

**8** Most easily recognized by its distinctive smooth, steel-grey bark, **American Beech** (*Fagus grandifolia*) is the large tree growing to the right of the trail here. A lure for lover's initials since the beginning of time, this "thin-skinned" tree can sadly become more susceptible to fungal infection and decay when its bark gets damaged in this way. Its leaves have a papery texture with parallel veins extending to the sharp toothed edge. Buds on the branches are long and pointed. Like Oaks, which are in the same botanical family, most American Beech trees hold their brown leaves through the winter months. Wind pollinated flowers appear soon after the new leaves emerge in spring. Two small, triangular nuts are encased in each soft-spined bur and are a favorite high calorie forage in autumn for game birds and other wildlife.



**Partridge Berry** (*Mitchella repens*) is a creeping, perennial herb. It has small, roundish leaves, paired opposite one another along the trailing stem. Each leaf has a white center mid-vein. In late spring or early summer, it bears tiny, twin, white, trumpet-shaped flowers. The paired fruits turn scarlet in autumn and are enjoyed by many birds (not only Partridges!) and mammals. Native women drank a tea made from the leaves to aid in childbirth. **Teaberry** (*Gaultheria procumbens*) is a semi-woody, aromatic perennial with leathery evergreen leaves. Even though the plants appear to be individuals, they have creeping underground stems, thus forming colonies of plants. Their small, white waxy flowers look very similar to Blueberry flowers and dangle beneath the leaves. The two or three shiny, red berries have a mildly peppermint flavor.



**10 Cinnamon Ferns** (*Osmunda strum cinnamomeum*) make up most of the ferns in this area. Their curled "fiddleheads" emerge in spring. Tall, stately beauties, clumps of these ferns can grow to a height of 4' and produce two distinctly different types of fronds on the same plant. Fertile, cinnamon-colored fronds grow at the center of the plant, surrounded by larger, green, sterile fronds. Ahead, on the right side of the trail, also grow thickets of **Sweet Pepperbush** (*Clethra alnifolia*). This tall, many-branched, hardy perennial shrub bears upright clusters of fragrant, white flowers June through September. The dry fruiting capsules remain long after flowering and help the novice naturalist identify this plant in the cold weather months. On the left side, near the foot bridge, are some



Winterberry (*Ilex verticillata*) shrubs. Most easily recognized in autumn and winter when they bear red berries along the stems at the end of the branches. They are some of the members of the Holly family that are deciduous, losing their leaves in autumn. Like most Hollies, Winterberry shrubs are also dioecious, with separate male and female plants. The proximity of at least one male plant is required to pollinize the females in order to produce berries.

**11 Highbush Blueberry** (*Vaccinium corymbosum*) (on the opposite side of the trail) and its smaller, humble cousin, **Lowbush Blueberry** (*Vaccinium angustifolium*) (directly underfoot) grow on the side of the trail here. Both have small, white, bell-shaped flowers which are followed by edible blue fruits usually ripening in July. Everyone likes blueberries! Wildlife and humans alike. These woody, perennial shrubs require high soil acidity. Its seeds germinate best on bare, open ground following burning or clear-cutting events. Some of the small trees in the understory here are Red Maple (*Acer rubrum*), one of the most common native trees growing in wetlands. The Red Maple was voted as the state tree of Rhode Island by school children in the 1890s. So named for its red young growth, red flowers in the spring, red leafstalks, and red autumn foliage.



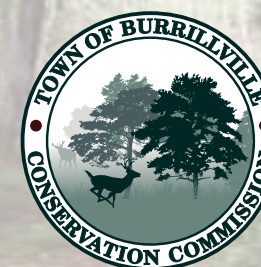
**12** The small shrub growing here beside the trail is called **Beaked Hazelnut** (*Corylus cornuta*). During most of the year it may seem non-descript as its soft green leaves with serrated edges blend in with the other green foliage, but come fruiting season, this plant bears one of the most unique nuts here in the forest! Its furry, green involucre is nearly 3" long and surrounds an edible nut, sometimes called a "Filbert".



## Joseph O. "Brock" Blanchard Memorial Management Area BURRILLVILLE, RHODE ISLAND

The Nipmuc River Trail is a 1.5 mile loop walking path through part of the 213 acre property acquired in 1980 by the Town of Burrillville.

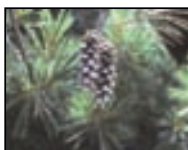
*This is a self-guided botanical hike. Markers inscribed with numbers correspond with entries in this guide. Keep in mind that some flowers, fruits or even entire plants may be visible only during certain months of the year. Enjoy each season for it's unique beauty and diversity.*



This trail was created by the Burrillville Conservation Commission with matching funds from the Rhode Island Department of Environmental Management. The management area is named in memory of the late Harrisville postmaster, who lived next to the trailhead.



**1** The large tree to the right of the trail is an **Eastern White Pine** (*Pinus strobus*). This straight trunk, evergreen tree has a crown of stout horizontal branches. One row of branches is added each year. Needles are five to a bundle, called a fascicle. The large, 4" to 8" pinecones can be found on the forest floor around large trees. Pine trees are sun-loving and more apt to grow in or around abandoned fields than in the shade of mature forests. Pine trees have played an important role in the economy and history of New England. The wood is straight-grained, durable and light, often used in construction. To the left of the trail is a small grove of immature **Sugar Maple** (*Acer saccharum*) trees. Named for the sweetness of their sap, Maples can be tapped in early spring to make syrup and other confections. Their twigs and leaves grow directly opposite each other on a branch. Yellow-green clusters of flowers appear along with new leaves in early spring followed by pairs of winged seeds called double samaras. Their broad, five-lobed leaves become brilliant, multicolored foliage in the Autumn and are the familiar emblem on the national flag of Canada.



