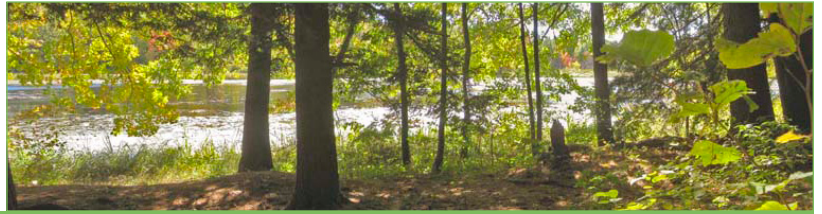


# BROAD BROOK COALITION



www.broadbrookcoalition.org

Volume 34, Issue #1, Spring 2022

## BOARD OF DIRECTORS

2021-2022

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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 900-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.

## President's Message: March of the Invasives

Plants and animals have been continually moving into new habitats and new regions throughout the ages in response to improved nutritional sources, the availability of water, and changes in the climate. The effects of many such range changes are innocuous and don't perturb the existing ecology. But when these invaders compete with and displace existing flora and fauna, we label them as "invasive" and usually regard their appearance as an unfortunate or harmful intrusion. We're likely all aware of the many invasive plants that have taken up residence in our region but we're generally less mindful of numerous invasive invertebrates, particularly insects, that have recently caused the decline of native plant species. Over the years, many invasive organisms have been introduced, intentionally or unintentionally, in shipments of flowers, shrubs, trees, wood-based packing materials, and even rocks, from Europe and Asia.

In the Fitzgerald Lake Conservation Area, we've been battling the proliferation of numerous invasive plants for many years. Most of those we encounter have existed in our area for a long time and we can't really date their arrival. Among them, **knap-weeds**, **buckthorns**, **multiflora rose**, and **black swallow-wort** grow in open fields; **garlic mustard**, **Asiatic bitter-sweet**, **Japanese barberry**, and **winged euonymus** proliferate in wooded areas; **Japanese knotweed** and **purple loose-strife** are found in wet areas, **Phragmites** (common reed) occurs in marshes, and **water chestnut** propagates in Fitzgerald Lake. Hand removal works well for many of these plants while digging out the root system is effective for others. For large infestations, herbicides have been applied to target plants in a highly specific manner that does not harm adjacent vegetation. Overall, we have made significant progress in reducing or eliminating most of these invasives at the FLCA, yet efforts to control them require attention every year.



*Mile-a-minute*



*Porcelain-berry*

At the same time, new invasive plants are appearing on the horizon. **Kudzu**, **mile-a-minute**, and **porcelain-berry** are all fast-growing perennial vines from Asia that have been found at numerous sites in Massachusetts. The dense foliage of these plants can overwhelm and smother native shrubs and trees. Another invasive, **Japanese stiltgrass**, which can densely cover the forest floor and crowd out other plants, has been discovered locally. Though none of these have yet been



*Hydrilla Verticillata*

found in the FLCA, their spread in New England may be exacerbated by the ever warmer temperatures that result from climate change. Also worthy of note are two aquatic invasives that out-compete native plants and reduce dissolved oxygen available to fish: **Eurasian water milfoil**, which forms dense mats on many ponds and lakes in Massachusetts, and **Hydrilla verticillata**, which is making its way up the Connecticut River and its tributaries. Luckily, neither has been found in Fitzgerald Lake but, as they are hard to control once established, it is important that kayakers and canoers thoroughly wash their boats before launching in the lake.



*Hemlock Woolly Adelgid*

Invasive insects provide an altogether different kind of ecological threat by sickening and killing native trees and shrubs. With the exception of the **gypsy moth** which was imported from France for silk production in 1869, most are recent arrivals in Massachusetts. The **hemlock woolly adelgid** was discovered in Massachusetts in 1988. Immature adelgids feed on the sap of hemlock trees, often weakening and slowly killing them. This insect can be suppressed by treating infested trees with insecticides or by spraying them with horticultural oil. A few hemlocks with the woolly egg masses characteristic of this insect have

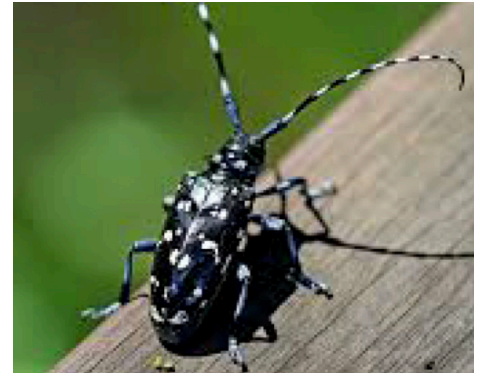


*Emerald Ash Borer*

been found in the FLCA, but the host trees do not seem to have been adversely affected so far. The **viburnum leaf beetle**, a native of Europe, was first detected in Massachusetts in 2004. Its larvae feed on viburnum leaves, leaving a lace-like leaf skeleton. Repeated rounds of defoliation can weaken and eventually kill the host plants. Spraying viburnum bushes with agents such as spinosad, a mixture of naturally occurring compounds derived from soil bacteria, has proved to be an effective control. The **emerald ash borer**, a tiny insect native to Asia, was first found in Massachusetts in 2012 and has recently become established in Hampshire County. The larvae tunnel under the bark of ash trees into the cambium layer, creating zigzag channels as they feed. When the damaged cambium girdles the tree, nutrient flow is disrupted and the tree will die. The most promising control measure for the emerald ash borer is the introduction of parasitic wasps that attack either the eggs or the larvae on infested trees. Since chemical or biological control of these insects is often quite labor-intensive, their spread can best be minimized by destroying their infested hosts.

