



# BORTONS MILL NATURE TRAIL GUIDE

## **INTRODUCTION**

Welcome to one of Cherry Hill Township's Open Space lands.

This nature trail is designed to help visitors open the natural world with a unique opportunity to experience nature's sights, sounds, touch and smells.

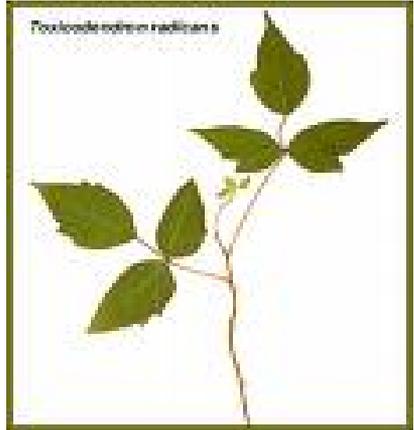
You'll be a Nature Scene Investigation (NSI) Detective and will be encouraged to interact with nature in a gentle way by using your senses to improve your powers of observation. There is a mystery to solve at the end.

You'll see a broad variety of plants and animals. Natural variety is called biodiversity and is important for a well-balance natural area.

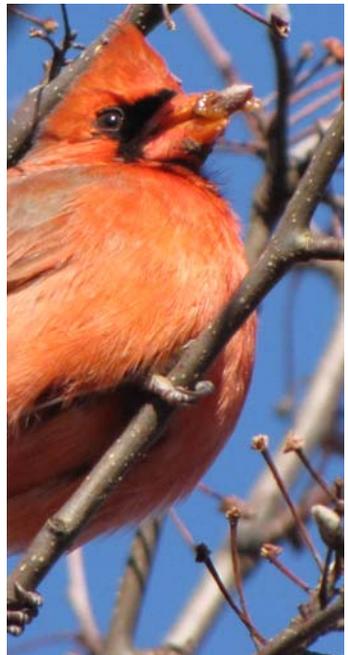
Please stay on the trail. The goal is to experience nature without harming it using a technique called "Leave No Trace." In a phrase, "take only pictures, leave only footprints." Please carry out your trash, and maybe even someone

else's, making this trail better than you found it.

One word of caution: Avoid poison ivy. Do you know how to identify poison ivy? (clusters of three shiny leaflets, and no thorns). Some rhymes to help you remember how to identify it are “leaves of three, let it be,” “berries white, run in fright,” “hairy vine, no friend of mine,” and “red leaflets in spring is a dangerous thing.”



**Let's Get Started! Watch for wildlife as you proceed to Stop 1. Here's some you might see...**



## **STOP 1. BUTTERFLIES, BEETLES AND BEES, OH MY!**

In the Spring, Summer and Fall notice the insects visiting the plants in the meadow between the trail and the road. These insects would not be found in a forest with mature trees, because meadow plants need full sunlight and can't get sun under tall trees.

Why are the insects at these plants? They are gathering nectar or pollen. In the process they pollinate the flowers. Without pollinators many plants could not produce the seeds needed to grow more plants and feed wildlife and people. Can you name some pollinators? (Answer: butterflies, beetles, hummingbirds, bees, ants,).



## **STOP 2. WALK ON THE EDGE**

You are walking on the edge of two different types of habitats. Habitats are where animals live. It's their home.

Low growing plants live between here and the road. This has developed since mowing in this area was stopped. It was a lawn with few kinds of plants. Now many different plants grow here in the meadow so biodiversity has increased. That's a good thing. Now more animals can live here because there's more food and shelter....habitat.

In the other direction is an area with woody vegetation that is generally less than 20 feet tall. This is called scrub-shrub. It is an important type of plant community since there's little left in NJ.

The edge is a good place to see a lot of different kinds of plants and animals. Watch for birds above and rabbits darting from the trail to cover in the scrub-shrub or the meadow.



Watch carefully, you're on the edge.

### STOP 3. FEEL THE DIFFERENCE

Look at all the plants around this marker. Notice the



various textures. Do you see a tree with smooth bark? Touch it to see how it feels. Look for a tree with rough bark. Touch it to see how it feels. How does it feel?

Now look closer to the ground to see if you can find wild roses. If the flowers are not in bloom, you can identify it by the sharp thorns. Don't touch it, but notice how pointy the ends are. The thorns are the plant's defense mechanism for protection. The shoots are very



tender and the rose hips are sugary to entice animals to eat it. Which feels best?

