

25 years of greenspace advocacy

PLACE

Fall 2012

Brookline GreenSpace Alliance is a non-profit membership organization dedicated to the enhancement of open space in Brookline by supporting citizens in caring for their green spaces.



Trees contribute significantly to our community and our environment. Throughout this issue of PLACE you will read of benefits of planting a tree. From providing beauty and shade to helping to clean our air, trees improve our lives. Trees also often provide significance to a place or mark a special occasion. Brookline GreenSpace Alliance is celebrating 25 years of environmental advocacy and education. We have decided to mark this anniversary by contributing to the town a grove of trees which is part of the design of the new Fisher Hill Reservoir Park. This is important because this grove will celebrate the contribution of Brookline citizens who enhance and improve our green spaces; small and large acts of volunteerism that have made Brookline a special, healthier place to live. Please join us in this tribute by donating to the GreenSpace Grove, a reminder for future generations that parks need stewards.

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One of the beech trees planted by David Sears.
Photo by Jean Stringham

David Sears, a wealthy Bostonian (1787-1871), bought the land in the eastern part of Brookline from the Muddy River to the Charles River, and named his property Longwood after Napoleon's residence in exile on the island of St. Helena.

Sears planted more than 14,000 trees in the community of homes and parks that he developed in what is now referred to as the Cottage Farm and Longwood area. He planted the Longwood Mall in the 1830s and 1840's with 24 imported green and purple leaved European beech trees, *Fagus sylvatica*, many of which are still alive. On the National and State Registers of Historic Places, this beautiful park is one of Brookline's most treasured spaces.

Today, another tree-lined mall is in the planning stage. The Town of Brookline is designing a new park on the former site of the Fisher Hill Reservoir. As part of its 25th anniversary, the BGSA is assisting in the planting of a grove of 25 trees on the promenade at Fisher Hill Park. The tree-lined promenade will afford visitors a view of the park's fields, meadows and woods. A water rill will run the length of the promenade, under the trees. The Alliance is seeking donations to help fund the trees for this new Mall. The grove will celebrate all those who have volunteered in many ways to make this town **GREEN** and its parks special places. Please return the enclosed envelope with your donation.

Ogham Tree Calendars

Deborah Rivers, AIA LEED AIP

A trip to Ireland in the spring of 2006 introduced me to the concept of the Ogham calendar. In a shop window in Dingle, I encountered a unique display of thirteen small stone pendants, each inscribed with a character from the alphabet of Ogham. Each character represented a tree and a month in the Celtic year. Iron age inscriptions of Ogham are common on the Dingle Peninsula - the northernmost of the five rocky peninsulas which extend into the Atlantic on the southwest coast of Ireland.

Fascinated by the connection between the primitive symbols, trees, and a calendar, I attempted, but failed, to find the shop on our last morning in Dingle. Several days later, while my husband did research on his father's family, I pursued the subject of an Ogham Tree Calendar at the West Meath County Library in Athlone. Coincidentally, the entrance to the new Library contained a modern depiction of Ogham in etched glass. There I found a book which related the symbols to a thirteen-month lunar calendar, where the names of the trees in the Primitive Irish language corresponded to the names of the characters in the alphabet. Each of the Ogham

characters has a name, many of which refer to trees. For example, the first letter of the Ogham alphabet is 'beith' meaning a birch tree. Trees had a very important place in Celtic society, particularly among the Druids. Of special importance to this learned class was the oak tree – dair. 'Dair' is the term attributed to the seventh letter, the letter 'd', of the Ogham alphabet.

While we didn't see any Ogham stones in the West of Ireland, at the Trinity College Library in Dublin, two Ogham stones were displayed as part of the exhibit leading to the Book of Kells. The vertical edge of the stones formed the stemline across which the marks forming the characters were carved. The Celtic year consisted of two seasons, summer and winter. Summer, commenced with Beltane (May 1st eve) when the cattle were put out to pasture and winter began with Samhain (November 1st eve) when the cattle were brought in from the fields. Samhain survives today as our Halloween. Since 2006, I have created several modern combination calendars which mark the thirteen lunar months of the Celtic year and the twelve months of the Gregorian calendar.