*Invasive insects provide an altogether different kind of ecological threat by sickening and killing native trees and shrubs. For two recent arrivals, there are no effective control methods.*

For two recent arrivals, there are no effective control methods. The **Asian long-horned beetle**, discovered in Mas-



*Asian Long-Horned Beetle*

sachusetts in 2008, endangers a wide variety of native hardwood trees. Its larvae tunnel into the cambium and then into the woody tissue forming galleries in the trunks and branches that ultimately kill the tree. Breeding populations of the **spotted lanternfly**, another Asian invader, were first found in Worcester County in 2021 and 2022. Both the adult and immature forms of this insect suck sap from their host plants, leaving behind a sticky ooze that promotes the growth of harmful mold. Though lanternfly infestation weakens their hosts, it rarely kills them. Since there are no natural predators and few insecticides to which the long-horned beetle or lanternfly are vulnerable, cutting down, chipping and burning infested trees is the most practical solution for removing these insects from the environment.



*Spotted Lanternfly*

Moral of this story: Invasive organisms are on the march. Be on the lookout for invasive plants and insects in your gardens and backyards, and grow only native plants if possible. And if you discover any infestations of invasives at the FLCA, please let us know the species and location at [info@broadbrookcoalition.org](mailto:info@broadbrookcoalition.org) so that we can mount a quick response to them.

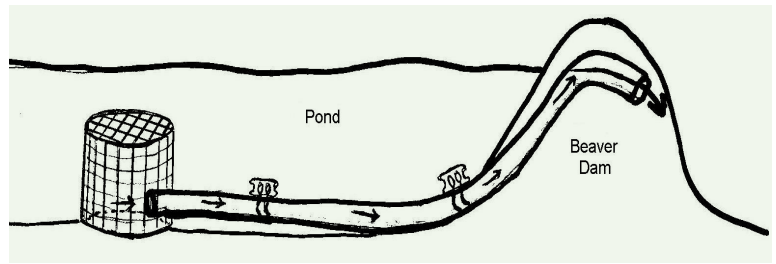
— Bob Zimmermann



## Beavers and the BBC

In November 1998 my wife and I and a few other volunteers installed our second beaver dam pipe ever on the west end of Fitzgerald Lake. This innovative "Flexible Pond Leveler" resolved an abutter's beaver dam flooding problem. Little did I know then that in 2000 I would start my Beaver Solutions LLC business, and would install over 1,800 successful, nonlethal water control devices across southern New England by 2022.

Since that first "beaver deceiver" at Fitzgerald Lake, we have also installed flow devices on the outlet pipe in the dam, at a beaver dam near the lake boardwalk, and at a series of three dams on Pine Brook that were causing flooding along Boggy Meadow Road. This fall we piped the lowest of these dams to resolve the recurrent flooding. BBC member Michael Kesten filmed the work and created an excellent 13-minute video showing how we assemble and install these devices. Check it out at: [tinyurl.com/yckr37pw](http://tinyurl.com/yckr37pw)



*The flexible pond leveler is positioned at some distance from the dam to minimize the perception of flowing water.*

## Why do we do this work?

Beaver dams can cause serious flooding problems for humans, but these dams also create wetlands that have innumerable ecological benefits. In fact, the dams along Pine Brook have created a sizeable pond that is now home to nesting blue herons, green herons, migrating waterfowl, and many other aquatic species. So finding a middle ground to live in harmony with beaver-created wetlands benefits everyone.

Despite their public perception, wetlands are not wastelands. They store valuable water and clean stream flows by filtering and removing runoff fertilizers, suspended particles, and toxins. They provide a buffer against wildfires and reduce flooding damage from catastrophic storms. Wetlands also increase biodiversity and serve as critical habitat for many endangered species, preserving plant and animal genetic diversity. In addition, they are an effective means of storing carbon. All these attributes help reduce climate change damage.

Freshwater wetlands have been labeled the "Earth's kidneys" and are as valuable and productive as coral reefs and rain forests. Yet, according to the U.S. Fish and Wildlife Service, over 50% of America's freshwater wetlands have been lost to draining and/or filling, and much of the remaining wetlands have been degraded.

Fortunately, the best wetland restoration specialist in the world is available to help: the beaver! *Castor canadensis*, the North American beaver, created extensive wetlands across much of the continent for millions of years. Innumerable species co-evolved with the beaver to take advantage of the lush habitats they create with their dam building. This is why biologists classify beavers as a "keystone species" critical for our planet's health.

Nearly trapped to extinction in the 18th and 19th centuries for their fur, beavers have made a comeback since the mid-20th century, and with them, so have many of our wetlands! As beavers returned, so did an important natural cycle that had been missing from our landscape. When beavers open the forest canopy by damming streams and cutting down trees they create new transition zone habitats where various species thrive. So while killing trees, in and around a beaver pond appears destructive, these dead trees actually create critical habitats. Since beavers prefer not to travel far from the water, eventually they exhaust their woody food supply and move to a new location. Then their dams develop leaks and the ponds drain out. The rich pond sediment gives rise to a lush, grassy meadow. Eventually shrubs and trees become established, and after 10 to 15 years there is enough woody vegetation to attract new beavers, and the process starts over. This natural beaver cycle creates a repeating series of successional habitats that support biodiversity.

Unfortunately, across the country, beavers are routinely killed when their dams flood human properties. To better promote progressive management of beavers across North America, in 2017 I founded the nonprofit Beaver Institute. We train beaver wetland professionals (the BeaverCorps) across North America to implement effective, nonlethal measures to resolve beaver-human conflicts when they occur.

Using proven, innovative water control devices and tree protection techniques, the BeaverCorps can resolve most land use conflicts with beavers while leaving "Nature's engineers" in place to do their necessary wetland restoration work. Our goal is to have a trained BeaverCorps professional available everywhere beavers live in the U.S. and Canada.