## **STOP 4. FIND THE PATTERNS**

Find a diamond pattern on a nearby tree. It's an Ash. All ash trees have a distinctive diamond pattern of the bark.

Now look for the Black Cherry tree. As the tree ages the bark gets harder and thicker. Look at the base of the tree trunk. It will flake into sheet-like pieces of nearly black colored bark while the younger branches higher on the tree will be smooth.



Can you find other patterns in nature? If so, take a photo or draw a picture.

## STOP 5. OOOOH, IT'S WET

Look towards Kresson Road to see evidence of a different kind of soil. This is a wetland. Are there a lot of trees and shrubs growing here? [Answer: no] Most trees do not like constantly wet conditions. Other plants do. One is the cattail. You will see it towards the road just before Stop 6. It is a native plant with great value.

Cattails are often called the “supermarket of the swamp” because they have a lot of edible parts.

The roots and shoots can be eaten in a variety of ways and are a valuable food source that contains ten times the starch of an equal weight of potatoes.

Native Americans discovered many medicinal uses for cattails. The seed head can be put on cuts to control bleeding, and the leaves are excellent for basket weaving.

Another type of plant dominates the part of wetland you can see in the direction of the road. It is Phragmites, which is actually a grass with straight stems.



Can you see the feathery tops? It is an invasive species. More about them at Stop 8.

Why are wetlands are important natural areas? [Answer: They provide special habitat for wildlife, they hold stormwater and let it soak slowly into the ground and filter impurities from water.]

How could this wetland be improved for nature? [Answer: Remove the Phragmites and allow more kinds of native species to grow.]



## **STOP 6. TAKE A WHIF**

Look for a tree along the Nature Trail that grows three different shaped leaves - one with three lobes, one with two lobes looks like a mitten, and one with no lobes. In the spring, there are tiny yellow flowers and the bark is thick and reddish brown. The tree is the Sassafras.



When you find one take one small twig sample for your whole group. Pass it around and smell it where it was broken. What does it remind you of? How about root beer?

Native Americans called the Lenni-Lenape or Delaware who originally lived here and early settlers used this plant for food and medicine. Before 1960, sassafras was used to flavor root beer.

Dried root bark produces oil used in perfumes, soaps and aromatherapy. Smells wonderful, huh?

## **STOP 7. FIND A SWEET ONE**

Search for flowers and fruits. Animals do. Pollinators helped the plant's flowers grow into fruit. The cherry and mulberry trees are good examples. In the spring it grows small white flowers arranged in long, thin clusters. The black fruit ripens in summer and are favorites for animals like birds, raccoons. Often bitter, they are sweet at their peak. Find a sweet one to eat.



Red mulberry is noted for its large, sweet fruits in spring. It is a favored food of most birds and a number of small mammals including opossum, raccoon, and gray squirrels. Eat a handful. Now look at your hands and your friend's tongue. What color do you see?

Since plants can't move, some of them persuade animals to move their seeds for them so the plant will grow in other areas. This is a process called dispersal. Some plants hide their seeds in fruit. Some of them taste good, like the mulberry and wild cherry. Eat some more.

**STOP 8.  
LOOK  
OUT!  
THEY'RE  
INVADING!**

Do you see any plants moving? No? Maybe just a breeze moving their branches? The invasion is a slow one, but it's still happening.

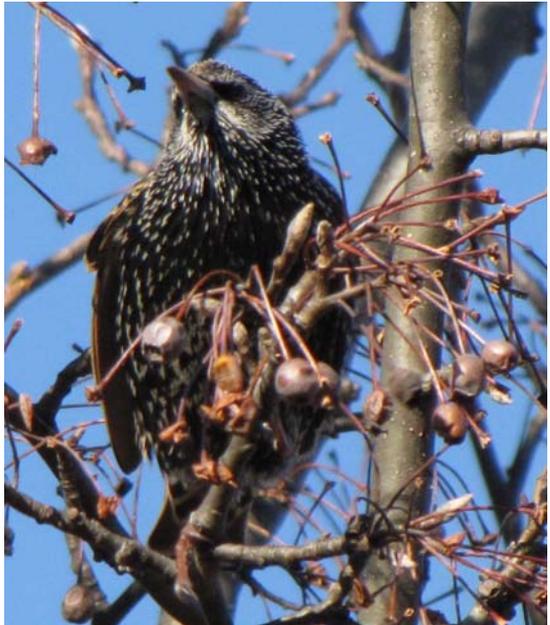


The process of going from bare soil to tall trees is called plant succession. We saw early successional stages in the meadow by Stops 1 and 2 where the land changed from a lawn to low growing plants. The next plant stage is scrub-shrub. Most of the land at Bortons Mill is scrub-shrub. A small mature forest grows between Stops 8 and 9.

