

We hope you enjoyed this brief introduction to the environment of Fitzgerald Lake. Please recycle this brochure if you choose not to keep it. Donations, which can be left in the box at the North Farms Road parking area or sent to BBC, P.O. Box 60566, Florence, MA 01062, would be greatly appreciated. Thank you for helping to preserve the beauty of this natural place.

**Broad Brook Coalition**

Broad Brook Coalition is a non-profit, all-volunteer community organization that co-manages the Fitzgerald Lake Conservation Area with the Northampton Conservation Commission. We welcome new members. For more information, please visit our web site at: <http://www.broadbrookcoalition.org>.

*Trail and brochure originally designed and created by Jody Larson (2000) with updates by Emily Case and Bob Zimmermann (2011).*

*Evolving Habitats*

*A Self-Guided Nature Trail at the Fitzgerald Lake Conservation Area*

*Broad Brook Coalition*  
*[www.broadbrookcoalition.org](http://www.broadbrookcoalition.org)*

**A Bit of History**

The land of Fitzgerald Lake Conservation Area has had many human uses in its long history. Early native people hunted, fished and may have had encampments here. After European settlement, this area was used as Northampton’s woodlot and, at the time, two sawmills were located along Broad Brook. Later, some of the forest was cut for farming and grazing. After the farms were abandoned, the forest grew back and covers most of the area today.

As you walk along the half-mile Nature Trail, the numbered stops will introduce you to some of the natural history of the area. Let’s begin with a view of the lake from the end of the canoe-launch boardwalk.

**The Lake**

Fitzgerald Lake is an artificial lake created when an earthen dam was built across the Broad Brook by the Fitzgerald family in 1965 and is only 10 feet at its deepest. When the brook and the adjacent marsh were flooded, the characteristic marshland habitat was replaced by lake habitat, which supports fish such as perch, bluegill, large-mouth bass and pumpkinseeds, and semi-aquatic animals such as beavers, otters, turtles and water snakes. The conservation area still includes extensive marshland east of the dam. The continued spread of cattails and the abundant growth of aquatic plants in the lake during the summer months indicate that the lake is undergoing *eutrophication*, a process through which plant growth

is stimulated in part by nutrient overload from sources such as lawn fertilizer runoff and leaky septic systems.

**1 Cattail Marsh**

Cattails are a common plant of marshes and are native to North America. The thick brown “tail” is actually the flowering part, producing thousands of seeds that are dispersed by wind to start new colonies. New cattails also sprout from the plants’ starchy under-

ground stems, a favorite food for muskrats and geese. The tall stalks provide shelter for nesting birds. In spring and summer, you may see red-winged blackbirds perched in the cattails, giving their territorial call. Cattails were immensely useful to Native Americans: the leaves were woven into baskets and mats and, with willow branches, were used to construct thatched huts; the tufted seeds were used to line cradle boards and diapers; the brown tail, dipped in fat or oil, was used as a torch; and virtually every part of the plant was used for food

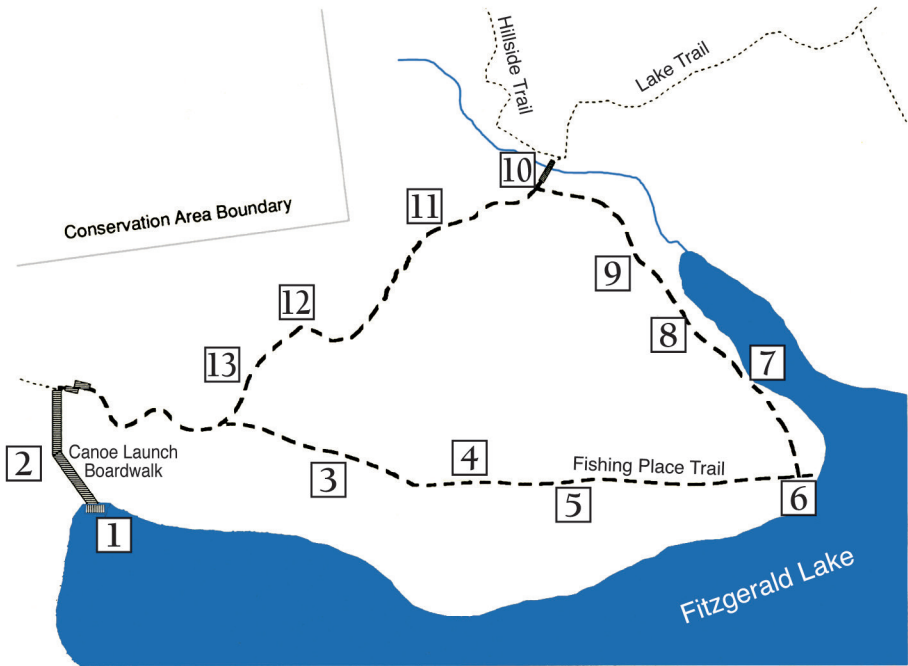


**2 Boardwalk Plant Community**

The wetland plant community on either side of the boardwalk grows at the level of the water table. In the spring, skunk cabbage, ferns and mosses thrive there. The shrubby trees are mostly native dogwoods which can be identified by their parallel-veined leaves, clusters of white flowers and, in the late summer and fall, blue-black or white berries.

**3 White Pines**

You are passing through a grove of white pines which are characteristic of the New England landscape. Records show that the pines in the Broad Brook drainage area were tapped for turpentine and cut for firewood over 300 years ago. You can estimate the age of these trees by counting the *whorls*, rings of branches at the same





height, and identify them as white pines by the presence of five needles in each leaf bundle. Other pines in our region have either two needles per bundle (red pine) or three needles per bundle (pitch pine).

