BROAD BROOK COALITION

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ABOUT US

Broad Brook Coalition (BBC) is a nonprofit, all-volunteer organization incorporated in 1988 with the mission of preserving open space and promoting affordable housing. Under a memorandum of understanding with the Northampton Conservation Commission, BBC is responsible for the day-to-day management of the 936-acre Fitzgerald Lake Conservation Area. BBC's goals are to maintain and enhance the diversity and integrity of wildlife species and habitat at FLCA, promote outreach and education, and provide public access for passive recreation that is compatible with habitat protection.

Our work in trail maintenance, stewardship, education, and land preservation to expand FLCA is funded by the generous support of our members and occasional grants.



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PRESIDENT'S MESSAGE PAGE 2 FIFTH-GRADE FIELD TRIP PAGE 4

Broad Brook Coalition Annual Meeting

Sunday, Nov. 12 — in person and via Zoom — 2:00–4:30 p.m.

Members and friends are cordially invited to attend the Broad Brook Coalition's annual meeting on Sunday, November 12. Please join us to celebrate BBC's 35th anniversary! This year's meeting will be presented in hybrid format: you may attend in-person at the Florence Civic Center or at home via Zoom. Information about how to attend virtually will be sent by email ahead of time. Light refreshments will be served at the Civic Center starting at 2:00 p.m., with the program to follow at 2:30.

This year's speaker is Bob Leverett, who will present the keynote address titled *Northampton Woodlands' Importance to Climate Mitigation*. The woodlands of Northampton and the surrounding area offer an abundance of maturing and mature tree cover that helps in climate mitigation. Forest managers often differ in their interpretation of the roles of younger versus mature woodlands in terms of their respective rates of carbon sequestration. The Fitzgerald Lake Conservation Area is a prime property to use in investigating their arguments as well as other areas, including Look Park and Smith College's Lyman Estate. This presentation will look at individual trees and wooded areas, primarily in Northampton, and evaluate them in terms of their climate mitigation impacts.



Bob Leverett is recognized by Wild Earth publications as the East's "premier old-growth forest evangelist." Co-founder of the Native Tree Society, and co-founder and President of Friends of Mohawk Trail State Forest, he co-discovered a major percentage of the old-growth forests in Massachusetts and is now Chair of the Forest Reserves Science Advisory Committee of the Massachusetts Department of Conservation and Recreation.

A nationally recognized expert on tree-measuring, Bob co-produced *American Forests Champion Tree Measuring Guidelines Handbook.* He has co-authored

the Sierra Club Guide to Ancient Forests of the Northeast and Island Press's Eastern Old-Growth Forests: Prospects for Rediscovery and Recovery. Recently, he published a peer-reviewed paper in Frontiers with William Moomaw and Susan Masino: Older Eastern White Pine Trees and Stands Accumulate Carbon for Many Decades and Maximize Cumulative Carbon. For Northeast Wilderness Trust, he is developing detailed comparisons of tree carbon models to assess their reliability.

President's Message: FLCA Celebrates its 35th Anniversary

Though the land that now comprises the Fitzgerald Lake Conservation Area was long occupied by native peoples, its recorded history began roughly 350 years ago. From the late 1600s till the mid-1800s, it was used by the citizens of Northampton for deer hunting to the north of Broad Brook and as a source of wood, turpentine, fence posts and lumber to the south. From then on, the land passed through a succession of owners who put it to use variously as a vegetable and poultry farm to nourish the patients of a doctor in Florence who specialized in hydropathic cures (1859-1885); a farm owned by Francis Cooke and his sons whose name now adorns the large field north of Broad Brook (1885–1927); a pasture for grazing beef cattle (1927-1960s); a site for the National Guard to practice maneuvers during World War II (early 1940s); and the Mondegas Park recreation and dance hall for Corticelli Silk Mill workers (1950s).

