Parks, Recreation, & Beaches

Trail Guide

Flora B. Peirce Nature Trail

New Bedford, MA

Digital trail map available at
http://www.newbedford-ma.gov/parks-recreation-beaches/

Public parking is available at the Falmouth Street Trail Head.

Kids love to explore in nature and find it fascinating when given the opportunity. Use your five senses to discover the wonders in the world around you. Bring binoculars to explore the tree tops and a magnifying glass to study plant details. Enjoy the change of seasons as you return again and again to hike the trail and become familiar with the plants and animals that live here. Don't disturb the natural habitat around you. You are visiting the homes of forest dwellers and should be a good guest. Enjoy this beautiful public space. Please treat it with respect.

Visit our other beautiful urban nature trails.
For more information and trail maps go to
http://www.newbedford-ma.gov/parks-recreation-beaches/

We have a carry in carry out policy for trash.

Leave only footprints take only photos.

Mary S. Rapoza, Director

Parks Recreation & Beaches

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Based on the original Trail Guide by:

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The Coalition for Buzzards Bay

1999

Introduction and Trail History

Who was Flora B. Peirce?

Flora B. Peirce (pronounced 'purse') was a New Bedford native and a member of the New Bedford Conservation Commission from 1964 to 1984. She was, in fact, instrumental in forming the Conservation Commission in 1964 and served as its first chairperson (a post she filled several times during her tenure).

Under Miss Peirce's direction, the first major project undertaken by the Conservation Commission was the development of the trail system in what is now known as the Flora B. Peirce Nature Trail. An article detailing the dedication of the Trail in the September 28, 1973 issue of the Standard-Times describes Miss Peirce as a "woman who has done so much for New Bedford in the name of preserving the green grass, trees and trails left from a long past."

While on the Conservation Commission, Miss Peirce also worked on beautification of Buttonwood Park, public education programs, and the preservation of numerous small open spaces in New Bedford. She was also involved in the League of Women Voters where she was on the Board of Directors for 15 years. Her community involvement also included teaching English to local immigrants in preparation for their naturalization. After a lifetime of community involvement, Miss Peirce died in 1990 at age of 91.

The Peirce Trail Site

The Flora B. Peirce Trail is a mostly wooded preserve in the extreme northwest of New Bedford. New Plainville Road forms the northern border of the site and separates the site from Turner's Pond and the Acushnet Cedar Swamp, a 1,850 acre Massachusetts State Reservation. To the south and east is the New Bedford Municipal Airport, whose +300 acres abuts the Nature Trail property. The New Bedford – Dartmouth town line defines the entire western border of the site.

The trail is sandwiched between two swamps, the Acushnet Cedar Swamp to the north, and the Apponagansett Swamp to the south, which is bisected by the New Bedford – Dartmouth town line (a third swamp, the Flag Swamp in Dartmouth, is within a mile of the Nature Trail.) Since red maples far outnumber Atlantic White Cedar at this site, this community would be classified as a Northern Swamp Forest rather than an Atlantic White Cedar Swamp.

The Peirce Trail site combines forested, red maple-dominated wetlands with drier, white pine-dominated uplands. A north south strip of forested wetland area follows the Paskamanset River as it flows south from its beginnings at Turner's Pond through the Trail property. The south-central and southeastern sections of the preserve are also characterized by forested wetland.

There are drier upland areas in the northeast and north central sections, as well as in the southwestern section. Included in this southwestern section is a small meadow. A small pond and wet meadow are located in the northeast and separate gas and water right-of-way easements that bisect the west and southwestern sections create a fair amount of edge habitat in the preserve.

Starting as early as 1925, the city began to acquire land in this area. As the amount of city-owned acreage in this area grew, the city encouraged Bristol County to purchase abutting acreage in order to increase the amount of open space in New Bedford. The land that now comprises the preserve is either owned and managed by the City of New Bedford, or owned by Bristol County and managed by the City of New Bedford, under mutual agreement.

Part of the current trail system in the preserve was blazed in the late 1960's, and the area was officially dedicated as the Flora B. Peirce Nature Trail in 1973. More trails were blazed in the mid-1970's and some wooden bridges were installed, and repairs were made to existing structures in the preserve in 1978 as a part of a federally funded summer Youth Corps project through CETA.

Who was Flora B. Peirce? and The Peirce Trail Site, taken from Management Plan for the Flora B. Peirce Nature Trail, 1995, written by Kristen E. Leotti. Reprinted with permission.