— Mike Callahan, Beaver Solutions

*To learn more about beavers and our work, please visit our websites ([www.beaversolutions.com](http://www.beaversolutions.com) or [www.BeaverInstitute.org](http://www.BeaverInstitute.org)).*



*Beaver Solutions employee John Egan assembles the intake fence using heavy-gauge steel mesh.*



*The intake fence and flexible pipe are floated into the pond on pontoons, then sunk to the bottom.*



*The dam is breached by hand to accommodate the pipe at the desired level, then covered over again using the same materials.*



*Mike Callahan led a team of BBC volunteers in 2015 to pile trap rock around the base of the chain-link fence protecting the outlet at the Fitzgerald Lake dam, to keep beavers from digging under the fence and clogging the outlet.*

## New BBC Board Member: Yamila Irizarry-Gerould



Yamila grew up at the Pines Edge condominiums at the edge of the Fitzgerald Lake Conservation Area, which helped foster her love of the outdoors. She now lives on the other side of the lake in Haydenville and is an avid hiker, gardener, and birder. She enjoys learning about local wildlife, plants, trees, and flowers, anywhere in the world, but especially in Western Mass and in Puerto Rico, where her family is from. Yamila has a degree in International Relations & Arabic from Tufts University and previously lived in the Middle East for many years. She works at a local labor rights nonprofit that works on issues of human trafficking in global supply chains. She loves sci-fi/fantasy, basketball, animals, social justice, and her community.

The BBC website ([broadbrookcoalition.org](http://broadbrookcoalition.org)) has a wealth of information about Fitzgerald Lake Conservation Area. Please visit us to find upcoming events, learn about the history and ecology of FLCA, renew your membership, and much more. Contact us by email at [info@broadbrookcoalition.org](mailto:info@broadbrookcoalition.org), or write us at P.O. Box 60566, Florence, MA 01062.

## Stories from an FLCA Childhood

I can undoubtedly say I had the coolest backyard ever growing up. We called it “the woods,” also known as the Fitzgerald Lake Conservation Area. We moved to the Pines Edge condos when I was in kindergarten. My brother Diego and I were constantly and blessedly outside.

We made a lot of mud pies, sometimes with less than neighborly intentions. In those early days, we weren’t allowed to go beyond the edge of the forest on our own, so we would gather twigs and soil and leaves from the edge of the woods and mush them into a naturally magnificent concoction that we’d unceremoniously leave on our least favorite neighbor’s doorstep. I was heartbroken when I watched that same neighbor cut down some saplings at the edge of the forest to “clear the way for sunlight” – Mami scolded me for sticking my tongue out at him behind his back. Anything other than reveling in the woods’ grandeur made no sense to me.

The vernal pools directly behind our unit used to be louder and wetter. I wish it wasn’t one of the many traits climate change has devastatingly altered in the forest over the years. Sometimes one of our parents would accompany Diego and me back there to help gather tadpoles into a big jar; we would observe their nifty transformation before releasing them back to their home, hoping their grown-up frog croaks would lull us to sleep soon after. Forest sounds are the best sleep aid.

I remember waking one morning to the starkness of the winter woods. Mami, Papi, Diego, and I gathered around one of the upstairs windows to gawk at a bobcat sitting stoically among the sentinel trees. I am not sure whose eyes caught sight of it, because its camouflage and stillness were uncanny.

Our eyesight steadily improved over the years, as did our hearing, learning to follow a bird’s call to its perch so we could zoom in with our family pair of binoculars (every family member now has their own pair thankfully). Papi always loved birds, and Diego quickly followed suit, with me reluctantly

catching on once I realized how cool it in fact was. The bird blind was and remains a favorite spot, and I cannot imagine birds would have become such a part of our family narrative without having grown up at FLCA. Our family text thread today is really just a collective bird journal: juncos, titmice, chickadees, pileated woodpeckers in Western Mass, and guaraguao (red-tailed hawks) bridging the cultural and geographic gap to Papi’s native Puerto Rico, where we observe san pedritos, reinitas, zorzales, turpiales. Birding is a family affair.

Our shih tzu canine family member, Nena, loved the bosque as much as any of us. She’d eagerly yank us onto the path by the Moose Lodge, eating rabbit poop and barking imperiously at dogs three times her size. That mighty 12 pounds of dog would make it all the way to the lake in her youth. We’d often have to trick her to turn around to return home; neither the thick humidity nor the deep snow could dissuade her from spending time in the forest, and who could blame her? Our original family pet, Plata the cat, eventually never returned to the condo, and although a bigger creature probably got her, I like to think that she just preferred the woods.

We walked and still do after most holiday meals, a meandering and magical digestive aid. Sometimes we are a posse of cousins and aunts and uncles, other times it is just a couple of us. Sometimes we are quiet and observant, other times the forest makes space for our boisterous conversation. Sometimes we only make it to the marsh to glance at the heron rookery, other times, we go all the way to the lake to greet the beavers.

Diego regularly jogs the same paths that have comforted me after breakups and provided solace for Mami and Papi in their pandemic isolation. The woods have held our family through both challenge and celebration for years.

— Yamila Irizarry-Gerould



# FLCA Bird Checklist

In 2016 I wrote a pair of articles for the newsletter describing how eBird, the citizen science database created by the Cornell Lab of Ornithology, could be used not just to keep track of one’s personal bird sightings but to find out what other birders were seeing as well. This makes it possible, with a little effort, to compile a list of all the birds reported from an area over a number of years, along with information about how often a bird has been seen, at what times of the year, and in what kind of numbers. In other words, eBird makes it possible to create a reliable checklist for that particular area.

This is just what I have done for the Fitzgerald Lake Conservation Area. Several factors make FLCA a good candidate for this project. It’s large enough, and has enough different habitats, to support a wide variety of birdlife throughout the year, yet not too large to make gathering the data impractical. And it’s conveniently located in a populated area, meaning a lot of people go birding there. Though eBird wasn’t created until 2002, it’s easy to add “legacy lists,” and the first sightings reported from FLCA go back at least to 1989. Thus the information I was able to gather represents more than thirty years of reporting, from scores of different birders who together have submitted hundreds of individual lists.