Symbol	Month	Tree
≡	Idad	Yew
⊥	Ailm	Pine
┆	Beith	Birch
┆┆	Luis	Rowan
┆┆┆	Fern	Alder
┆┆┆┆	Sail	Willow
┆┆┆┆┆	Huath	Hawthorne
┆┆┆┆┆┆	Onn	Ash
┆┆┆┆┆┆┆	Dair	Oak
┆┆┆┆┆┆┆┆	Tinne	Holly
┆┆┆┆┆┆┆┆┆	Colle	Hazel
┆┆┆┆┆┆┆┆┆┆	Cert	Apple
┆┆┆┆┆┆┆┆┆┆┆	Ruiz	Elder

Greening the Next Generation

By Sue Zobel, 7/8 Grade Science Teacher - Lincoln School

Middle school students are known for their energy and enthusiasm. Capturing that energy and harnessing it to inform and improve the quality of their neighborhood is the goal of a collaboration between students at William H. Lincoln School, the Brookline GreenSpace Alliance and the Brookline Parks and Open Space Division.

Learning about ecosystems; population interactions, energy flows and cycles of matter such as carbon, oxygen and nitrogen are fundamental concepts in science education. Understanding our urban ecosystem, how the human infrastructure interacts with these systems has become increasingly important as we become aware of human impacts on these systems.

This year, with the help of Hugh Mattison (GreenSpace Alliance) and Brandon Schmitt (Park Ranger – Park and Open Space Division), middle school students at the Lincoln School will have the opportunity to begin a long term study of their local urban environment by investigating the important role their neighborhood trees play in this ecosystem.

Hugh has introduced the iCanopy software program developed by the USDA Forest Service which will allow students to determine what percentage of their neighborhood is covered by buildings, pavement, grass or trees. Students can then estimate the size of the local urban forest. This fall students will begin going out to identify, measure and map trees on the school grounds and in the surrounding neighborhood. They will be able to compare the iCanopy results with what they are seeing in the field. This will allow them to verify that what they are visualizing from above, via satellite imaging, is what is observed on the ground.

The tree data collected will then be used for four purposes:

1. Creating a guide to local trees for use by the community. The goal is to make this available as a field guide to familiarize and encourage families to explore the local urban forest surrounding the school.

2. Begin to identify the heritage trees in the neighborhood with Brandon Schmitt. Heritage trees are trees that are significant due to their size, age or historical importance. The town has a complete inventory of public trees but doesn't have information about noteworthy trees on private property. Student outreach into the surrounding neighborhood will help fill those gaps.

3. Upper grade students will be partnering with the lower grade students to observe specific trees to document color change and leaf drop in the fall, and budding and leaf out in the spring. The information will be added to Project Budburst, a national phenology database. Phenology is the study of the seasonal timing of life cycle stages of plants and animals. Using the local tree data and accessing the national phenology database students will be able to draw conclusions for themselves about changes that may be occurring in populations over time on a regional and national scale.

4. As this project develops and a more complete data set is built, students will be able to use a program also developed by the Forest Service to determine the economic value of the ecosystem services the neighborhood trees contribute, including CO₂ up take, runoff control, soil stabilization and cooling.

Actively participating in learning about the local environment while collecting useful information for their community will help these students experience the value of civic engagement. The hope is that through these experiences children, as they become adults, will continue to understand the importance of trees and local green spaces and continue to support their communities in maintaining these vital resources.

Newly planted street trees appreciate a thorough watering once a week



Park Ranger Brandon Schmitt reviews tree characteristics with Lincoln School 7th grade class

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Editor

Marian Lazar

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Street trees on Norfolk Road

Past and Present: Brookline's Commitment to Street Trees

Town forefathers planned well; their thoughtful design has shaped the Brookline we know today. Town records show that, as the Town was developed, street designs included provision for planting strips, or tree lawns.

In my effort to understand more of Brookline's commitment to its street trees, I reviewed the 1889 and 1890 Report of the Committee on Planting Trees. The 1889 Report of the Committee on Planting Trees reported that \$2,000 was appropriated. A total of 241 trees planted including 15-26 trees planted on Sewall Ave., Cumberland Ave., Allerton St., Tappan St., and Babcock St., St. Paul St., Harvard St., Kent St., and Clark and Sumner Roads. Although only \$1,250 (one contract called for a price of \$2 per tree!) was expended, another \$2,000 "to provide for a system of pruning and protection of existing trees" was budgeted for the next year.