Trail Rehabilitation

Southeastern Environmental Education Alliance (SEEAL) members, the Buzzards Bay Coalition and Greater New Bedford Regional Vocational High School along with New Bedford Conservation Agent, Elizabeth Leidhold, began collaboration in early 1999 to bring the trail back to its full potential for education and passive recreation. They replaced the old boardwalks with new ones made from recycled plastic lumber.

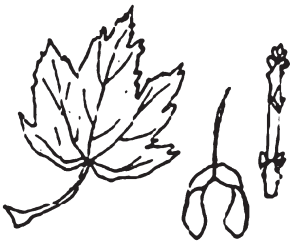
In 2013, the Department of Parks, Recreation, and Beaches received a Massachusetts Department of Conservation and Recreation Recreational Trails grant to replace damaged boardwalks and add new boardwalks as needed and design a new trail map and trail guide. Parts of the original trail near the Paskamanset River were abandoned at the suggestion of the Conservation Agent and new upland trails were added. Thank you to the Trustees of Reservations Youth Corp. who built and installed the new boardwalks. They also return each summer to maintain the trails. Thank you also to Nicole Jones of Greater New Bedford Regional Vocational Technical High School, who created the way finding signs on the trials. I am sure that you will enjoy this beautiful trail representing a unique local natural environment.

Typical Mature Wetland Forest Type

As you walk into the woods, notice the canopy formed by the Red Maple *(Acer rubrum)* and the Atlantic White-Cedar *(Chamaecyparis thyoides)* trees. The canopy they form shades the plants and shrubs below. These two trees are the dominant species in the trail. The presence of these trees, and the other species you see, tells us that this is a wetland forest. All species are adapted to living in seasonably flooded conditions.

Red Maple:

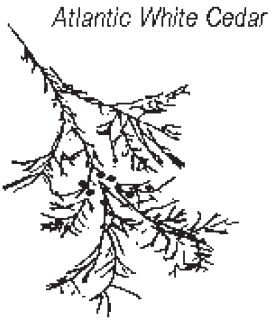
A medium-sized tree which, when young, has smooth bark. Older trees bear bark that is rough and scaly. Leaves have 3 to 5 lobes, are toothed and whitish below. New growth on trees has reddish bark. Small red flowers are visible in the early spring. This is a very common eastern tree.



Red Maple

Atlantic White-Cedar:

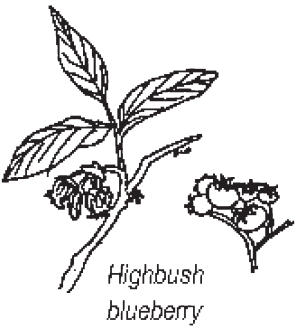
An aromatic evergreen tree with a narrow, pointed crown and slender, horizontal branches. Its reddish brown bark is thin with narrow, forking ridges and the leaves are dull, blue-green and scale-like. The wood of this tree is very resistant to rot, so it's widely used for shingles and fence posts.



Understory and Herbal Layer Species

Highbush Blueberry:

A tall, woody plant with peeling bark, its leaves are elliptical (oval closing in a point at the tip), with smooth edges. The green leaves turn red in the fall, new branch growth is green and slightly fuzzy. Its bell-shaped flowers grow in white to pink clusters and bear edible fruit in the late summer.



Highbush blueberry

Do not eat plants or berries if you are unfamiliar with them.

Sessile-leaved Bellwort:

(Wild Oats) A low, delicate plant with oblong leaves growing alternately along an arching stem. Yellow bell-shaped flowers hang upside down from the ends of the stems and appear in early spring.

Common Greenbrier:

Its leaves grow somewhat egg-shaped and are shiny green on top, but duller green underneath. Its rigid green thorns grow along the vine. Also has a small blue-black berry. Very common on trail.

Canada Mayflower:

Common throughout most of New England, this low-growing plant forms mats, with two to three shiny green leaves which are heart-shaped at the base. In the spring flowers bloom in a raceme (similar to a bunch of grapes) and small, red-speckled berries can be seen.

Cinnamon Fern:

Receives its name from the cinnamon colored hairs along base of leaf stalk. Fronds are large, deeply-cut, with smooth edges. Grows in circular clusters.

Cinnamon Fern

Royal Fern:

Look for opposite branches on central frond. Each branch has pairs of smooth-edged, green, slightly triangular leaflets.