As of the end of 2021, 188 bird species have been reported from FLCA – an impressive number, well over half the birds reported from all of Hampshire County. I have included information as to their frequency (Common / Uncommon / Rare) and seasonality (Spring / Summer / Fall / Winter / All Year) on the checklist as well. It should be noted that these categories are based solely on the reporting from FLCA and do not necessarily reflect a species’ wider presence in the county as a whole. Thus House Sparrows and Northern Mockingbirds are common in the county but seldom reported from FLCA. Similarly, Eastern Screech Owls are resident in the county throughout the year but have only been reported from FLCA in winter.

This checklist will be posted on the BBC website, where it will join a growing number of resources describing the natural diversity of FLCA. Click on Plants and Animals under the Fitzgerald Lake tab to access guides to aquatic plants, seasonal wildflowers, and other natural features of the conservation area. And to everyone who birds at FLCA, please let us know of any unusual sightings you report to eBird; you can email us at [info@broadbrookcoalition.org](mailto:info@broadbrookcoalition.org) and if appropriate we’ll update the checklist as we go along. Happy birding!

— Dave Pritchard

## Fitzgerald Lake CA Bird Checklist

Species	Frequency	Season
<input type="checkbox"/> Snow Goose.....	R.....	F
<input type="checkbox"/> Cackling Goose.....	R.....	F
<input type="checkbox"/> Canada Goose.....	C.....	All Year
<input type="checkbox"/> Mute Swan.....	R.....	Sp
<input type="checkbox"/> Wood Duck.....	C.....	Sp/Sm/F
<input type="checkbox"/> Blue-winged Teal.....	R.....	Sp/F
<input type="checkbox"/> Northern Shoveler.....	R.....	F
<input type="checkbox"/> Gadwall.....	R.....	F
<input type="checkbox"/> American Wigeon.....	R.....	F
<input type="checkbox"/> Mallard.....	C.....	All Year
<input type="checkbox"/> American Black Duck.....	C.....	All Year
<input type="checkbox"/> Mallard x Black Duck.....	R.....	Sm/F
<input type="checkbox"/> Northern Pintail.....	R.....	F
<input type="checkbox"/> Green-winged Teal.....	U.....	Sp/F
<input type="checkbox"/> Ring-necked Duck.....	U.....	Sp/F
<input type="checkbox"/> Greater Scaup.....	R.....	Sp/F
<input type="checkbox"/> Lesser Scaup.....	R.....	F
<input type="checkbox"/> Surf Scoter.....	R.....	F
<input type="checkbox"/> Bufflehead.....	U.....	Sp/F
<input type="checkbox"/> Common Goldeneye.....	R.....	Sp
<input type="checkbox"/> Hooded Merganser.....	C.....	Sp/F
<input type="checkbox"/> Common Merganser.....	C.....	Sp/F
<input type="checkbox"/> Ruddy Duck.....	R.....	F
<input type="checkbox"/> Ring-necked Pheasant.....	R.....	Sp
<input type="checkbox"/> Ruffed Grouse.....	U.....	All Year
<input type="checkbox"/> Wild Turkey.....	U.....	All Year
<input type="checkbox"/> Pied-billed Grebe.....	C.....	Sp/F
<input type="checkbox"/> Rock Pigeon.....	U.....	All Year
<input type="checkbox"/> Mourning Dove.....	C.....	All Year
<input type="checkbox"/> Yellow-billed Cuckoo.....	U.....	Sp/Sm
<input type="checkbox"/> Black-billed Cuckoo.....	R.....	Sp/Sm

Species	Frequency	Season
<input type="checkbox"/> Common Nighthawk.....	R.....	Sp/F
<input type="checkbox"/> Eastern Whippoorwill.....	R.....	Sp
<input type="checkbox"/> Chimney Swift.....	C.....	Sp/Sm/F
<input type="checkbox"/> Ruby-throated Hummingbird.....	C.....	Sp/Sm/F
<input type="checkbox"/> Virginia Rail.....	U.....	Sp/Sm
<input type="checkbox"/> Common Gallinule.....	R.....	F
<input type="checkbox"/> Coot.....	R.....	F
<input type="checkbox"/> Semipalmated Plover.....	R.....	Sm
<input type="checkbox"/> Killdeer.....	R.....	Sp/Sm
<input type="checkbox"/> Least Sandpiper.....	R.....	Sm
<input type="checkbox"/> Semipalmated Sandpiper.....	R.....	Sm
<input type="checkbox"/> American Woodcock.....	U.....	Sp/Sm
<input type="checkbox"/> Wilson’s Snipe.....	R.....	F
<input type="checkbox"/> Spotted Sandpiper.....	U.....	Sp/Sm
<input type="checkbox"/> Solitary Sandpiper.....	U.....	Sp/Sm/F
<input type="checkbox"/> Greater Yellowlegs.....	R.....	Sp
<input type="checkbox"/> Lesser Yellowlegs.....	R.....	Sm
<input type="checkbox"/> Bonaparte’s Gull.....	R.....	F
<input type="checkbox"/> Ring-billed Gull.....	U.....	All Year
<input type="checkbox"/> Herring Gull.....	R.....	All Year
<input type="checkbox"/> Great Black-backed Gull.....	R.....	Sp/F
<input type="checkbox"/> Double-Crested Cormorant.....	C.....	Sp/Sm/F
<input type="checkbox"/> American Bittern.....	R.....	Sm
<input type="checkbox"/> Great Blue Heron.....	C.....	Sp/Sm/F
<input type="checkbox"/> Great Egret.....	U.....	Sp/Sm
<input type="checkbox"/> Little Blue Heron.....	R.....	Sm
<input type="checkbox"/> Green Heron.....	C.....	Sp/Sm/F
<input type="checkbox"/> Black Vulture.....	R.....	Sp
<input type="checkbox"/> Turkey Vulture.....	C.....	Sp/Sm/F
<input type="checkbox"/> Osprey.....	C.....	Sp/Sm/F
<input type="checkbox"/> Northern Harrier.....	U.....	All Year