In 1935, Harold Fitzgerald acquired 350 acres between Bridge Road and the Broad Brook and, in 1965, constructed an earthen dam across the brook to create a 40-acre lake as the centerpiece of a new lakeside community. The plan was abandoned, however, owing to new federal wetland restrictions adopted in the 1970s, and a 155-acre parcel including the lake was sold by Fitzgerald to the City in 1977, providing the nucleus of the Fitzgerald Lake Conservation Area. To the east, the land around Cooke's Pasture was sold to Northampton Land Partnership, which planned to construct a development of trophy homes called "Hidden Oaks Estates." This project was abandoned due to inadequate access, and the 161-acre parcel was subsequently offered for sale in 1987 to the City, which declined. It was next sold to the Hartford Insurance Company, then finally acquired by the City in 1994 with a significant financial contribution from the nascent Broad Brook Coalition.

Broad Brook Coalition was founded and incorporated by a group of local residents in1988 with the mission of managing the budding conservation area and to contribute to affordable housing as compensation for the removal of potentially developable land from the market. A particular focus was to stop the development of housing on Cooke's Pasture, an objective that succeeded a few years later. In the 1990s and beyond, a number of smaller abutting parcels were purchased by the City and incorporated into the conservation area. The inclusion of many habitats-fields, forests, marshes and lake-ensured that a wide variety of plants, birds and other wildlife would find a protected home. At the same time, several miles of trails were built so that the public could enjoy the area at all times of year. Each season presents different opportunities to enjoy-and improve-the many attributes of the conservation area.

With the advent of spring, early-blooming wildflowers appear along the trails in the woods and fields together with a variety of mushrooms and ferns. Animals that were quiet—perhaps even hibernating—over the winter re-emerge. Beavers and otters ply the lake, bears can be sighted with their cubs, and an abundance of migrating birds return from the south to visit or nest. A survey conducted a few years ago cataloged over 75 bird species who made FLCA their home. At the same time, volunteer crews repair winter damage to the trails and trim shrubs in the pastures to prepare for new growth.



During the summer, naturalist talks on a diversity of topics-from beavers and leaf-mining insects to wildflowers and vernal pools-are in full swing. Birds, bees and butterflies abound. Our efforts turn to the control-and in the best cases, elimination-of invasive plants throughout the conservation area. Water chestnut pulls in the lake begin in June each year and continue through the summer. Only 100 lbs. of this invasive were harvested this past summer compared to over 1,000 lbs. six years ago. Our contractors use highly targeted herbicide application to treat invasive buckthorn and knapweed in the pastures and forest edges, along with lesser amounts of other non-native plants. We estimate that in the past 10 years we have reduced the burden of invasive plants in Cooke's Pasture, the marsh, and the dam by 90-95%.



Fall provides striking vistas of the lake as the birches, oaks and maples turn from green to yellow, orange and red. Beavers pile fresh saplings next to their lodges to stock their winter larder. Invasive common reed (*Phragmites*) is spottreated with herbicide in a continuing effort to eliminate this non-native plant from the Broad Brook marsh. The BBC Board lays plans for its annual meeting and membership drive as winter approaches.



The conservation area returns to quiet in winter as cross-country skiers glide along the trails, skaters venture onto the frozen lake, and fishermen chop holes in the ice in hopes of luring a bluegill or large-mouthed bass to their lines. Meanwhile, the BBC Board is hard at work organizing the program of workdays and naturalist walks for the coming year. Maps and brochures are revised and printed, and we make sure the entrance kiosks are up to date in anticipation of spring.



As the year closes, we take stock of the numerous challenges that we face in the future, including the rapid decimation of pollinators, the relentless advance of invasive plants, and the effects of climate change on the well-being of all forms of life that inhabit the conservation area.

We welcome your participation in all of our activities. Join us for a "Walk &Talk" to learn about the plant and animal inhabitants of the conservation area. Help the Trails Committee blaze trails and build bog bridges over wetlands. Grab your kayak and take a cruise on the lake to enjoy the view and pull invasive water chestnut. Advocate with the City for new land purchases. And don't forget to attend the annual meeting in November to hear presentations about the natural history of the FLCA and issues affecting the health and vitality of our local natural areas. This year, we are pleased to host old-growth forest expert Bob Leverett who will discuss the importance of Northampton's woodlands to the mitigation of climate change.