4 **Vernal Pool**

The shallow basin you see just off the trail is one of a number of certified vernal pools in the Fitzgerald Lake area. Vernal (or spring) pools fill with water in the spring and, though they have no outlet, they usually dry up during the summer. They are crucially important breeding sites for spotted salamanders, wood frogs and several other species. Spotted salamanders migrate to the pools at night in the spring to breed and lay eggs. If they were to breed in permanent bodies of water, such as the lake, their eggs would be eaten by fish. Please do not disturb the pool or allow your dog to play in it.



5 **The Forest and the Lake**

The forest surrounding Fitzgerald Lake has been cut at least once in the past. Here you can see stumps from the last time trees were cut. In the 1800s, 80% of the land in Massachusetts was cleared for farming, and only 20% was forested. With the decline in farming, we now have the reverse: 80% is forested, and 20% is cleared. Note the transition in vegetation from forest to small trees

and shrubs near the lake shore, a phenomenon known to ecologists as an *ecotone*.

6 **Lookout Point**

Fitzgerald Lake is a splendid place to experience peace and quiet. Take a few minutes to sit and enjoy the peacefulness of the area. You might close your eyes and notice the sounds and smells of the woods around you, or look for great blue herons, wood ducks, tree swallows and, possibly, ospreys, flying over the lake. Near the shore to your right (partly hidden by a large rock) is a maple tree with a unique growth pattern: its trunk grew horizontally for several feet due to some unknown damage sustained in its youth, then turned and grew upward.

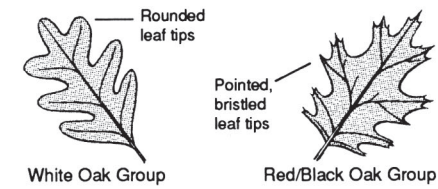
7 **Fishing Place**

This small arm of the lake is a favorite resting and feeding place for ducks, geese, herons, beavers and other wildlife at different times of the year. Note the large beaver lodge on the opposite shore and watch for the beavers swimming in its vicinity, particularly at dusk. In recent years, the surface of this inlet has become densely covered with water lilies and watershield owing to the accumulation of nutrients as plants from previous years settle to the bottom and decay which contributes to eutrophication. As you walk toward the next post, note several multi-trunked red maples along the path.

8 **Oak Trees**

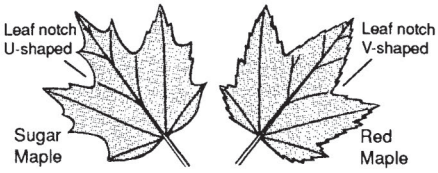
The tree to the immediate right of this marker is a young white oak. Oak trees are second to none in producing food for

wildlife. Their acorns are eaten by grouse, turkeys, jays, deer, porcupines, raccoons, squirrels and even bears. The behavior of squirrels in turn helps to propagate new oak trees. Squirrels bury acorns, hiding them to eat later, but they don't always remember where they buried them. These forgotten acorns sprout in the spring, growing into new trees. The wood of the oak is widely used in the production of fine, durable furniture, and *tannins*, extracted from its bark, were important historically for tanning leather.



9 **Sugar Maple**

Most of the maples along this trail are red maples, but this one is a sugar maple, whose sap is used to make maple syrup. Sugar maples usually prefer drier uplands; this one probably started growing here before the lake rose and made the land wetter. The density and hardness of maple wood makes it an excellent choice for flooring and butcher blocks while its sound-conducting properties are exploited in the fabrication of several types of musical instruments.



10 **“Migrating” Rocks**

This large granite boulder and the chain of large rocks behind it are called *glacial erratics*; they were carried to this spot from northern New England or Canada during the Wisconsin glacial period 12,000 years ago and deposited here as the ice melted. Imagine what this area looked like covered with solid ice a mile high! On the banks of the brook to your right is a community of plants typically found in moist soils, including trout lily (dogtooth violet) and purple trillium.

11 **Den Tree**

About 40 feet off the trail is an old red maple tree with large hollows. Trees like this one are called *den trees* because animals and birds seek shelter in them. Raccoons and other mammals often live inside the hollows of this tree, protected from the weather and predators. Just before you reach post 12, there are numerous patches of *Lycopodium* (also known



as clubmoss or ground pine), a very small evergreen plant whose ancient—and much larger—relatives helped form the coal deposits we

mine today. Its flammable spores were once used as flash powder by photographers and magicians.

12 **Yellow Birch**

This large tree with shiny, peeling bark is a yellow birch. Yellow birches and black birches produce wintergreen oil in their bark and new twigs. The wintergreen oil protects the trees from browsing by deer and other animals who don't like its aromatic flavor. The same aromatic compound, which has long been used for medicinal purposes, is also produced by *wintergreen*, a small, ground-hugging evergreen plant with white-striped leaves, which can be seen growing near the base of this tree. Look for its red berries in winter.

13 **Hemlocks**

You are just on the edge of a fine stand of Eastern Hemlocks, one of New England's most attractive conifers that occurs throughout our region. In recent years, hemlocks have been attacked by an insect predator with a peculiar lifestyle called the *hemlock woolly adelgid*, which forms small, white, cottony balls on the underside of the needles and eventually defoliates and kills the infected tree. As of this edition of the trail guide (2011), hemlocks in the conservation area have escaped infestation even though diseased trees have been found in the vicinity. Please notify us at [info@broadbrookcoalition.org](mailto:info@broadbrookcoalition.org) if you see any signs of woolly adelgid infestation.