Species	Frequency	Season
<input type="checkbox"/> Sharp-shinned Hawk.....U.....Sp/Sm/F		
<input type="checkbox"/> Cooper's Hawk.....C.....All Year		
<input type="checkbox"/> Northern Goshawk.....R.....F/W/Sp		
<input type="checkbox"/> Bald Eagle.....U.....All Year		
<input type="checkbox"/> Red-shouldered Hawk.....U.....All Year		
<input type="checkbox"/> Broad-winged Hawk.....U.....Sp/Sm/F		
<input type="checkbox"/> Red-tailed Hawk.....C.....All Year		
<input type="checkbox"/> Eastern Screech Owl.....R.....W		
<input type="checkbox"/> Great Horned Owl.....U.....All Year		
<input type="checkbox"/> Barred Owl.....C.....All Year		
<input type="checkbox"/> Northern Saw-whet Owl.....R.....Sp		
<input type="checkbox"/> Belted Kingfisher.....C.....All Year		
<input type="checkbox"/> Yellow-bellied Sapsucker.....C.....Sp/Sm/F		
<input type="checkbox"/> Red-bellied Woodpecker.....C.....All Year		
<input type="checkbox"/> Downy Woodpecker.....C.....All Year		
<input type="checkbox"/> Hairy Woodpecker.....C.....All Year		
<input type="checkbox"/> Pileated Woodpecker.....C.....All Year		
<input type="checkbox"/> Northern Flicker.....C.....All Year		
<input type="checkbox"/> Kestrel.....R.....Sp/Sm		
<input type="checkbox"/> Merlin.....R.....W		
<input type="checkbox"/> Peregrine Falcon.....R.....Sp/Sm/F		
<input type="checkbox"/> Olive-sided Flycatcher.....R.....F		
<input type="checkbox"/> Eastern Wood-pewee.....C.....Sp/Sm/F		
<input type="checkbox"/> Yellow-bellied Flycatcher.....R.....Sp/F		
<input type="checkbox"/> Acadian Flycatcher.....R.....Sm		
<input type="checkbox"/> Alder Flycatcher.....U.....Sp/Sm		
<input type="checkbox"/> Willow Flycatcher.....C.....Sp/Sm		
<input type="checkbox"/> Least Flycatcher.....C.....Sp/Sm		
<input type="checkbox"/> Eastern Phoebe.....C.....Sp/Sm/F		
<input type="checkbox"/> Great Crested Flycatcher.....C.....Sp/Sm/F		
<input type="checkbox"/> Eastern Kingbird.....C.....Sp/Sm/F		
<input type="checkbox"/> Yellow-throated Vireo.....C.....Sp/Sm/F		
<input type="checkbox"/> Blue-headed Vireo.....C.....Sp/Sm/F		
<input type="checkbox"/> Warbling Vireo.....C.....Sp/Sm/F		
<input type="checkbox"/> Red-eyed Vireo.....C.....Sp/Sm/F		
<input type="checkbox"/> Blue Jay.....C.....All Year		
<input type="checkbox"/> American Crow.....C.....All Year		
<input type="checkbox"/> Fish Crow.....R.....Sp/Sm		
<input type="checkbox"/> Common Raven.....C.....All Year		
<input type="checkbox"/> Black-capped Chickadee.....C.....All Year		
<input type="checkbox"/> Tufted Titmouse.....C.....All Year		
<input type="checkbox"/> Northern Rough-winged Swallow.....C.....Sp/Sm		
<input type="checkbox"/> Tree Swallow.....C.....Sp/Sm		
<input type="checkbox"/> Bank Swallow.....U.....Sp/Sm		
<input type="checkbox"/> Barn Swallow.....C.....Sp/Sm		
<input type="checkbox"/> Cliff Swallow.....R.....Sp/Sm		
<input type="checkbox"/> Golden-crowned Kinglet.....C.....F/W/Sp		
<input type="checkbox"/> Ruby-crowned Kinglet.....C.....Sp/F		
<input type="checkbox"/> Red-breasted Nuthatch.....U.....All Year		
<input type="checkbox"/> White-breasted Nuthatch.....C.....All Year		
<input type="checkbox"/> Brown Creeper.....C.....All Year		
<input type="checkbox"/> Blue-gray Gnatcatcher.....C.....Sp/Sm		
<input type="checkbox"/> House Wren.....C.....Sp/Sm/F		
<input type="checkbox"/> Winter Wren.....U.....All Year		
<input type="checkbox"/> Marsh Wren.....R.....Sp/F		
<input type="checkbox"/> Carolina Wren.....C.....All Year		
<input type="checkbox"/> European Starling.....U.....All Year		
<input type="checkbox"/> Gray Catbird.....C.....Sp/Sm/F		
<input type="checkbox"/> Brown Thrasher.....R.....Sp/Sm/F		
<input type="checkbox"/> Northern Mockingbird.....U.....All Year		
<input type="checkbox"/> Eastern Bluebird.....C.....All Year		
<input type="checkbox"/> Veery.....C.....Sp/Sm		
<input type="checkbox"/> Swainson's Thrush.....R.....Sp/F		