Royal Fern

Poison Ivy

While enjoying the beauty of the forest we are tempted to smell and touch the surrounding plants and trees. Not only does this bring us closer to nature, but it also helps transport pollen. Often, our contact with plants is accidental; branches, leaves or flowers may brush up against us as we tour the trail. However, we should avoid touching certain plants, one of which is Poison Ivy.

Poison Ivy grows all over this forest. You should look for plants whose leaves grow in groups of three, and have smooth edges. The leaves are shiny green, deeply-veined and turn red at the end of summer. You may see berry-like fruit growing in the summer, and sometimes the plant will grow like a climbing vine.

Poison Ivy produces poisonous oils that can stick to skin and clothing and cause rashes and blisters throughout the year.

Poison ivy

The oil is present in all parts of the plant. If you touch Poison Ivy, wash your clothing and wash your skin in warm, soapy water.

Finally, never burn Poison Ivy. The oils will become airborne and can enter your lungs.

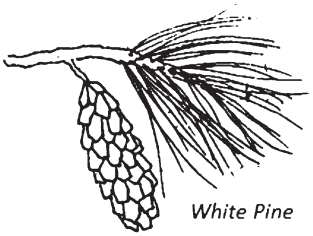
Remember…… "Leaves of 3 – Let it Be."

White Pine Forest

The open area of the forest is dominated by White Pine *(Pinus strobes)*. There is very little growth below the canopy layer. The trees effectively block most of the sunlight from reaching the forest floor. The lack of sun prevents most plant species from growing in this part of the trail system. It is expected that this area will look the same for many years to come, unless a major weather event were to topple one of the pines and open a hole in the canopy layer.

White Pine:

A coniferous (bearing cones) evergreen with rough, deeply furrowed bark. Needles grow in whorls. Lower branches unexposed to sunlight die off because they are unable to photosynthesize. Larger trees only grow needles on the top branches.


White Pine

Starflower:

Five to ten lance-shaped, deeply veined leaves grow in a whorl near the end of the plant stem. Leaves form a star. White flowers with seven petals rise out of the center of the whorl. Dry seed capsules may be visible.


Starflower

Wild Sarsaparilla:

Growing in an umbrella-like fashion, its three-leaf group branch from the main stalk and each leaf group (leaflet) holds five leaves. The edges are slightly toothed, and small whitish-green flowers appear in late spring. When leaves have withered or fallen off, small purplish berries may be seen. At first glance this plant resembles Poison Ivy.

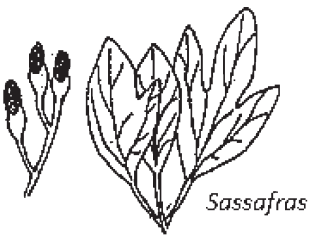

Wild Sarsaparilla

Early Succession

You will enter a part of the trail that was recently disturbed, creating open canopy. Most likely, logging activity at some point opened up this area to the sun. Whatever the cause, plenty of sun was able to reach the ground. Eventually, the typical pattern of succession on the forest floor began to take place. Trees that require lots of sun, often called pioneer species, took root. They are the trees and woody shrubs you see in a clearing and at the forest edge, all of which are described below.

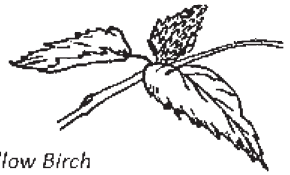
Sassafras:

A unique tree with soft, sometimes fuzzy leaves which grow in three different shapes (single egg-shaped lobes, two-lobed mittens and three-lobed leaves resembling a ghost). The forked, green branches have blotches near the leaf stems and blue fruits appear in late summer. The leaves give off a fragrant, spicy aroma which smells like root beer soda when rubbed.


Sassafras

Yellow Birch:

Identified by its shiny golden, peeling barks; its leaves are double-toothed, pointy at the tips and rounded at the base. It thrives in moist areas and its sap has a wintergreen aroma.



Yellow Birch

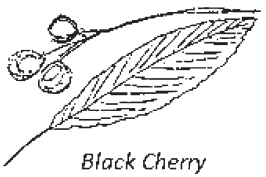
White Oak:

Tall with white to light gray, flaking bark, this tree's leaves are multi-lobed. The edges are smooth and rounded. Acorns are produced each summer.

White Oak

Black Cherry:

A pungently aromatic tree with a tall trunk, oblong crown and small white flowers. Its bark has distinctive bitter odor and is blackish-gray with smooth, horizontal lines. The leaves are shiny dark green above and lighter green beneath.