Fifth-Grade Field Trip at FLCA

The BBC board created an Education Committee several years ago to explore possibilities for sponsoring nature programs aimed at school-age children. Our first attempts were stymied by Covid-19, but this year we managed to pull off our first field trip. Board member Yamila Irizarry-Gerould made the initial arrangements with Kieran Slattery, a fifth-grade teacher at the Jackson Street Elementary School. Some 50 students, from all three fifth-grade classes, were bused to the Fitzgerald Lake Conservation Area for an hour-long program on the morning of May 2. Laura Beltran, who is a nature educator at Arcadia, helped devise the activities, which were organized around three stations, each manned by a BBC board member. The students were divided into groups and moved from station to station for brief interactive presentations.

Dick Wynne was at the dock, where students were asked to listen for any sounds they could hear—birds? frogs? insects? They discussed why they thought animals would vocalize, and also looked around for anything of interest to see on the lake or along the shore. Red-winged blackbirds could be seen (and heard) in the nearby cattails, there were painted turtles sunning themselves on logs, and one group was fortunate enough to see a great blue heron fly across the lake right in front of them.

The second station was at the longtime beaver lodge just before the Fishing Place, where Rich Baker oversaw the scavenger hunt that Laura had drawn up. Students spread out and looked for signs of beaver activity, including trees that had been partially chewed but were still standing, the stumps of trees that had been felled and removed, and wood chips wherever the beavers had been chewing. They then trooped onto the lodge itself for a closer look at how these structures are built, using sticks of various sizes held together with mud. It appears that this lodge has been recently abandoned, but even when active it is sturdy enough to hold a class of fifth graders without any damage.

Station number three was one of the vernal pools just off the Fishing Place trail, where Brad Timm was waiting with his dip net and basins. Brad is a wildlife biologist specializing in amphibians, and early May is the perfect time to dip into a vernal pool. Brad scooped up some wood frog tadpoles, fairy shrimp, caddis fly larvae, and predacious diving beetles. This was a chance for students to observe a variety of aquatic life wriggling and kicking close up, and to learn about their life cycles and habitat needs.

BBC would like to thank Kieran for his enthusiastic participation in helping plan and carry out this field trip, as well as the parents who came along as monitors and the Jackson Street School administration who supported the program. We hope to hold other field trips in the coming years, and give other students the chance to get out of the classroom, learn about the natural world in their backyard, and, as these fifth graders happily did, get their feet muddy.













-Dave Pritchard

The Fungi of Laurel Park

Mycologist Peter Russell spent the last several years observing and photographing the mushrooms he found near his home in Laurel Park, at the edge of the FLCA. Because of its mix of mature and young trees, this small community hosts a wide variety of fungal species. Last year Peter published the results of his efforts in a richly illustrated book, The Fungi of Laurel Park (Barnes and Noble Press), which describes the trees that are found there, their fungal associations, and the general edibility and toxicity of the types of mushrooms that are present. Following is a selection from the 150 photos in Peter's book, all of which can also be found in the Fitzgerald Lake Conservation Area.



Amanita chrysoblema





Cyathus striatus







Clavaia zollingeri



Phyllotopsis nidulans



Mutinus elegans



Hygrocybe squamulosa



Exsudoporus frostii



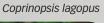
Gliophorus psittacinus

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Xeromphalina campanella





Leotia viscosa



Lactifluus volemus



Tylopilus plumboviolaceus



Microglossum rufum



Mycena leaiana



Lepiota americanus



Fistulina hepatica



Scutellinia scutellata



After five years using their original trail cam, the Trail Committee decided this year to purchase an updated model to enhance the videos they have been posting on the website and YouTube. The new camera is a Bushnell Core DS-4K, which has a considerably higher resolution and a separate imaging device for daytime vs. nighttime photography. Higher resolution not only improves the quality of the videos themselves, but it also provides sharper images when stills are created from the video footage for the newsletter or website. The Bushnell also has a quicker trigger time than the Browning Strike Force camera in use up to now, which in the case of fastmoving animals gives a little extra time to capture an image. The committee plans to use both cameras going forward. Of the three photos included here, only the bobcat was taken with the new camera. Even at nighttime, the higher resolution of the Bushnell cam is obvious. We will continue to monitor these cameras and include more trail cam photos from time to time. Thanks to Trail Committee member Michael Kesten for providing the technical details of these cameras, and to the Trail Committee as a whole for placing and maintaining these cameras. For the videos from which these stills were taken, visit the BBC website and open the Flora and Fauna tab, then click on FLCA Trailcams.

