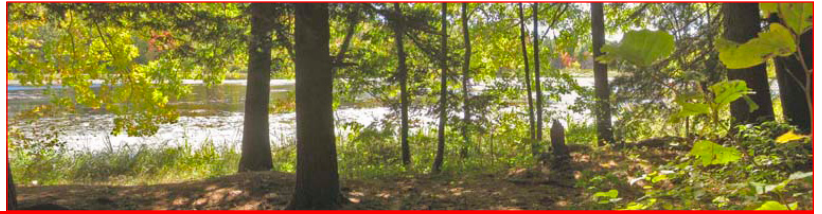


# BROAD BROOK COALITION



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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 850-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.

## Broad Brook Coalition Annual Meeting

**Sunday, November 4, 2018 • Florence Civic Center, 4:30 to 7 PM**

Members and friends are invited to join the Broad Brook Coalition's annual meeting to celebrate 30 years of stewardship of Northampton's signature conservation area.

Light refreshments will be available from 4:30 to 5:15, with a short business meeting to follow. At 5:45 Kathie Fiveash, a longtime BBC member and supporter, will read from her new chapbook *Broad Brook: Poems from Fitzgerald Lake*. Kathie has generously offered to contribute the proceeds of her book to Broad Brook Coalition, and copies will be available for sale at the meeting.

This year's speaker is Laurie Sanders, naturalist and Co-executive Director of Historic Northampton, who will talk about the deep history of Fitzgerald Lake Conservation Area. Beginning 400 million years ago, Laurie will take us up to the present day, describing the natural and human influences that together have shaped the conservation area that we know today.



*Laurie Sanders*

## President's Message: We've Come a Long Way

### Thoughts on the 30th Anniversary of the FLCA

Anniversaries inspire us to reflect on where we've come from and where we intend to go in the future. Soon after its founding in 1988, BBC assumed the stewardship of two large abutting properties for which very different outcomes had been envisioned. In the 1960s Fitzgerald Lake was created by damming the Broad Brook, and the adjacent land, encompassing 155 acres, had been slated to become the site of numerous lakeshore homes. In the 1980s a 161-acre parcel

*Continued on page 2*

of former farmland encompassing Cooke's Pasture was to become an upscale housing development. Through the intervention of the City and concerned neighbors, as well as the upshot of new environmental regulations, these lands became the core of the Fitzgerald Lake Conservation Area.

The FLCA has since grown to a total of 850 acres through the acquisition of a number of small adjacent parcels, many of which were at one time wood lots for Northampton residents. The area has developed into an outstanding destination for hiking, boating, and the enjoyment of nature, as well as a fine location for observation, learning, and quiet repose.

***"Looking to the future, there can be no doubt about the importance of preserving and maintaining conservation areas like the FLCA."***

Since I joined the BBC Board of Directors in 2002 at the invitation of then-president Jody Larson, the FLCA has also been a wonderful teacher. The Nature Trail near the North Farms Road entrance had been designed by Jody, but its maintenance had dwindled after she left the area. It fell to my colleagues and me to check out, repair, and replace the posts marking the stations along the trail and to print a new descriptive brochure, a process that taught us a lot about the ecology of the area.

About the same time, Brian Adams showed some of us how to monitor the quality of water in Fitzgerald Lake using simple chemical assay kits to measure dissolved oxygen, nitrate, phosphate, and other parameters. Back then we did the measurements on site, though today we do them in our kitchens. These measurements have assured us that the water in Fitzgerald Lake and the Broad Brook is quite healthy.

Bob Packard, an excellent naturalist, set us on the path of identifying and removing invasive plants – whether phragmites in the marsh, buckthorn and knapweed in Cooke's Pasture, or water chestnut in the lake. Though we've made significant progress in controlling these non-native plants, we slowly learned that we can't expect to eradicate these invaders; the best we can do is keep them from taking over and outcompeting the native vegetation. When it became clear that herbicides were the only practical way to control certain invasives, we were forced to think very carefully about the justification for doing so in a way that would not cause further damage to the habitat.