Black Cherry

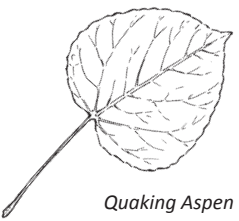
Eastern Red Cedar:

An aromatic evergreen tree with an angled trunk and narrow, compact crown. Growing 40-60 feet, its bark is reddish brown, thin and shreddy. Its evergreen leaves are scale-like and dark green.

Eastern Red Cedar

Quaking Aspen:

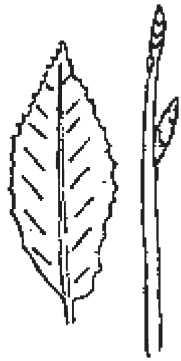
(Trembling Aspen) This is the most widely distributed tree in North America. Its crown is rounded and narrow and its foliage is thin. Leaves are short-pointed at the tips, rounded at the base, shiny green on top, but duller green underneath. The bark is somewhat white, smooth and thin. On larger trunks the bark will grow thicker, gray and furrowed. Brownish flowers grow in early spring before the leaves appear.



Quaking Aspen

American Beech:

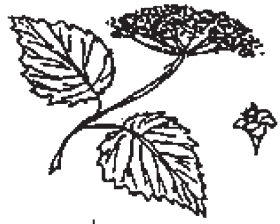
Growing up to 80 feet in height, this large tree produces edible beechnuts. The crown is rounded and branches are spreading and horizontal. Leaves are wide and elliptical, and long-pointed at the tips, having a dull, dark, blue-green color on top and lighter green beneath. The edges are coarse and saw-toothed, and have slightly sunken veins. Its bark is light gray, smooth and thin.



American Beech

Arrowwood or Viburnum:

A woody shrub with egg-shaped, deeply veined leaves which are sharply toothed. Purplish berries are visible in late summer.



Arrowwood

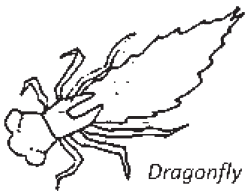
At the Pond

Since this trail preserve is situated between two swamps, you would expect to see a lot of water. In fact, you will encounter several sites along the trail which have required boardwalks to allow for walking. Most of this water nourishes the plants and trees, or flows through the preserve in the Paskamanset River. This site, however, appears to be the only one along the trails that is a true pond, holding water year round.

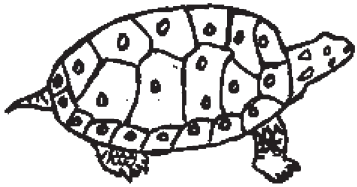
Ponds are self contained fresh water ecosystems. The plants and algae that live in a pond turn sunlight energy into sugar just like plants that live on land, thus beginning many food webs. These plants and algae get eaten by tiny invertebrates, tadpoles, insects and turtles. These animals become food for other animals that live in or near the pond. Animals that die in this pond will provide nutrients for future generations as their bodies are broken down and eaten.

If you make the effort to wait quietly, you may be rewarded by seeing or hearing several animals and insects. These include Spotted Turtle, Painted Turtle, Bullfrog, Green Frog, Dragonfly, Damselfly and Water Strider. The larval forms of several insects can be found in this pond, along with adult and larval amphipods. You can also expect to see many bird species feeding or nesting nearby.

There is another natural process taking place here along with life cycles. The pond is slowly (very slowly) being reclaimed by the woods. The leaves that fall off the trees that surround the pond accumulate on the pond bottom, as does any soil or other organic material that washes down the pond banks. The small islands of red maple and sweet pepperbush or *Clethra* also will continue to trap material to slowly add to the amount of solid material in the pond. This depression on the trail will always be saturated, but the size and shape of the pond will change over time.



Dragonfly larvae



Spotted Turtle

Sweet Pepperbush

Sphagnum, Mounds and Hummocks

Although there are boardwalks throughout, it is possible, and likely, that as you walk this site your shoes will get wet. You probably tried to avoid the wetness of the trail by stepping on the outer edge of the trail or by stepping on mini hills of soil and plants.

These mini hills are known as mounds or as hummocks, depending on their origin. Hummocks are formed when plants or trees sprout and grow on stumps, downed logs or raised root systems of other woody plants. Mounds are formed after a tree is blown over and its roots become exposed after getting ripped out of the ground. Over time, the soil that was lifted out with the roots falls off and, with decaying roots, forms a mound of soil in the site where the tree once stood.