Species	Frequency	Season
<input type="checkbox"/> Hermit Thrush.....C.....Sp/Sm/F		
<input type="checkbox"/> Wood Thrush.....C.....Sp/Sm/F		
<input type="checkbox"/> American Robin.....C.....All Year		
<input type="checkbox"/> Cedar Waxwing.....C.....All Year		
<input type="checkbox"/> House Sparrow.....U.....All Year		
<input type="checkbox"/> Evening Grosbeak.....R.....Sp		
<input type="checkbox"/> House Finch.....C.....All Year		
<input type="checkbox"/> Purple Finch.....U.....All Year		
<input type="checkbox"/> Common Redpoll.....R.....W		
<input type="checkbox"/> Red Crossbill.....R.....W		
<input type="checkbox"/> Pine Siskin.....U.....W		
<input type="checkbox"/> American Goldfinch.....C.....All Year		
<input type="checkbox"/> Chipping Sparrow.....C.....Sp/Sm/F		
<input type="checkbox"/> Field Sparrow.....R.....Sp		
<input type="checkbox"/> American Tree Sparrow.....U.....F/W/Sp		
<input type="checkbox"/> Fox Sparrow.....R.....Sp/F		
<input type="checkbox"/> Dark-eyed Junco.....C.....F/W/Sp		
<input type="checkbox"/> White-crowned Sparrow.....R.....F		
<input type="checkbox"/> White-throated Sparrow.....C.....F/W/Sp		
<input type="checkbox"/> Savannah Sparrow.....R.....Sp/Sm/F		
<input type="checkbox"/> Song Sparrow.....C.....All Year		
<input type="checkbox"/> Lincoln's Sparrow.....R.....Sp/F		
<input type="checkbox"/> Swamp Sparrow.....C.....Sp/Sm/F		
<input type="checkbox"/> Eastern Towhee.....U.....Sp/Sm/F		
<input type="checkbox"/> Bobolink.....R.....Sp/Sm		
<input type="checkbox"/> Orchard Oriole.....R.....Sm		
<input type="checkbox"/> Baltimore Oriole.....C.....Sp/Sm		
<input type="checkbox"/> Red-winged Blackbird.....C.....All Year		
<input type="checkbox"/> Brown-headed Cowbird.....C.....Sp/Sm/F		
<input type="checkbox"/> Rusty Blackbird.....U.....Sp/F		
<input type="checkbox"/> Common Grackle.....C.....Sp/Sm/F		
<input type="checkbox"/> Ovenbird.....C.....Sp/Sm/F		
<input type="checkbox"/> Worm-eating Warbler.....R.....Sm		
<input type="checkbox"/> Louisiana Waterthrush.....C.....Sp/Sm		
<input type="checkbox"/> Northern Waterthrush.....U.....Sp/Sm		
<input type="checkbox"/> Blue-winged Warbler.....U.....Sp/Sm		
<input type="checkbox"/> Black-and-White Warbler.....C.....Sp/Sm/F		
<input type="checkbox"/> Orange-crowned Warbler.....R.....F		
<input type="checkbox"/> Tennessee Warbler.....R.....Sp		
<input type="checkbox"/> Nashville Warbler.....U.....Sp/F		
<input type="checkbox"/> Common Yellowthroat.....C.....Sp/Sm/F		
<input type="checkbox"/> Redstart.....C.....Sp/Sm/F		
<input type="checkbox"/> Cape May Warbler.....R.....Sp/F		
<input type="checkbox"/> Cerulean Warbler.....R.....Sp		
<input type="checkbox"/> Northern Parula.....U.....Sp/F		
<input type="checkbox"/> Magnolia Warbler.....U.....Sp/Sm/F		
<input type="checkbox"/> Bay-breasted Warbler.....R.....Sp/F		
<input type="checkbox"/> Blackburnian Warbler.....C.....Sp/Sm/F		
<input type="checkbox"/> Yellow Warbler.....C.....Sp/Sm/F		
<input type="checkbox"/> Chestnut-sided Warbler.....U.....Sp/Sm/F		
<input type="checkbox"/> Blackpoll Warbler.....U.....Sp/F		
<input type="checkbox"/> Black-throated Blue Warbler.....C.....Sp/Sm/F		
<input type="checkbox"/> Palm Warbler.....C.....Sp/F		
<input type="checkbox"/> Pine Warbler.....C.....Sp/Sm/F		
<input type="checkbox"/> Yellow-rumped Warbler.....C.....Sp/F		
<input type="checkbox"/> Prairie Warbler.....R.....Sp		
<input type="checkbox"/> Black-throated Green Warbler.....C.....Sp/Sm/F		
<input type="checkbox"/> Canada Warbler.....R.....Sp/F		
<input type="checkbox"/> Wilson's Warbler.....R.....Sp/F		
<input type="checkbox"/> Scarlet Tanager.....C.....Sp/Sm/F		
<input type="checkbox"/> Northern Cardinal.....C.....All Year		
<input type="checkbox"/> Rose-breasted Grosbeak.....C.....Sp/Sm/F		
<input type="checkbox"/> Indigo Bunting.....U.....Sp/S		

## In Recognition of Our Volunteers

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As ever, we are most appreciative of the many dedicated volunteers who worked to improve the Fitzgerald Lake Conservation Area and the Beaver Brook Greenway by pulling and digging invasive plants, maintaining trails, tending native shrubs and trees, and donating their time in many other ways throughout 2021:

**David Arbeitman, Alma Bartnik, Adam Caldwell, Alan Berkenwald, Hilary Caws-Elwit, Alex Cohen, Doris Cohen, Peter Flinker, Yvonne Freccero, Makani Freitas, Brigid Glacken, Steve Harding, Bruce Hart, Judy Hyde, Colleen Isabelle, Deb Jacobs, Ami Jean, Jason Johnson, Michael Kesten, George Kohout, Michael Murphy, Rachael Naismith, Jeannette Pamaylaon, Jim Reis, Norma Roche, Chris Schmidt, Jon Steinberg, Heidi Stevens, Matt Verson, and Andrew Weirin.**

## 2021 Walks and Talks

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*BBC will resume a full schedule of Walks and Talks this year, beginning in May. We will not be limiting attendance, but we ask that you continue to register for each walk beforehand. This will allow us to answer any questions you might have and notify you of any changes or cancellations.*

*To sign up for any of the following walks, please send an email to Dave Pritchard at [Registrar.BroadBrookCoalition@gmail.com](mailto:Registrar.BroadBrookCoalition@gmail.com).*

*Please check the Broad Brook website ([broadbrookcoalition.org](http://broadbrookcoalition.org)) for more information on any of these programs, or call Dave Pritchard (413-268-3668) or Dick Wynne (413-584-7930).*