We found out about forest bathing from Frank Olbris, who had served as a board member from BBC's inception until his untimely death five years ago. Forest bathing is a practice developed in Japan that emphasizes the health benefits stemming from immersion in the sights, scents, textures, and even tastes of the natural environment, and serves as a pathway to reduced stress and improved mood. Together with BBC members and volunteers, we also worked with professionals to reconstruct the boardwalk and dock, participated in an experiment to restore American chestnuts to the FLCA after an absence of many decades, initiated a program to locate the wildlife corridors that cross the roads surrounding the conservation area and, in the process, discovered how to navigate the City bureaucracy.

Looking to the future, there can be no doubt about the importance of preserving and maintaining conservation areas like the FLCA. Pollution, habitat degradation, and development are continually shrinking the land available to native plants and wildlife. Although we are not witnessing the dramatic instances of habitat disruption in our own region that are happening elsewhere, many once-common birds, animals, and insects are undergoing a rapid decline in the Northeast, making the availability of safe havens even more critical. Our conservation areas provide increasingly rare places to observe and enjoy the company of such species and of the natural world as a whole. May the FLCA continue to play this role for another 30 years...and beyond!

*Bob Zimmermann*



*A friendly eastern pondhawk finds a perch*

## Fitzgerald Lake in Poetry

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### Painted Turtle

On these last shining autumn days I know  
these words about your life: logs and stones  
warm in the afternoon, fraying stems  
of water lilies, the clogged pond edge hemmed  
with cattails, prey disappearing, geese flown,  
cold settling in your bones. You row  
against a thickening darkness. The mud  
swaddles you in a silken winding sheet,  
a willing burial in silt and leaves  
and all things mingled in the velvet weave  
of what decays. You suspend the beat  
of your body, the pulsing of your blood.

But you know nothing about words. To unfurl  
your speechless mind, I'd have to cleanse  
my mind of speech, becoming like the dead,  
who cease to speak and yet remain, embedded  
in life like your abiding body in the dense  
muck of sentience that underlies the world.

### Earthbound

Sitting under trees as evening falls  
over the lake, I watch the gentle veils  
of twilight sway and settle over pale  
luminous water, insubstantial shawls  
that dim the air thick with peeper song.  
Silent beavers trail their wakes, at peace  
before their work. Day's remnants cease  
to cling. What's here is only what belongs.

What belongs is everywhere and all--  
that heron stalking frogs, this cankered leaf,  
this sprouting seed, my body come to grief,  
the mourning cloak in flight, these ants that crawl  
through the leaf litter on their orderly way  
home to their nest. The overarching sky  
fades and cools. Shadows ramify.  
I slip into the last embrace of day,  
into the arms of all things that enfold me,  
the arms of earth, the only arms that hold me.

### Regarding Spring

First things are noticed, welcomed, and affirmed,  
and each new season has its reckoning –  
budswell, saprise, mud upon the frost,  
earliest blackbirds cresting the wave of spring,  
first snowdrops heralding the coming garden,  
first earthworm castings speckling the lawn.  
Today I saw, in a budding, brushy tangle,  
the first ruby-crowned kinglets feeding on  
the first fragile flies. Walking into  
the leafless forest, I followed the clucking sound  
of woodfrogs to a hidden vernal pool,  
and peering into the tannic snowmelt, found  
tiny fairy shrimps, each with its fringe  
of legs fanning the chilly water, pink,  
slender, transitory, while startled frogs  
leaped headlong from the dark pool's brink.

Last things are impossible to know.  
They happen and they do not come again.  
They pass unrecognized, they fade like dreams--  
which flowering, which lovemaking, which rain.