**2** Overhead and at the right side of the trail here is an arbor of **Witch-hazel** (*Hamamelis virginiana*). This native shrub grows in clumps 10' to 20' tall in the understory of hardwood forests with moist soils. An aromatic extract of leaves twigs and bark is used to make a mildly astringent lotion. Settlers in New England believed that a forked branch of Witch-hazel could be used to locate underground water. Leaves are nearly round in shape with wavy edges. The small, yellow flowers bloom in late Autumn or early Winter and resemble little fireworks. One or two shiny, black seeds are encased inside a hard brown capsule maturing in Autumn. As the capsule dries and contracts, seeds can be ejected as far as 30'! Also, in the understory, on the left side of the trail in this area, is a small tree or shrub with distinct



grey, sinewed trunks called **American Hornbeam** or **Ironwood** (*Carpinus caroliniana*). Named for its very hard, tough wood, Hornbeam is used for durable tool handles. Deer browse the twigs and foliage, and many ground birds eat the nutlets.



**3** The bog and wetlands surrounding the footbridge here contain many plants that have adapted to a moist environment. The first flowering plant to emerge in Spring is **Skunk Cabbage** (*Symplocarpus foetidus*). Its streaked purple spathe pokes up through February snows. By early Summer, the large and lush green leaves dominate the forest floor. The distinctive rank odor of the entire plant helps to attract its pollinators, carion flies! The groundcover here is primarily **Sphagnum Moss** (*Sphagnum spp.*). This soft, spongy plant is commonly known as peat moss. Both living and dead plants can hold large quantities of water within their cells, between 16% to 26% of the plants' dry weight! During the Summer months, the spotted golden/orange blossoms of the **Jewelweed** (*Impatiens capensis*) hang like pendent jewels. The succulent stems exude a soothing juice when crushed which can be used to treat a recent Poison Ivy rash, burns, cuts, and insect bites. Some investigation may reveal the modest **Marsh Marigold** or **Cowslip** (*Caltha palustris*). Only conspicuous when the yellow flowers are in bloom April to May, the greens of this member of the Buttercup Family were cooked by Native Americans to be used as a Spring tonic and to aide anemic conditions. (At the fork in the trail just ahead, travel straight or bearing slightly left in order to continue this hike in numerical order.)



**4** There are two different kinds of Oak tree growing beside one another here. On the right is a **Northern Red Oak** (*Quercus rubra*). Its leaves have points at the end of each lobe. Its bark is hard and often marked with vertical reddish fissures. Its wood is dense, heavy and durable, making it a good choice for flooring and long, slow-burning firewood. On the left is a **White Oak** (*Quercus alba*). Its leaves, with rounded lobes, are a bright green color on the top side and a whitish green on the underside. Its bark is light colored with a flaky, papery texture. Unlike the Northern Red, White Oak wood is waterproof, perfect for use in ship building and making whiskey kegs.



**5** You are now in a stand of **Eastern Hemlocks** (*Tsuga canadensis*). These lovely evergreen trees typically grow in cool, moist valleys. Their crown of long slender horizontal branches often droop down towards the ground at their ends. The needles are short, flat and rounded at the tip. Shiny, dark green on the top side and, with close examination, two narrow white stripes on the underside. Despite how large these trees may grow, their cones remain numerous and tiny – only ½" to ¾" long. Hemlocks cast some of the densest shade of any forest tree, not only because their foliage is thick, but also because their canopies filter out light across the entire light spectrum. They, therefore, cast "blue-shade" rather than the "green-shade" cast by broad leaf trees which reflect only the green portion of the spectrum. Whitetail Deer often "yard-up" in Hemlock groves during heavy snowfall, consuming foliage and twigs. In fact, many kinds of wildlife enjoy these groves.



**6** **Mountain Laurel** (*Kalmia latifolia*) is the evergreen shrub growing at the side of the trail here. This many-stemmed, thicket-forming native shrub is common on acidic soils.



Its thick, stiff leaves are dull dark green on the top side and rather yellow-green underneath. The leaves are poisonous to livestock and, thus, are rarely browsed. The flowers, in late spring or early summer, are ¾" to 1" wide, delicate cup shaped, mostly white with slight pink markings. Flowers are on long stalks that are covered with sticky hairs and grow together on the plant in upright, branched clusters. This is a protected species in Rhode Island.

**7** Down below the trail here is a special kind of wetland called a **Vernal Pool**. Holding a variable amount of water depending upon the weather, rainfall, and season, these wetlands serve an important role in the ecosystem as Nature's Nursery for most species of amphibians and the breeding grounds for many of the insects upon which they will feed. Frogs, Toads, Salamanders, and Newts all begin their life cycles in places such as these. In springtime when Vernal Pools are teeming with new life, all kinds of wild animals and birds are drawn to these still waters as a secluded place to drink water, nest or find a quick and easy meal.