### Vernal Pool Ecology

Brad Timm

Saturday, May 14, 10:00 a.m. – noon  
North Farms Rd. entrance

Fitzgerald Lake Conservation Area is fortunate to contain several confirmed vernal pools just a short walk in from the North Farms Rd. entrance. Join biologist Brad Timm as we visit these pools and discover their truly unique ecology. We'll learn about the wide variety of animals that rely on vernal pools for their existence – from amphibians and reptiles to an amazing number of diverse invertebrate species, as well as some mammals and birds. And we'll explore the importance of vernal pools to overall ecosystem functioning, and how climate change might impact these critical habitats. We will also get the chance to see some of these animals in action during our walk while we learn about their captivating life histories. All ages are welcome and encouraged! Brad Timm is a wildlife biologist who has conducted amphibian research (typically centered around vernal pools) in New England for over 15 years

### Spring Bird Walk

Lesley Farlow and Steve Winn

Saturday, May 28, 7:00 – 9:00 a.m.  
Cooke Ave. entrance

Lesley Farlow and Steve Winn, experienced birders and members of the Hampshire Bird Club, will lead a bird walk along Boggy Meadow Rd. to the Fitzgerald Lake dam. We will look for breeding migrants and resident birds as we pass through a number of different habitats. We should be able to see and hear some warblers, thrushes, vireos, swallows, herons, kingfishers, and more. Bring binoculars if you have them. We may have a few extra pairs.

### Beavers at Sundown

Laura Beltran

Saturday, June 4, 7 p.m. – 9 p.m.  
Cooke Ave. entrance

Discover the natural history of beavers, how they alter the landscape and provide habitat for other wildlife on this walk at Fitzgerald Lake. Evening is the ideal time to observe beavers, and if we're lucky, we'll see them and maybe get slapped at. We'll meet at the Cooke Ave. entrance (next to the Moose Lodge) and walk along Boggy Meadow Rd. to the new Pine Brook Trail. We'll examine a lodge and several dams that have backed up the brook to create a sizeable pond where great blue herons nest and migrating waterfowl visit. All ages welcome! Binoculars and shoes for wet, muddy conditions are recommended. Laura Beltran is a teacher/naturalist at Arcadia Wildlife Sanctuary in Easthampton.

### Late Spring Wildflowers

Janet Bissell

Saturday, June 11, 9:00 – 11:00 a.m.  
North Farms Rd. entrance

Join Janet for a walk to look for late spring ephemeral wildflowers and other flora. We'll discuss the natural history, folklore, and identification of these wonderful forest plants. We'll also discuss the identification of invasive species and the impact they have on biodiversity as well as the impacts climate change could have on our forests and wildflowers. Some of the native plants we can use in our gardens in place of non-natives will also be discussed. Janet is an avid amateur botanist and volunteers for the Native Plant Trust – formerly the New England Wildflower Society. She also leads plant walks for Mass Audubon and is a docent at Smith College Botanic Garden. Janet will mention field guides to use on your own explorations. Bring your favorite field guide and hand lens if you have them.

### Mushrooms in the Woodland Ecosystem

Peter Russell

Saturday, Sept. 10, 10:00 a.m. – noon  
North Farms Rd. entrance

Mushrooms are an essential component of our Woodland ecosystems, yet much of their taxonomy and diversity remains undescribed even in sites such as Fitzgerald Lake. A lot of such recording is nowadays performed by citizen scientists and amateurs. Take a walk in the woods to learn about this diversity, how to recognize some of the major groups of fungi, and the roles played by mushrooms in the Woodland ecosystem. Collecting edible mushrooms will not be the main focus of this walk. Peter is a local resident, a member of the Pioneer Valley Mycological Society, and has been leading mushroom forays for many years.



## Workdays at the FLCA: Spring and Summer 2022

### Shrubland Habitat and Native Plants

Saturday, May 7, 9:00 a.m.–noon

Several years ago, we established three “islands” of native shrubs in Cooke’s Pasture to provide food and habitat for shrubland birds and small mammals. We return every year to prune the shrubs, cut back competing undergrowth, replace plants that have not survived the winter, and carry out other tasks as necessary. Tools will be provided, though additional clippers are always welcome. Wear long pants and bring along your favorite insect repellent. Meet at the former Moose Lodge parking lot at the end of Cooke Avenue at 8:30 a.m. or at the Fitzgerald Lake dam at 9:00 a.m. Contact Dick Wynne at 584-7930.

### Annual Cleanup at the North Farms Road Entrance

Saturday, May 21, 10:00 a.m.–noon

Each year we devote one day in the spring to cleaning up the North Farms Road entrance to the FLCA including clearing winter debris from the path to the bridge and boardwalk, picking up trash in the parking lot, and removing by hand invasive plants such as garlic mustard, Japanese knotweed, and multiflora rose in the adjoining woods. Please help us spruce up this heavily used route to the conservation area. Tools will be provided. Contact Brad Timm at 401-595-9934.

### Removal of Invasives on Boggy Meadow Road

Sunday, June 26, 10:00 a.m. –1:00 p.m.

The margins of roads provide excellent habitat for the growth of invasive plants. We have surveyed and located many patches of invasives along Boggy Meadow Road, which connects the former Moose Lodge parking lot at the end of Cooke Avenue with the Fitzgerald Lake dam. We will work our way along the road, removing invasive plants such as multiflora rose, Asiatic bittersweet, Japanese barberry, autumn olive, and non-native honeysuckle by hand: pulling, cutting and digging. Tools will be provided, but if you care to bring clippers, pruning saws, and lopping shears, it would be appreciated. And don’t forget gloves, sunscreen, and insect repellent. Meet at the former Moose Lodge parking lot. Contact Bill Williams at 585-9696.

### Removal of Water Chestnut from Fitzgerald Lake

Saturdays, (6/18, 7/9, 7/30, 8/20, 9/10) 9:00 a.m. –noon

Five years ago we implemented a new approach to controlling water chestnut in Fitzgerald Lake called “pull early, pull often.” In 2017, we removed roughly 1,100 lbs. from the lake while in 2021 the yield was down to 100 lbs. Though we are pleased with the results so far, viable water chestnut seed can persist for up to ten years on the lake bottom so we plan to continue our “pull early, pull often” approach again this year. We’ll organize crews in late May, begin pulling in mid-June and continue at 3-week intervals throughout the summer. Volunteers should bring their own canoes or kayaks. If interested, contact Bob Zimmermann by email (raz@umass.edu) or phone (585-0405) for further information or to volunteer.