*Kathie Fiveash is a naturalist, teacher, homesteader, and writer. She divides her year between Florence, Massachusetts and Isle au Haut, Maine, a remote, unbridged island in Penobscot Bay. She is the author*



*Kathie Fiveash*

*of Island Naturalist, an award-winning book of essays about natural history on the coast of Maine published by Penobscot Bay Press; and of Earthbound, a chapbook of poems published by the Gallery of Readers Press.*

*Kathie has generously offered to donate the proceeds of the sale of Broad Brook: Poems from Fitzgerald Lake to Broad Brook Coalition.*

## 2018 Walks and Talks

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Broad Brook Coalition sponsored a variety of educational walks this past season, from old favorites like spring birds and summer wildflowers to newer topics including amphibians and the history of land use at Fitzgerald Lake. Eight walks were scheduled from May through the end of September, making this one of our busier seasons in recent years. Following are some of the highlights.

The lead-off walk (so to speak) was for birds, led by Mike Locher of the Hampshire Bird Club. Twenty people accompanied Mike from the Moose Lodge to Cooke's Pasture in late April, on the lookout in particular for returning migrants. The group tallied a respectable 31 species, including a mute swan, which is only the second time a swan has been reported at Fitzgerald Lake on the eBird website. Mike also reported 15 double-crested cormorants, a high count for Fitzgerald Lake.

Next up were amphibians, led by wildlife biologist Brad Timm, who has conducted amphibian research in New England for more than 15 years. This was the first amphibian walk to be sponsored by BBC, and it was well attended, with more than 20 people following Brad first to the dock, then to the vernal pools just off the Fishing Place trail. While most of the species Brad discussed were evident only by their vocalizations, there were egg masses of both spotted salamanders and wood frogs visible in the vernal pools, as well as some green frogs poking their heads through the floating leaves. Finally, Brad overturned a stone to produce a red-backed salamander. These salamanders, though quite small, are extraordinarily numerous and can account for as much biomass in a particular section of New England forest as all small mammals together, and possibly several times that amount.

Summer wildflowers were on display at a walk led by John Burns, of Burns Environmental, at the end of July. John pointed to more than 40 species of plants along Boggy Meadow Road, some with colorful flowers, others with equally colorful names such as deer-tongue grass, monkey-flower, and mad-dog skullcap. The high point for many was his detailed description of how to process jewelweed in a blender to make a lotion to relieve poison ivy rash. (He swears by it.)

Mushrooms and the history of Fitzgerald Lake were the topics of the last two walks of the season. Pat McDonagh, a former BBC board member, titled her walk Fungal Partnerships to

emphasize that the focus would not be on collecting or edibility but rather on the complex role that fungi play in the forest ecosystem.



*Pat McDonagh with mushroom basket*

Whether parasitic (feeding on living organisms), saprophytic (feeding on dead organic matter), or mycorrhizal (establishing symbiotic relationships with the root systems of trees), fungi are major contributors to the health and diversity of our forests. As Pat explained, their threadlike mycelia spread throughout the forest soil and dead wood, only putting up their fruiting bodies (such as mushrooms, earthballs, tooth jellies, and many other intriguing forms) when conditions are right. With our wet end of summer, as anyone who has walked the FLCA trails knows, conditions have been spectacularly right this year.

And finally Laurie Sanders, in a walk cosponsored by Historic Northampton, led some 40 people along Boggy Meadow Road to the dam, sketching the deep history of what is now the Fitzgerald Lake Conservation Area. From the Pleistocene (when the conservation area was under a mile of ice), to the changing patterns of use as settlers worked the land, to the narrowly averted luxury development in Cooke's Pasture, it's a fascinating story. Laurie will offer an expanded version of this history in her presentation at the annual meeting on November 4. Don't miss it!

*Dave Pritchard*



*Laurie Sanders at Cooke's Pasture*



*Examining a mushroom*



*A red-backed salamander*



*Laurie at the beaver pond*



*John Burns along Boggy Meadow Rd.*



*At a vernal pool with Brad Timm*

## Conservation News in Brief

by Bob Zimmermann

### Blight-resistant Chestnuts Thrive in Cooke's Pasture

Last spring, we anxiously awaited the leafing out of four American chestnut seedlings, bred for resistance to chestnut blight that had been planted in Cooke's Pasture the previous fall.