Except for the areas at Bortons Mill that were mowed, the land was left to grow without active management. This is when the invasion started. Plants called invasive species started to grow and out-compete the native plant and tree species. Can you detect some of the invaders? One is the Japanese Honeysuckle and another is the Bradford Pear.

The Japanese Honeysuckle is a vine that climbs up and over trees in the competition for and sunlight. In the process it can kill the native tree that supports it.

The Bradford Pear is a beautiful tree often planted along roads and in people's yards. They produce pretty blooms in the spring and colorful fall foliage.



However in a natural setting like Bortons Mill, they crowd out native trees like mulberry, cherry, ash, maple, and oak. In this picture a Starling, an invasive bird from England, eats Bradford Pear fruit, spreading it to other natural areas.

Invaders are not good for the land and its wild animal populations. What should we do with them, detectives? [Answer, like weeds in a garden, they need to be removed so the native trees and plants can grow and support the wildlife that depends on native biodiversity.

## **STOP 9. A BATTLE IN THE TREES.**

All trees and plants generally need key things to survive. Can you name them? They are sunlight, water and carbon dioxide. Sometimes plants and trees need to fight for them.

Where do plants get carbon dioxide? They get it from the air. Breathe on your hand. Do you feel the air? Human breathe out carbon dioxide. Plants use it.

Where do most trees and plants get water? Under your feet and in the soil are the tree's roots. They gather water and send it to the leaves. The competition is happening underground as roots seek water.

Above ground the battle continues. Here it's for sunlight. Look at the tree branches along the tree line of the trail. Note how they grow out to the open area in the competition for sunlight.

The tree then combines all these to make food in its green leaves. It's a process called photosynthesis. Leaves then get rid of something they don't need a lot of--oxygen.

This is the source of oxygen for animals. Take a deep breath. Now, thank a plant.

## **STOP 10. CASE OF THE MYSTERY TREES**

At this stop put your Nature Detective observation skills to work and solve the tree identification mystery.

Note the two large trees that are always green.



The pictures here show each tree's needles and cone.

Conifer trees have needles instead of leaves. Pick a sample of the needles. Do they feel different? One is short and sharp while the other is long and soft. Rub some needles in your hand. How does it smell?

Now for some counting. Does the tree with the long needles grow its needles in bundles? [Answer: yes]

You can identify pine trees by the number of needles grouped together in a bundle. How many needles are in each bundle. [Answer: 5].

Does the tree with the short, sharp needles grow its needles in bundles? [Answer: no].

Conifers grow their seeds in cones. You'll be able to find cones under each tree. How do they compare? [Answer: The scales from a spruce tree cone are much thinner and more papery than the thick scales on a pine tree cone.]

Final clues: A white pine has bundles of five needles. A spruce grows short needles that are not in bundles but attached singly to the branches.

Have you solved the mystery?

The spruce is specimen A and the White pine is specimen B.

Good job nature sleuths!

**A**



**B**



## **CONCLUSION: CAN YOU HELP OUR ENVIRONMENT? YEP!**

Everyone can help preserve, improve or prevent the loss of biodiversity and habitat.

Here's some examples: Learn about nature, pick up trash, recycle, stay on trails, don't litter, conserve energy, help with a conservation community service project, plant native flowers for bees and butterflies, plant native trees that naturally grow here, and support Cherry Hill Open Space programs. Contact the Cherry Hill Environmental Committee for projects. (856-488-7868)

Photos: Lewis E. Gorman III

Aaron Sirkin developed this Nature Trail in Partnership with the Cherry Hill Environmental Advisory Committee to complete his Eagle Scout Project.

**Please return this guide to the trail's brochure box for others to enjoy.**