—Dave Pritchard





Another Collaboration with Historic Northampton

BBC has been fortunate to co-sponsor several programs with Historic Northampton in recent years, and we did so again this spring. In late May, Laurie Sanders, Co-Executive Director of the organization, led a walk along the Swamp Forest Trail on the east side of FLCA. Laurie brought her considerable knowledge of the history, geology, and ecology of the area to this walk. The various habitats (as Laurie is fond of pointing out) are greatly influenced by the former presence of glacial Lake Hitchcock, which kept this area under water for several thousand years, until it drained away around 12,000 years ago. Laurie paused in the



BBC and Historic Northampton co-sponsored a spring walk on the Swamp Forest Trail, led by Laurie Sanders. Pictured here are a scenic pool and the T-Rex stone near the Rocky Knoll Loop.

wet meadow near the beginning of the trail to point out the various sedges, horsetails, and ferns typical of that habitat. At the scenic spot where the brook flows past a large rock formation, she explained how the ancient lake bottom sediments eroded into a narrow inlet of the receding lake to eventually form the Broad Brook streambed, now dominated by cattail marshes and beaver ponds. On the way out, she stopped at a large boulder just off the Rocky Knoll Loop path to pay homage to a remarkable boulder that perfectly mimics a T-Rex skull. A walk with Laurie always comes with a surprise or two!

Old Friends

Even as a kid. [had a passion for nature. My earliest memories of learning the names of wildflowers were on day camp outings to a Mass Audubon sanctuary. By the time I moved to the Pacific Northwest in 1975, I'd built a respectable foundation of natural history knowledge in New England, having learned the names of most of the plants and animals I'd encountered. But that was followed by a lifetime spent away from my region of birth, learning about the awesome natural worlds of Washington, Oregon, and Minnesota. One's mind can only hold so many Latin names and ecological facts, so over the years, my familiarity with New England's natural history had faded.

After decades of only occasional visits, it's been a delight for my wife and me to return to the forests and meadows of the Northeast. From the first day, I'd step outside and happen upon an old acquaintance. I remember seeing the humble little partridgeberry early on, and feeling like I'd found a long-lost friend. In contrast, I discovered the songs of the tufted titmouse, a very common and vocal bird in our area, but one that, for the life of me, I cannot recall having known. They say a benefit of a poor memory is that you get to enjoy discovering things all over again!

Because we arrived in May, I was immediately thrown into the excitement and complexity of the avian breeding season's many bird songs. Back in the day, I'd spent my driving time listening to cassette tapes of bird songs, trying to memorize the nonsense phrases that would imitate the songs, and reading the sonograms (diagrams of bird songs) provided in the Golden Guide, a leading field book of the time.

Fast forward to 2022. Who could have imagined in 1970 that we'd have hand-held computers that can listen to the song of a wild bird you can't even see and tell you what species is serenading you? (If you haven't discovered it, the "Merlin" phone application from the Cornell Lab of Ornithology is an amazing tool for anyone interested in learning to identify bird songs.) Although my brain no longer has the capacity to retain 25 warbler songs, it is great fun to relearn the 25 or so most common birds of our forests and meadows. And occasionally I will hear an old friend like the black-throated green warbler, with its subtle, distinctive song and fun mnemonic ("zee zee zee zoo zee") that brings me right back to the first times I learned it, while working at Acadia National Park in Maine. Nature is like that, with sights, sounds, and smells that evoke long-forgotten memories.

And what about relearning all the trees, wildflowers, mushrooms, butterflies, and frogs, not to mention the plant communities and ecological associations that provide the context for all this biological diversity with which we are blessed? I'll have to pace myself, and take it a step (or a species) at a time.