The dormant chestnuts survived the rigors of winter in good shape and leafed out on schedule in May. In early June, we noticed that one of the plants was looking emaciated and, to our astonishment, found that a snapping turtle had dug under the protective fence and was dining on the little



*Healthy first-season growth*

chestnut. The other three seedlings were doing well, though, despite a close call with a second snapper, and grew vigorously over the summer. To keep them adequately watered during dry spells, we purchased a small water pump to lift water from the Broad Brook to two 50-gallon barrels near the seedlings. Volunteers visited the site to water the plants every couple of days during dry spells in June and July, but the inundations of August and September took care of this for us. We hope that the three remaining chestnuts will once again overwinter successfully and we look forward to seeing them take off again next spring.



*Bill Rosen removes a fallen tree on the Middle Path*

### Invasive Water Chestnut in Fitzgerald Lake Yields to Control Efforts



*Steve Harding sets out*

In the summer of 2017 we instituted a vigorous effort to curtail the presence of water chestnut, a persistent and aggressive invasive plant, in Fitzgerald Lake. Dubbed the "pull early, pull often" approach, a flotilla of volunteers in kayaks, canoes, and rowboats set out on the lake to pull water chestnut by hand at roughly three-week intervals from June through September. Zigzagging and crisscrossing to cover as much of the lake as possible, boaters "harvested" over 1,000 pounds of water chestnuts, catching many of them before they dropped their seeds to the lake bottom.



*Dick Wynne returns with a haul.*

This year was a test of our success in 2017: would we achieve a substantial reduction in water chestnut yield this year? We were very pleased to see that the same regimen yielded only 300 pounds of the invasive. We believe that we are making significant progress in controlling water chestnut growth in Fitzgerald Lake and acknowledge with thanks the terrific job done by the 20 volunteers who ventured out on the water at least once and often several times. We're optimistic that next year's water chestnut yield will be even further diminished.

## Beaver Brook Greenway Improvements Move Ahead

Several improvements planned for the six-acre portion of the Beaver Brook Greenway lying between Haydenville Road and the Beaver Brook have been carried out over the past spring and summer. This project, a collaborative effort of the Leeds Civic Association and the Broad Brook Coalition, is funded by a grant from the Northampton Community Preservation Committee.



*The wildlife blind is open for business*



*Spreading wood chips on the mowed paths*

A major achievement was completion of the timber-framed wildlife blind overlooking Beaver Brook by Neil Godden with the help of LCA and BBC volunteers. Walking paths were mowed and wood chips generated by a crew from Cotton Tree Service from the abundant supply of fallen trees and branches were used to cover them. In addition, picnic tables built by a team at the Hampshire County Jail were placed in one of the cleared areas. Invasive plant control is underway, and interpretive signs describing the human and natural histories of the area will soon be erected. Opening of the improved parcel for public use is planned for Spring 2019.



*Picnic table in a shady spot*

## Low Dock at Fitzgerald Lake Helps Boaters

At a foot-and-a-half above water level, the new dock at the end of the FLCA boardwalk proved difficult for many boaters to navigate as they got into or out of their canoes, kayaks, and rowboats. By popular demand, we asked Douglas Thayer of Thayer Woodworking and Design to put in a lower dock at one end of the existing dock.

The new platform, measuring 6 x 9 feet, is just 8 inches above the water. It suits boaters of all abilities (and agilities) and has become the preferred means for entering and exiting boats. At the request of the Northampton Conservation Commission, the support posts are made of red cedar rather than pressure-treated lumber to avoid polluting the lake with the preservatives present in the latter.



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## Paths to Good Health: Fitzgerald Lake Included in List of "Serene Treks"

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Boggy Meadow Road and trails around Fitzgerald Lake were favorite running routes for Andy Castillo when he was growing up. The Hampshire Gazette reporter still returns to the woods of Fitzgerald Lake and other conservation areas nearby. He highlighted five of what he describes as "serene treks" in an article published in the Gazette last August.

In addition to FLCA, his list included Arcadia Wildlife Sanctuary in Easthampton, the Robert Frost Trail in Amherst, Fort River Birding and Nature Trail in Hadley, and the Arthur F. Kinney Center for Interdisciplinary Studies, also in Amherst.