There are examples of both here. See if you can find a fallen tree that has since become covered with vegetation. Its appearance stands out among the smaller hummocks.

These mounds and hummocks are necessary for the growth of many of the woody species and trees on the trail. The wet conditions are ideal for the growth of types of mosses known as sphagnum. Sphagnum is the small, leafy green (and probably wet) plant that you see covering the ground like a lush, green carpet. This growth habit, with rolled branch leaves and overlapping leaves, allows them to draw up water and store it. In fact, these mosses are capable of storing water that amounts to many times more than their own body weight.

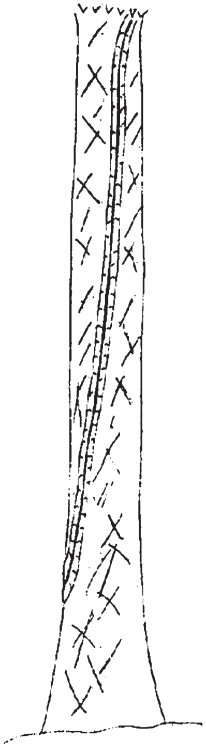
These qualities make sphagnum important for land conservation, flood control and protection from soil erosion. They have also led to other unique uses such as insulation, packing material for nursery plants, absorbent surgical dressings (especially during battle) and perhaps even as diaper material.

Sphagnum moss

Lightning Strikes

Lightning is one of the most dangerous natural occurrences in the world. It is a visible discharge between rain clouds and the ground. When discharging, the electricity takes the easiest path to the ground, which is usually through the highest standing point in the area.

White Pine is a northeastern tree with needles two to four inches long. The needles are five to the bunch. A good way to identify White Pine is that in the word white, there are five letters, the same amount of needles in a bunch on a white pine tree. The cone is smooth, slender and grows three to ten inches in length. Very few of the 200-220 foot pines first viewed by settlers exist because of lumbering. The largest modern pine trees are more likely to reach 100-110 feet.



When a tree is struck by lightning there are several possible effects. The strike can hit the crown of the tree and then jump to the ground, which may cause minor damage. A more destructive effect is when the strike tremendously heats up the water between the bark and the core of the tree and blows the bark off. This is more common in pines than oaks. The bolt will then travel down the side of the tree in a twisting or corkscrew fashion or even straight down. Although one would think this would kill the tree, this is not always the case. If the strike does not kill the tree, the wound is now left open and the tree becomes susceptible to disease.

After the incident, the recovery may take up to a full season. A good way to identify if the tree is dead or not is to take the bark off an outer twig. If the wood is green, the tree is alive. If the wood is brown, the tree is dead.

Paskamanset River

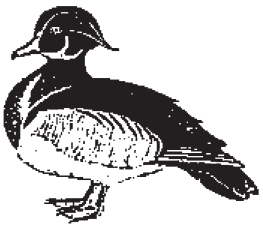
You can access the beginning of the Paskamanset River by following the cleared area from the New Plainville Road Trail Head. This river flows out of Turner's Pond, which is just on the other side of New Plainville Road. The river flows south through the Peirce Trail property, past the western border of New Bedford Airport, through the Apponagansett Swamp into Dartmouth. It will pass under Route 195 and Route 6 and reach the Russell's Mills area of Dartmouth, in all a 7.5 mile trip, as the crow flies. The river at this point changes names, now being called the Slocum River. The Paskamanset is a fresh water river. The Slocum, however, mixes with the salt water of Buzzards Bay. It is not unusual to have the fresh water section of a local river keep the Wampanoag name, and have the salt water portion named for a European settler. You can visit the small pond and fish ladder at end of the Paskamanset if you park in the small lot at the beginning of Rock O'Dundee Road, just down the hill from Davoll's General Store.

This river is home to several species of invertebrate larvae and adults. Crayfish, water striders, water scorpions, whirligig beetles and amphipods make their homes here. Adult dragonflies, damselflies, stoneflies, and caddisflies lay their eggs here. In fact, data from the Lloyd Center for Environmental Studies lists nearly 30 species of dragonflies in Turner's Pond and the Paskamanset River. A wide variety of dragonflies is an indicator of good water quality within a river system.

This river system is an inviting place for Mallard and Wood Ducks, both of which have been seen here at various points along the river. Several other bird species, including American Redstart, Black-capped Chickadee, Blue Jay, Eastern Phoebe, Great Crested Flycatcher, and Yellow Warbler take advantage of the bounty of insects found in and along the river. Insects are an important source of protein for developing nestlings.