But again, my phone is helping me put a name to that face that says "hello, old friend." Like the Merlin bird ID application mentioned above, "Seek" is a fantastic phone application (from iNaturalist) that uses a phone's camera to identify plants, insects, mushrooms, and pretty much any living thing that will hold still long enough for the artificial intelligence to puzzle out what you're looking at. Since moving here, I've used it to identify 81 plants, 12 insects, 11 mushrooms, 2 amphibians and 2 slugs. And it never loses patience if I ask about the same species for the fourth time!

As you visit Fitzgerald Lake Conservation Area and our wealth of other natural lands, take the time to look and listen to the diversity of life that surrounds you. Our world is jammed with plants and animals that will amaze and inspire you. I hope you'll join me in discovering old friends and making new ones in nature!

-Rich Baker

We Need a Membership Secretary!

BBC is looking for a membership secretary. Responsibilities include writing and mailing donation acknowledgment letters, preparing annual requests and reminders for commercial printing, and working closely with the Treasurer to maintain the membership spreadsheet. September through January is somewhat busier than the rest of the year, when responsibilities are minimal.

Please email Tina White at treasurer@broadbrookcoalition.org to learn more.

This would be a wonderful non-monetary way to contribute to BBC!

2023 Walks and Talks

For the first time since Covid-19 emerged in 2020, BBC held a full schedule of educational programs this year. Though we continued to offer walks in each of the previous years, they were reduced in number and restricted in attendance. This year, however, we lifted the restrictions and resumed a normal schedule. Following is a description of the walks we offered in 2023.

Spring Birds



Steve Winn and Lesley Farlow led off this year's programs with a birding walk along Boggy Meadow Rd. on May 6. There were 14 participants, from experienced to beginner level. The main stops were at the beaver pond, the lake, and finally the bird blind. We counted 41

species in all, including both blue and green herons, a broad-winged hawk, and six different warblers. An early Baltimore oriole was heard, as was a rose-breasted grosbeak. The high individual count was 28 red-winged blackbirds, with 22 tree swallows coming in second.

Wildlife Habitats



Board member Brad Timm led this well-attended walk along Boggy Meadow Rd. to the beaver pond to examine some of the key habitats that support such a variety of life at FLCA. The pond and the series of dams that created it were the primary focus. This beaver-created habitat is now home to nesting herons, migrating waterfowl, and many mammals and amphibians

that breed, feed, and hunt there. We were lucky to observe several large northern water snakes basking at the edge of the pond, soaking up solar energy after hibernation, as well as a sluggish garter snake and a migrating solitary sandpiper.

Shrubs, Lichens, and Plants of the Forest Floor



Molly Hale calls herself an all-purpose naturalist, but she has recently been concentrating on lichens, and this walk turned up a number of these intriguing organisms, which are composite associations of an alga and a fungus. A hand lens revealed some of their intricate structures and beautiful colors. In addition, Molly pointed out some forty

herbaceous plants of the understory, some with names straight out of fairy tales: enchanter's nightshade, virgin's bower, and princess pine.



Learn Your Ferns

Randy Stone's 2021 fern walk was so popular that we asked him back again for this year. Randy is a member of the Pioneer Valley Fern Society and enjoys sharing his knowledge of these ancient plants. He pointed out the 12 most common ferns in New England as well

as several other less common species, such as the diminutive cut-leaf grape fern. In addition to showing how to identify ferns, Randy provided information about their remarkable life cycles and the conditions under which they flourish.

Mushrooms in the Woodland Ecosystem



Peter Russell has recently published a book cataloguing the mushrooms he has found in Laurel Park, on the edge of FLCA, most of which are also to be found in the conservation area. On this September walk he discussed some of

the roles fungi play in the forest, such as decomposing dead material, building soil, and, in the case of mycorrhizal species, providing mineral nourishment to trees in exchange for the sugars that the trees produce through photosynthesis. This is another group of organisms with often fanciful common names, such as brown rotters, turkeytails, chicken fat fungus, destroying angel, and witches' butter, all of which were found on this informative walk.

