profit organization 63 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.

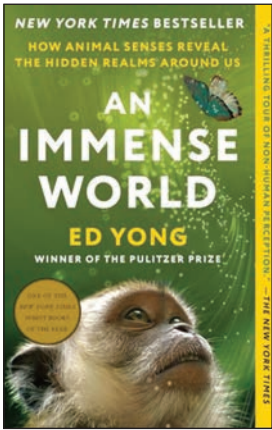
We welcome material related to our mission from any source. Send proposed articles or letters by email in MS Word or rich text format to articles@newtonconservators.org. Digitized photographs, maps, and diagrams are also welcome.

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Thanks to the following contributors to this edition of the newsletter: Sam Corbin, Pete Gilmore, Katherine Howard, Richard Primack, Marc Welch, and Beth Wilkinson.

An Immense World by Ed Yong

Editor's Intro: In our quest to preserve open space in Newton, understanding the creatures of the animal world that inhabit these spaces is of great interest. In this book review of *An Immense World*, board member Pete Gilmore shows how echolocation is vital to many of our wildlife, and as one example, draws attention to his work as a leader of bird and nature walks in places like Cold Spring Park. To learn more about Ed Yong's work, visit the following website: <https://bit.ly/3WZPCMA>



An Immense World is a mind-opening book. Ed Yong has researched the scientific literature and presents material that stretches your imagination. It is full of descriptions of the senses of various animals. He encourages us to try to imagine what it is like to have the different experiences that various creatures have.

Take echolocation, for instance. We all know bats echolocate. How exactly do they use this to hunt

prey moving fast and erratically, trying to avoid the bat? Some species of moths even have evolved sounds that “jam” the radar of the bats. Dolphins also echolocate and have the only type of sonar available to the U.S. Navy to locate mines buried deep in the seafloor. They can distinguish between objects underwater that are very similar. Dolphins are toothed whales, and other species of toothed whales also echolocate. A false killer whale, for example, could tell the difference between two hollow metal cylinders that differed in thickness only by the width of a hair. Sound waves go through flesh, unlike light waves; thus, dolphins can sense your skeleton and interior organs while you are in the water. They live in a different world than we do.

Certain human beings can also echolocate. Daniel Kish, for example, has been blind since early childhood. At about three or four years old, Dan dropped out of his bedroom window and took a tour of the neighborhood at night. At that time, he was echolocating objects around him, and he had been doing it instinctively from a very young age. Neighbors saw a very young child, a blind one, walking around their backyard in the darkness. They got him safely home. Now, he has been practicing this skill his entire life. He has founded a non-profit to teach other blind folks how to echolocate. Kish believes his skills are not an oddity but something that most humans can learn. He senses large objects and cars coming, but not small differences, like a curb along the sidewalk, so he also uses a cane.



Graphic courtesy Deposit Photos

The book's chapter on threatened sensescapes, “Save the Quiet, Preserve the Dark,” is especially relevant in Newton. I lead bird and nature walks in Cold Spring Park twice a year. Birds that used to breed there are not found there anymore. Neighbor and Brandeis University biologist Dan Perlman got a parabolic sound reflector to record sounds in nature, particularly bird songs. In Cold Spring Park, the volume of human-generated sounds is omnipresent, making it impossible for him to record bird songs with clarity and focus. Many people consider Cold Spring Park an oasis, away from human noise and traffic. However, it is incredibly noisy for the birds and animals that live there. Our noises interfere with birds hearing each other, the approach of predators, and the sounds of insects as potential meals. Our sounds interfere with courtship and defense of nesting territories. We will lessen some noise as we move towards hybrid and electric vehicles. We may not be able to do anything to reduce most of our noise, but being aware of it may lead to lessening it in chosen locations. Imagine the animals sleeping peacefully right before a fireworks display.

Then there is the matter of light. People in ancient cultures were in the presence of nightly displays of the stars. They have passed down to us the names of constellations and the signs of the zodiac. The night sky was a source of wonder for them. But in today's world, most of us are cut off from that wonder, except if we live far from our cities. It is quite a bit more severe for migrating birds, who are attracted to the lights of cities. Turning off lights in large buildings during migration is a start. Taking care of Nahanton, Kennard, and Cold Spring Parks requires more urgency when you realize that migrating birds will be attracted to the lights in town and have only those oases to find food when they land. This is when they are in the middle of a journey that stretches their bodies to the limits of possibility.

We have drastically reduced the biomass of insects near cities in Europe and North America. It is crucial to preserve natural, native areas in and around our cities. The insects left in these places are attracted to all kinds of public and private light at night. Bats are familiar with this and fatten around lights, attracting many insects. Just as our noises interfere

with the lives of birds, our lights interfere with the lives of insects. Remember when attendants at gas stations would scrape the bugs off the windshield of your car, particularly if you just pulled in off the highway? No more. We are good at upsetting the balance of the chain of life. The consequences are beginning to emerge, good and bad.

Of course, some of us are threatened by the insects that are left, and we spray them in a way that kills most of the insects on our property. No insects, no birds. Many of the plants

that are ornaments in our yards cannot be eaten by native insects. We are creating a world in which we will end up more uncomfortable than if we cared more for the richness of life we are given. Understanding other creatures' senses and the world they experience can help us care for them and benefit us in the long run. Ed Yong opens the window to understand the tremendous variety of life around us and to care for that life. ♦

✿ Pete Gilmore

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Individuals 70½ 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 2024 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



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Savannah Sparrow at Nahanton Park
photo by Haynes Miller

Go Green! ...and all the other colors of the rainbow. You can view this newsletter at newtonconservators.org/newsletters. To elect not to receive a paper copy of the newsletter, email us at membership@newtonconservators.org.