The 1890 report shows a total of 189 trees (one of which was replaced because of injury from a horse) were planted on streets including Jamaica Road, High Street, Summit Ave., Clark Road, and Brook Street, and holes

prepared for the spring of 1891 on Norfolk and Middlesex Roads in South Brookline. The Committee again requested \$2,000 for fiscal 1892. This \$2,000 annual appropriation was about .30% of the total Town budget at that time.

So how well has Brookline maintained this commitment? The combined Forestry budget and Tree Replacement funding in the Capital Improvement Program is about \$560,000, or .25% of the FY2013 total budget. So when we compare this to the street tree funding of .30% in the 1890's, we are holding our own. Not bad, considering that in 1899 there were about 6,500 trees, and now we have over 11,000 street trees!

Hugh Mattison, Chairman,
Brookline Tree Planting Committee

Note: BGSA is embarking on a project to update a book written in 1938 by Emma Cummings, Brookline's Trees: A History of the Committee for Planting Trees of Brookline, Massachusetts and a Record of Some of Its Trees. She served on the Tree Planting Committee for almost 40 years, and offers many detailed descriptions of Brookline's trees, their history, and significance.

The Future: Fisher Hill Reservoir Park 2050

Linda Olsen Pehlke and Gina Crandell

It's 2050 and you've decided to take a walk to the town park on Fisher Hill. On your way there you enjoy the tree-lined sidewalk and beautiful homes, once again appreciating the way Frederick Law Olmsted's layout celebrates the curves of the land and embraces the views. As you walk along Fisher Avenue, you eventually reach the welcoming stone steps rising up toward a singular Gatehouse. The small rough-hewn stone structure reminds you of other bigger yet similar buildings you've seen; beacons from a more gracious past and remnants from the life of H.H. Richardson who lived and worked just a few miles from here.

Walking up the stairs, a promenade stretching away on either side of the Gatehouse comes into view. People are enjoying the view from up here, looking across the park and down into the former reservoir. You join them and while leisurely taking in the view, you settle onto a bench, enjoying the shade and cooling breezes from the grove of elegant, mature shade trees planted along the promenade. Looking through the grove, you're struck by the massive trunks and majestic height of the trees; they must be almost 50 feet tall. Since the trees are all the same species and about the same age, they tell you someone planted them here together many years earlier.

Walking along the high promenade the dappled shade is cool and soothing. The swishing sound of the boughs swaying in the breeze muffles distant voices. The crowns of the trees are touching, forming a continuous leafy canopy over the walkway, like one enormous tree with 25 trunks. From here, you look out into the wide open space of the large rectangular bowl, reminiscent of the reservoir that held metropolitan Boston's drinking water nearly two hundred years before. Now, there is an



expansive lawn opening to the sky. The Grove feels intimate by contrast to the bright sun of this large space.

The recent heat wave reminds you that these trees provide so much more than just shade and wildlife habitat. Your daughter, who is absorbing every real life lesson her favorite science teacher relates, reminded you yesterday that trees produce oxygen, absorb carbon dioxide, improve soil and water quality, mediate climate change, reduce noise and slow wind speed! But, mostly, you appreciate their beauty and enjoy watching the way the grove changes with every day and every season.

From your seat in the grove you watch some children playing lacrosse on the great lawn, a rustle in the branches overhead alerts you to a visit from what might be one of your favorite birds, a Baltimore Oriole. That's when you notice a plaque. Reading, you learn that this Grove was planted to commemorate the 25th anniversary of the Brookline GreenSpace Alliance and that the BGSA holds the conservation restriction for this, the Fisher Hill Reservoir Park. Calculating, you realize that the BGSA has been providing

environmental leadership in Brookline for 63 years! Planting a grove of trees was a really good idea and a great way to mark an important anniversary.

Design views of the promenade and BGSA grove at Fisher Hill Park. Courtesy of KDMG Design.



**Buying firewood?
Make sure it's not coming from an area infected by Asian Long-horned Beetle**

Yes! I want to support the local environment.