Insect Tracks and Signs



In 2021 Charley Eiseman carried out a two-day survey of herbivorous insects at FLCA, identifying most of them by the traces they leave on bark, stems, leaves, and other objects. His

report is available on the BBC website under the Flora and Fauna tab. On his September 16 walk he demonstrated how and where to look for these insect signs, pointing out leaf mines, various galls, wood borer tunnels, and the way some larvae roll or tie leaves with silk to make protective structures. Most of us walk by these signs all the time without ever noticing them, but attendees of Charley's walk had their eyes sharpened and their interest piqued.

Beavers at Sundown



This October 21 walk will be held after the newsletter goes to press, and will be led by Brad Timm using the North Farms Rd. entrance. There has been a good deal of new beaver activity in

Fitzgerald Lake this last year. The large lodge near the Fishing Place has apparently been abandoned after many years of continual occupancy, and at least two new lodges have been built along the same shore. Join Brad to learn more about the lives of these amazing habitat engineers.

Species Spotlight

(This is the tenth in a series of articles featuring species of animals and plants that are readily found in the Fitzgerald Lake Conservation Area. A fuller version of this article will be placed on the BBC website, broadbrookcoalition.org.)

Common Name: Belted Kingfisher

Scientific Name: Ceryle alcyon

Physical Description: The Belted Kingfisher is a rather robust-bodied bird with a daggerlike beak, a relatively large head, and a mix of predominantly blue and white feathers. The feathers that form the head crest have a spiky or shaggy appearance. Females have a rusty-brown band across their chest, which is an easy way to differentiate them from males, which do not have this band. They are roughly the same size as a Northern Flicker.

Longevity: They can live up to 15 years in the wild.

Distribution: Belted Kingfishers are found year-round throughout the lower 48 U.S. states, except in extreme northern portions of the upper Midwest and New England (where they are only found in the breeding season, as is also the case throughout much of Canada and Alaska) and extreme southern portions of the southernmost states (where they are only found in winter, as is also the case throughout Mexico, the Caribbean, Central America, and extreme northern South America).

Habitat: Belted Kingfishers are predominantly found in or near wetlands, especially open wetlands including ponds, lakes, rivers, freshwater marshes with extensive open water, and saltmarshes.

Reproduction: Females most commonly lay 6-7 eggs in a nest that is typically in a burrow that both the male and female excavate into a bank of soil, which can extend to six feet deep. Throughout most of their range they will raise one brood of young per year, though in the southern portion of their breeding range they will sometimes raise two broods in a year.

Diet: Their diet is primarily comprised of small fish, which they typically catch by diving from a perch above the water, but they will also eat insects, amphibians and reptiles, shellfish, small mammals, and berries.

Conservation and Management: Belted Kingfishers are quite common and widespread throughout their expansive range, though they have been experiencing a modest decline over recent decades. One of the limiting factors for their populations appears to be the scarcity of earthen banks suitable for nesting, though they have adapted to nesting in similar settings created by humans, such as the banks of sand or gravel pits. Historically they were persecuted due to their propensity to eat fish from hatcheries and human-fished bodies of water, but this has been outlawed due to migratory bird protection legislation over the past century.



Interesting Facts:

• Kingfishers regurgitate undigestible parts of their prey (such as bones and scales) in a pellet, similar to owls.

• Parents teach their young how to hunt by dropping prey, such as dead fish, in the water for the young to "hunt."

• Pairs excavate their nest cavity using a combination of their bill and their specialized feet, which each have two toes that are fused together, improving their digging ability.

-Brad Timm

Please visit our updated website at www.broadbrookcoalition.org.

There, you can view upcoming events (such as our Walks/Talks and Work Days), learn about the animals and plants found at Fitzgerald Lake Conservation Area, and access current and previous newsletters, among many other features. Broad Brook Coalition P.O. Box 60566 Florence, MA 01062

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Donate Online! Renew your membership or join BBC on our website (click on Donate)

The Broad Brook Coalition needs your help, too. We are very grateful for membership dues, but want you to know that you can contribute in other ways. Members and friends are needed to help carry out our goals.

Please consider one or more of the following volunteer opportunities:

___ Board Member ____ Trails Committee (maintenance and repair) ____ Clerical

____ Stewardship Committee (includes invasive species removal) ____ Land Preservation/Acquisition Committee

__ Occasional Work Days ___ Education Outreach ___ Newsletter writer ___ Other (please specify) ___