## CONSERVATION NEWS IN BRIEF

### ***AMPHIBIAN CROSSING AT NORTH FARMS RD.***



For the past several years, BBC board member Brad Timm has organized a group of volunteers to patrol a section of North Farms Rd. on either side of the FLCA parking lot on rainy spring nights, watching for amphibians

attempting to cross the road on their way to nearby wetlands. Road mortality is a serious threat to amphibians, and any help they can get in crossing can make a difference. Volunteers walk the sides of the road with flashlights, prodding or assisting where needed and occasionally signaling cars to stop or slow down till a critter has crossed. We also keep track of how many amphibians of each species are seen alive, and how many are found killed on the road. After several years of monitoring we have recorded seven species crossing at this location. In order of abundance (most to least) they are: wood frog, spring peeper, bullfrog, green frog, spotted salamander, American toad, and red-backed salamander.

### ***VOLUNTEER OPPORTUNITY: MAINTAINING BLUEBIRD BOXES AT FLCA***



Bluebird nest boxes at FLCA need a new caretaker or two. There are 10 boxes in Cooke’s and South Pasture that have been maintained for decades. Boxes, poles, and predator guards need cleaning, occasional repair, and eventually replacement. Thank you Frank Bowrys and son with Boy Scouts assistance in recent years. Call or text Bruce Hart at 413-320-2841 for information

on how you can help.

### ***EXPLORING NORTHAMPTON SERIES: BEAVER BROOK GREENWAY***



Join BBC president Bob Zimmermann and Historic Northampton’s co-director Laurie Sanders for an exploration of the human and natural history of the Beaver Brook Greenway. Learn about the family that lived here during the early 1900s, who planted daffodils, ran a sawmill, and operated a large farm. Fast-forward to today and learn about how this became a conservation

area, how the new timber-frame wildlife blind was built, and interesting facts about the natural history of the adjacent beaver marsh and surrounding uplands. Co-sponsored by Broad Brook Coalition & Historic Northampton, in partnership with the Leeds Civic Association.



## Species Spotlight

(This is the seventh 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](http://broadbrookcoalition.org).)

**Common Name:** Snapping Turtle

**Scientific Name:** *Chelydra serpentina*  
("Chelydra" is Latin for "tortoise" and "serpentina" is from the Latin "serpentis," meaning "snake," in reference to their long tail)

**Physical Description:** The snapping turtle is the second largest freshwater turtle in the U.S., second only to the alligator snapping turtle of the southeastern U.S. Adults have shells as long as 19 inches and typically weigh between 10-35 pounds, though in rare instances they can reach close to 50 pounds. Males tend to be modestly larger than females. Snappers have strong legs, webbed toes with long claws, and a thick, sawtooth tail that can be almost as long as their shell. They have large heads, with a hooked upper jaw, and long, muscular necks.

**Longevity:** Snappers can live up to 30 years in the wild but have been known to live to 47 years in captivity.

**Distribution:** They range throughout the eastern two-thirds of the United States and northward into south-central and southeastern Canada.

**Habitat:** Snapping turtles are found in almost any type of freshwater wetland, and sometimes even in brackish (partly saltwater) conditions. They often prefer wetlands with muddy bottoms that have a good amount of vegetation, allowing them to conceal themselves on the bottom so as to ambush prey.

**Reproduction:** Here in the northeastern U.S., female snapping turtles typically lay their eggs from late spring to early summer, most frequently in June. They leave the wetland and dig a nest nearby, often in areas with disturbed soil where it is easier to dig; sometimes in people's gardens, under landscaping hedges, and unfortunately often along roadsides, which can lead to young being run over by cars when they emerge from the nest. The female will excavate a deep nest with her hind feet and deposit anywhere from 25-50 eggs, after which she will cover the nest back over to conceal it from predators and return to the wetland.

The eggs typically incubate underground for a period of 3-4 months, with hatchlings emerging sometime between late August to early November in the northeastern U.S. In some instances, especially in the more northerly extremes of their range, the hatchlings will overwinter underground and emerge the following spring. The incubation temperature of the nest determines the sex of the hatchlings, with warmer temperatures leading to more females.



**Prey:** Snapping turtles are generalist omnivores, eating almost anything readily available to them, including fish, invertebrates, amphibians, reptiles, small mammals (such as muskrats), sometimes baby ducks, and a wide variety of plants.

**Conservation and Management:** Snapping turtles are widespread and fairly common throughout much of their range. Road mortality is one of the biggest threats, during nesting migrations by females, overland movements when traveling between wetlands, and when hatchlings emerge and migrate to the nearest wetland. Another conservation concern for snapping turtles is the high rate of nest predation by raccoons, skunks, foxes, and other animals; in some areas, upwards of 90% of snapping turtle nests have been documented as having been predated.

### Interesting Facts:

- Snapping turtles are quite docile when in wetlands, but often are quite aggressive or defensive on land, likely due to being more exposed to harm than when they are in wetlands.
- Here in the U.S., turtle stew is most often made from snapping turtle meat, and is known as a delicacy in some locales.
- Most snapping turtles overwinter underwater in the mud and debris in the shallow portions of wetlands; sometimes they will overwinter in beaver or muskrat lodges.

—Brad Timm

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Florence, MA 01062

[www.broadbrookcoalition.org](http://www.broadbrookcoalition.org)

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### ***Join Us!***

Please complete this form and return it with a check to:

**Broad Brook Coalition, P.O. Box 60566, Florence, MA 01062**

\$25 for Individual membership     \$35 for Family membership. *All contributions are tax deductible.*

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Sign me up for a paperless newsletter (email address required).

I prefer to receive a printed newsletter by mail.

I've included an additional tax-deductible contribution to the Land Preservation/Stewardship Fund.

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

***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) \_\_\_\_\_