Caddisfly Larvae

Wood Duck



Deer Rubbing

One of the most interesting things that you can see while exploring the trail are rubs of the White-tailed Deer on a cedar tree. A rub is a worn spot on a tree or sapling where the deer has rubbed his antlers to remove the velvet and mark his territory. This action removes the bark from the tree.

A scrape is a cleared area on the ground created during mating season by the deer. All the leaves and sticks are in a circular pattern and are brushed away from the tree by the constant pawing of the animals. Sometimes the circle extends for several feet. Look for deer hair and footprints in this area.

Sometimes if the ground on the path is soft you can see the footprints of the deer. The very path that you are traveling on is traveled by deer. Before the trail enhancements were performed, parts of the trail were located by looking for deer tracks. If their tracks weren't present, their droppings (scat) often were. If you walk the trail at dusk or dawn and are very quiet, you may see deer. Do not approach deer, as a startled deer will defend itself causing possible injury.

Snags

The simple definition is: snags are standing dead trees. Just thinking of them this way overlooks their importance to life in the woods.

Snags are, in fact, home to a wide variety of mammals, amphibians, birds, insects, spiders and other invertebrates. Since snags are dead, their wood gets progressively softer and easier to bore into. Woodpeckers excavate holes for nesting cavities. Many insect species burrow tunnels. Raccoons use their claws to remove some of the soft wood. Fungus will help create more cavities and living space. All of these open areas inside the tree are very inviting as nesting, resting and feeding places.

Snags were once cut down and hauled away by foresters because they were thought to be commercially useless and a home to tree pests. Now that we know that cutting down snags removes an entire 'apartment complex' for dozens of species, snags are being allowed to stand.

Take some time to look closely at them. You'll see the openings to birds' nesting cavities and tunnels made by ants. You may see fungus living off the tree's nutrients. You might even see an owl, hawk or porcupine sitting on a branch.

You will also be looking at a natural recycling project. All of the activity in and on these snags will someday turn these trees back into soil. This soil and the nutrients in it may help to support a new tree.

Vernal Pool

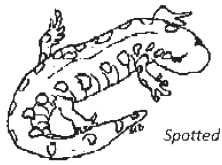
A vernal pool is temporary and similar to puddles. Their water comes from rain, snow and occasionally groundwater. They have no other water sources. This results in them drying up in the summer, leaving no fish or aquatic animals to be found.

These pools are home to several organisms that evolved to only breed in vernal pools. Wood frogs and spotted salamanders complete the change from egg to adult before the pools dry up. The eggs they lay and the larva that hatch from them have a better chance of surviving because there aren't any fish to eat the eggs. These animals return to their pool of birth every year to breed, further highlighting the importance of these temporary ponds. If you visit the vernal pool in the spring you may see gelatinous masses. Look closely and you will see the eggs of these species waiting to hatch. Do not disturb the egg masses. The very existence of these creatures is fragile and threatened. We must do our part to protect them. This vernal pool is also home to caddisflies, dragonflies, predaceous diving beetles, mosquitoes and many microscopic species.

The critters here use the vegetation as shelter and hiding places. The plants provide attachment sites for frog and salamander eggs. They also benefit from the shade provided from these plants and the trees around the rim of the pool. The shade lowers the temperature and slows down the evaporation process in the pool.

Although vernal pools are breeding sites for amphibians and fairy shrimp that cannot breed anywhere else, they continue to disappear. Often mistaken as big, lifeless puddles or nothing more than a breeding site for mosquitoes, they get filled in, paved over or built on. When viewed in their dry summer stages, their true function cannot be seen or estimated by those unfamiliar with vernal pools.

This is a certified vernal pool with the Commonwealth of Massachusetts.



Spotted Salamander

Wood Frog

List of birds seen at Flora B. Peirce Trail

Bring a Bird Guide with you to help identify these species.

American Crow
American Goldfinch
American Redstart
American Robin
Black Capped Chickadee
Blue Jay
Brown Creeper
Carolina Wren
Downy Woodpecker
Eastern Phoebe
Gray Catbird
Great Crested Flycatcher
Mallard
Northern Cardinal
Northern Flicker
Ovenbird
Red Bellied Woodpecker
Red Tailed Hawk
Rufous Sided Towhee
Tufted Titmouse
White Breasted Nuthatch
Wood Duck
Veery
Yellow Warbler

Resource List

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