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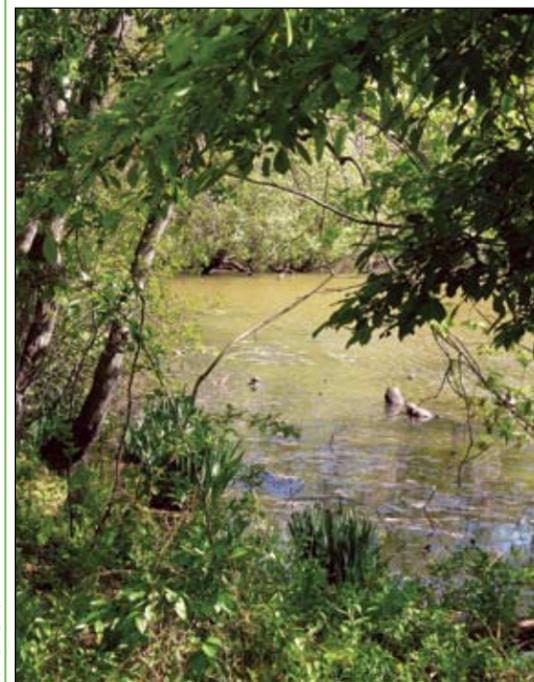
Planting for Habitat and for People

Gail McClelland Fenton

Trees and shrubs contribute so much to our urban landscape that it is easy to forget their other roles in the environment. A single large shade tree or a small grove of trees in a park gives us aesthetic pleasure as well as “environmental services” that serve our culture’s needs and wishes, such as shade and beauty, fresh oxygen, slowing the rush of rainwater onto the ground, anchoring and aerating the soil, and finding reserves of water deep underground during drought.

For urban folks, one or a few species of trees can serve these needs, especially aesthetics. We like a stand of intentionally planted trees; we will love the trees the BGSA is donating to the Fisher Hill Reservoir Park. They will be beautiful, and will complement the plantings of shrubs and trees – “habitat plantings” – designed to provide environmental services to the non-human nature here in Brookline.

A major contribution of new “habitat plantings” will be to provide natural surroundings for a web of interdependent plants and animals. The habitat needs of animals include the need for certain kinds of food year-round or during part



Hall's Pond

of a seasonal cycle. The right kind of shelter is necessary for protection from weather as well as from humans and other animals. Water and air that are not polluted are also needed. These are the environmental services naturalized plantings at the Fisher Hill Reservoir should provide. In such a small space, trees and shrubs provide much-needed physical space away from people. Wetland and meadow areas will add to the mix.

It will not be enough simply to plant oaks so that there will be acorns in the fall. Animals that eat acorns also need food during the time when acorns are not ripe. For turkeys, deer, blue jays, insects that eat acorns, birds that eat those insects, and many of the more obscure species that are currently living at or visiting the old reservoir site, there must be food and shelter throughout the year. Some of these animals might need a combination of maples, trees in the cherry family, native hickories of several species, birch trees, willows, bramble berries, and many other kinds of plants and the animals that feed on them to provide a rich enough habitat for survival of even a few species of animals.

At first, the massive cutting and re-shaping of the Fisher Hill site will be a heart-breaking sight. It will be hard to imagine that any animal could come back to the park. But there is an amazing resilience in urban wildlife.

Slightly more than ten years ago, part of the Hall’s Pond Sanctuary was excavated down to the soil and then thoughtfully replanted. This area has grown in beautifully. Birds, such as Red-winged Blackbirds and Baltimore Orioles are nesting there. Migrating birds find crucial food and shelter again where there once was bare ground. Rabbits thrive along with squirrels, chipmunks, wild turkeys, and an array of beautiful and fascinating insects.

And people, do they find it aesthetic? Yes, so much so that visitors return again and again to the sanctuary. Once again people are calling this area “pristine nature.”

A Garden Ethic For Brookline

Gina Crandell

Michael Pollan is well-known today for writing about food and agricultural policy and, while I read everything he writes, it is to *Second Nature: A Gardener’s Education*, 1991, that I often return. “The Idea of a Garden,” described here, is not only about trees but also the “man and nature” problem which Pollan illustrates through the example of a beloved old forest in Connecticut. Cathedral Pines, owned by the Nature Conservancy, was hit by a tornado in 1989 that left the 150-foot tall pines, about as big around as missiles, laying every which way like pick-up sticks.

Responses to the devastation took extremes: do nothing or clean it up (and build condos?). Pollan explains these extremes by what he calls the “wilderness ethic,” a particularly American conception that defines the relationship of man and nature as a zero-sum game: Do nothing, because if you do something, you destroy the wilderness. The wilderness has no middle ground. Pollan points out that Americans invented the wilderness idea right along side laissez-faire economics. This set of extremes is between Nature and the Market. By preserving a small percentage of land for “nature,” we allow the market to control the rest.