Despite the changes in development over the years, Castillo wrote that it's still "easy to escape into the quietness of nature, for my physical and mental health, on readily accessible trails throughout the region."

As BBC members know and appreciate, FLCA is close to downtown Northampton and yet seems far from it. "The dock at Fitzgerald Lake," Castillo pointed out, "provides a quick respite from the busyness of life. Even though it's not far from a few of the Pioneer Valley's main thoroughfares . . . while standing at the end of the dock surrounded by reeds, it feels as though you're miles from civilization."

*Margaret Russell*

## Broad Brook Coalition Is Digital!

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BBC is online! Although BBC is very much a low-tech, hands-on organization, we do realize that it is the 21st century and that technology is a tool that can help us be responsive and more efficient. BBC uses email to keep in touch with our members, volunteers, and community. BBC has a website and a Facebook page to provide information, and we accept donations and membership support online.

### Find Broad Brook Coalition Online

- The BBC website, [broadbrookcoalition.org](http://broadbrookcoalition.org), has a variety of features and resources relevant to members, friends, and anyone interested in the Fitzgerald Lake Conservation Area. See the accompanying article for a description of what you can find there. The website received 880 web page views in the past month from 312 people.
- BBC maintains the Fitzgerald Lake Conservation Area Facebook page, [facebook.com/ FitzgeraldLakeConservationArea/](https://www.facebook.com/FitzgeraldLakeConservationArea/). Just search Facebook for "Fitzgerald Lake" and then Like or Follow FLCA. There you will find up-to-date news, relevant articles, BBC events, and often superb photos posted by FLCA visitors. FLCA Facebook has over 400 followers and has had over 1,600 check-ins.
- BBC has an email list with over 400 subscribers which we use for occasional announcements. Subscribe at [broadbrookcoalition.org/about/contact/](http://broadbrookcoalition.org/about/contact/).
- Join or donate to BBC online at [mightycause.com/organization/Broad-Brook-Coalition](http://mightycause.com/organization/Broad-Brook-Coalition).
- Contact BBC at [info@broadbrookcoalition.org](mailto:info@broadbrookcoalition.org).

### Help Broad Brook Coalition's Online Work

BBC online can use your help. If you have a little time and expertise, we are always looking for volunteers in any of these areas: website, email list, online donations, member and volunteer management, and social media. Thank you!

*Dave Ruderman*

## Getting to Know the BBC Website

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If you haven't been to the BBC website for a while, you owe yourself a visit. The site is easy to navigate, especially if you're looking to donate, volunteer, or check out upcoming events. But if you haven't been looking beyond the primary tabs you might be missing some of the most interesting and informative features tucked away on the site. Here's a look at some of what's there.

The **About** tab, as you might expect, gives a brief summary of BBC's history, mission, and management plan. But hover over that tab and you'll find other pages that give a much more detailed account of these topics.

- The **Committees** page describes the important work of BBC's four committees: Land Preservation, Stewardship, Trails, and Walks and Talks.
- The **History** page goes into greater detail regarding BBC's origin as a neighborhood organization opposed to a planned housing development in Cooke's Pasture, then traces its transformation over the years into a full-fledged conservation management group.
- The **Land Acquisition** page lists each of the parcels that together make up the 852 acres of Fitzgerald Lake Conservation Area. Parcels are given in chronological order of acquisition, with information about size, registry, and donation or purchase history. BBC provided major funding for many of these parcels, contributing a total of \$140,755 over the years.
- The **Lilly Library Archive** page describes the contents of the BBC archive housed in the Local History Room on the second floor of Lilly Library. In addition to BBC management plans and other documents relating to Northampton's various conservation areas, this collection includes a set of notebooks containing wildlife observations made at the wildlife blind since 2000.
- The **Affordable Housing** page provides a history of this aspect of BBC's original mission, with contact information for anyone wishing to become more involved in this area.

*Continued on page 9*



The pages under the **Fitzgerald Lake** tab contain information primarily aimed at users of the conservation area, such as trail maps and regulations.