Cathedral Pines (or any other “natural” area) is not natural if that term suggests it has not been changed by people. Like many forests, it was the product of early logging practices, then fire suppression became a tool to protect it for the community. According to the theory of forest succession set out in the nineteenth century, a pine forest abruptly destroyed will usually be succeeded by hardwoods, typically oaks that arise from buried acorns.

But Pollan questions whether forests follow such prescribed routes: What if there had been no squirrels to bury acorns? Or what if there were hickory nut trees rather than oaks? What if an overpopulation of young deer wipe out the young pines and make way for spruces?

Or suppose, when the wind is just right, seeds from a Norway maple on a nearby street germinate in Cathedral Pines.

After listing possible scenarios that might cause a pine forest to follow a path quite different from forest succession, he asks: “If our cigarette butts, Norway maples, and acid rain are going to shape this place, why not also our hopes and desires?” After all, natural processes can also be very destructive and human intervention can also be positive. As an alternative to the “wilderness ethic,” Pollan proposes the “garden ethic,” which places people in the equation, and recognizes the possibility that they might contribute to the appreciation of natural processes, and even do so expressively as in a garden. The “garden ethic” begins with culture, avoids purity or blame, and affirms local interdependencies. The garden ethic asks us in Brookline to see our town as a garden. We can’t say this spot is natural and that spot is not. After all, natural processes occur in Coolidge Corner as well as at the bottom of Hall’s Pond. And people affect every part of it.

Trees can express our hopes and desires. We can protect existing ones and we can also plant thousands more. We might plant them to look natural or plant them in lines or groves, multi-species or the same. We can have forest canopy where the understory is left to one of the scenarios such as Pollan describes, or we can mow the understory to enjoy access. We might plant trees really close as they often grow in the forest and we can have contrasting sunny open spaces. When we think of our town as a garden, we can write a different prescription for each place with people and biological interdependencies in mind.

Plan of new park at Fisher Hill Reservoir. Orange circles indicate the BGSA grove along the promenade. Sketch courtesy of KMDG Design.



Avoid planting invasive species. Check out the list at <http://www.mass.gov/agr/farmproducts/prohibited-plantlist.htm>



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GreenMatters

The Benefits of Trees

The following are some statistics on how important trees are in a community setting.

“If you plant a tree today on the west side of your home, in 5 years your energy bills should be 3% less. In 15 years the savings will be nearly 12%.”

—Dr. E. Greg McPherson, Center for Urban Forest Research

“In one study, 83% of realtors believe that mature trees have a ‘strong or moderate impact’ on the salability of homes listed for under \$150,000; on homes over \$250,000, this perception increases to 98%.” —Arbor National Mortgage & American Forests

“One acre of forest absorbs six tons of carbon dioxide and puts out four tons of oxygen. This is enough to meet the annual needs of 18 people.”

—U.S. Department of Agriculture

“Trees can be a stimulus to economic development, attracting new business and tourism. Commercial retail areas are more attractive to shoppers, apartments rent more quickly, tenants stay longer, and space in a wooded setting is more valuable to sell or rent.”

—The Arbor Day Foundation

“The planting of trees means improved water quality, resulting in less runoff and erosion. This allows more recharging of the ground water supply. Wooded areas help prevent the transport of sediment and chemicals into streams.” —USDA Forest Service

“In laboratory research, visual exposure to settings with trees has produced significant recovery from stress within five minutes, as indicated by changes in blood pressure and muscle tension.” —Dr. Roger S. Ulrich Texas A&M University

“Nationally, the 60 million street trees have an average value of \$525 per tree.” —Management Information Services

To help locate New York City’s heritage trees, the City Department of Parks and Recreation conducted a program called the “Great Tree Search.” New Yorkers looked for trees of unusual size and age, those linked with historic landmarks, and trees of unusual species or location. On Arbor Day, they held a big party to celebrate New York City’s Great Trees.

Give a Living Legacy Plant a tree at Fisher Hill Park

For more information about planting a tree at Brookline’s newest park on Fisher Hill, go to www.brooklinegreenspace.org

GreenSpace Grove
GIVE A LIVING LEGACY
BGSA • 25 YEARS • 25 TREES
 Join Brookline GreenSpace Alliance in commemorating 25 years of environmental leadership with a gift of 25 trees to the Citizens of Brookline that will be planted in Fisher Hill Reservoir Park in 2013.