Two of these pages are of particular note to anyone interested in the natural history of FLCA.

- On the **Plants and Animals** page you'll find links to three useful documents: an illustrated "*Aquatic Plants of Fitzgerald Lake*" guide, compiled by Bill Williams; the updated FLCA "*Nature Trail Guide*"; and "*Rediscovering Northampton*." This latter report, by naturalist and historian Laurie Sanders, describes the natural history of Northampton's conservation areas in rich detail, with several chapters devoted to sections of Fitzgerald Lake.
- The **Photo Gallery**, with close to a hundred images viewable individually or as a slide show, documents wildlife, seasonal views, and a number of strenuous but character-building volunteer activities.
- In addition to the guides featured under this tab, at the bottom of this and most other pages on the website are links to several other natural history documents: Bob Zimmermann's "*A Layman's Guide to Spring Wildflowers at FLCA*" and its companion "*A Layman's Guide to Summer Wildflowers at FLCA*" (a final guide to late summer and fall wildflowers will be posted to the site this month); and "*Making Room for Native Plants*," an invasive plant guide compiled by the New England Wildflower Society.

Also on the website under the relevant tabs you can find an archive of all the BBC newsletters going back to Spring 2005, a list of upcoming events, the various ways you can support BBC's mission, as well as links under the **Resources** tab to a variety of City departments and area conservation groups. Keep clicking around – there's something of interest everywhere you look!

Dave Pritchard

## Delayed Pregnancy for Good and Mysterious Reasons

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One of nature's most amazing and wondrous adaptations for many animals living in the Fitzgerald Lake Conservation Area (FLCA) is delayed implantation or *embryonic diapause*. This reproductive strategy allows the fertilized egg to float freely in suspended animation until the mother is physiologically ready for the pregnancy to be successful and when the environmental conditions are favorable. For example, with black bears, after mating in May or June, the fertilized egg develops into a tiny ball of cells or blastocyst, at which time development stops and the blastocyst remains unattached in the uterus. If the female gains enough weight in the fall, around 150 pounds, the blastocyst implants in the uterine wall in late November. Roughly two months later, we get cute and cuddly little cubs.

There are two types of delayed implantation. *Obligate diapause*, also called seasonal delayed implantation, is a mechanism that allows mammals to time the birth of their offspring during a favorable time of the year. Animals in FLCA that use this strategy include black bear, fisher, otter, mink, skunk, long-tailed weasel, and some bats. This allows these animals to both mate and give birth when food is plentiful and the weather is good, as well as to abort the fetuses before implantation if the female's body doesn't have sufficient reserves. The other type of delayed implantation is called *facultative diapause* and is regulated by lactation. If a female copulates while still lactating for a previous litter, the sucking stimulus will cause the embryos not to implant which allows the mother to finish weaning her litter before the next litter arrives. Animals in FLCA that use this strategy include shrews, mice, voles, and opossum.

While there are clearly some evolutionary advantages for this adaptation, many mysteries remain. Why does this process occur in such a diverse range of over 130 mammals, including those mentioned above in addition to seals, kangaroos, red pandas, and armadillos? Why do certain species use delayed implantation, such as the long-tailed weasel, but not its close cousin the least weasel? Why do fishers mate within 10 days of giving birth only to delay implantation for 9-10 months? What is the process that stops cell division, and could its understanding help in the race to stop uncontrolled cell division in cancer?

The wonders of nature never cease to amaze me, and while I'd love to understand more about her workings, I also love that there are many mysteries we don't understand.

Jim Reis

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

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## **Already a member? Consider passing this page on to a friend!**

### ***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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\_\_\_ Please 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 Join/Support )***

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:***

\_\_\_ Trail Committee (maintenance and repair)    \_\_\_ Stewardship Committee (includes invasive species removal)

\_\_\_ Land Preservation/Acquisition Committee    \_\_\_ Occasional Work Days    \_\_\_ Education Outreach

\_\_\_ Newsletter writer    \_\_\_ Other (please specify) \_\_\_\_\_