Getting to Know Whitesbog

Started in the 1850s by James Fenwick, and later taken over and named by his son-in-law J.J. White, Whitesbog was a turn-of-the-century company town devoted to the growth and sale of cranberries. In fact, in the 1900s, Whitesbog was the largest cranberry farm in New Jersey, and J.J. White was a nationally recognized leader in the cranberry industry. Whitesbog’s production did not stop with cranberries, however. In 1911, White’s daughter, Elizabeth C. White, collaborated with Dr. Frederick Coville of the U.S. Department of Agriculture to develop the first cultivated blueberry—right here at Whitesbog.

As a company town, Whitesbog was a vibrant residential community, contributing to the economy and culture of the region. At the height of its operation, the J.J. White Company employed forty year-round workers and 600 seasonal workers to harvest the cranberries.

As harvesting technology improved over the years, the number of workers needed to harvest the cranberries steadily declined. In fact, by the 1960s, the wet harvesting technique, which requires that bogs be flooded, forcing the berries to float to the surface, reduced the number of employees necessary to the harvest to only five, and even rendered Whitesbog’s irregularly shaped bogs obsolete.

In 1967, using Green Acres funds, the State of New Jersey purchased Whitesbog from the J.J. White Company and incorporated the land into Lebanon State Forest (now known as Brendan T. Byrne State Forest). The New Jersey Department of Environmental Protection, Division of Parks and Forestry administers the land.

Today, Whitesbog is an important part of Burlington County history, as well as the history of American blueberry and cranberry culture. Listed on both the National and State Registers of Historic Sites, Whitesbog includes the village and the surrounding 3,000 acres of cranberry bogs, blueberry fields, reservoirs, and pine forests. Of course, in the years since the state purchased Whitesbog, much of its land has been transformed, becoming once more identical to the surrounding Pine Barrens. Thus, it is an excellent place for studying Pine Barrens ecology and ecological succession.

The Whitesbog Preservation Trust

The Whitesbog Preservation Trust, created in 1982, leases Whitesbog Village from the state in order to preserve Whitesbog. Specifically, the Trust restores, protects, and enhances the lands, sites (and sights!), and buildings at Whitesbog so that it can continue to provide educational programs and materials (such as this booklet) about the history, culture, and environment that create Whitesbog.

Those interested in becoming a member of the Whitesbog Preservation Trust and helping to preserve this unique site may call the Trust office at 609 893 4646, or stop at
the office located in Whitesbog Village.

An Introduction to the Old Bog Nature Trail

First of all, welcome to the Old Bog Nature Trail! The walk you are about to take will show you the intersection of history, culture, and environment in Whitesbog. The path will take you around a pond, over a cedar swamp (and former cranberry bog), and finally to Elizabeth White’s formal garden surrounding her home, Suningive. Along the way, you will note the process of ecological succession—that is, the process by which a natural environment reclaims land that was once cleared or altered by people. Since the last time this bog and the surrounding land was maintained, cedars, pines, oaks, and red maples have taken hold, as well as a wide variety of underbrush. Of course, as each of these plant species has once more gained a foothold in this location, the insects and animals that depend on these species have once more made their homes here as well.

To help you see this ecological succession taking place, we have placed numbers along the trail, each corresponding to a number in this booklet. Stop at each number and read the corresponding blurb in the booklet for a fun, informative walk along the trail. Also, please be sure to stay on the existing trail: if you step off, you could harm young plants or insects along the way (and you could pick up ticks as well).

A note of caution: the Old Bog Trail traverses difficult terrain, in parts rife with tree roots and other obstacles. Those with mobility difficulties might find the trail difficult to journey.

The Trail Guide

1. A Young Forest and an Observation Deck Over a Pond

Today, if you look off to the right, you won’t see much other than Pinelands forest. However, this area was once an open, sunny plane, in which there grew grasses and wildflowers. However, over time, seeds from pitch pines and gray birches have made their way to this area, sprouted, and started the forest that you see today. Below them, in the shade, you will see some shade-tolerating species, such as sphagnum and other varieties of moss, ferns, and even highbush blueberries. These lower-growing species make up the underbrush of this forest.

Take a moment also to stand out on the observation deck above the pond to your left. Note the lily pads and grasses along the edges, and even in the water. Although the dark water might be hard to look through, keep your eyes peeled for turtles: they love this area as well. Listen for frogs, too: you can often hear them croaking—especially as the sun sets. Between the road and the pond, you can spot swamp azalea, high-bush blueberry, and sweet pepper bush.
2. **Wetland Indicator Species**

Some plants can grow only where there are high water tables. So, whenever you see them, you know that the area is usually wet. Between here and the bridge ahead, and even beyond, you’ll note a number of such species, like sphagnum moss and cinnamon fern.

Both of these plants are primitive, non-flowering, and spore-producing. Sphagnum moss can be seen growing in low, dense mats along the pond (and even within it) to the left. The branching stems of sphagnum moss give it its characteristic star shape.

Sphagnum moss is often used in window boxes and as a potting soil amendment, as it can absorb many times its own weight in water. In fact, it can absorb so much liquid that Native Americans even used it as diapers for their young, and soldiers used it to dress wounds as late as World War I.

Unlike mosses, which absorb water like a sponge, ferns actively transport water through their tissues. In late spring and summer, look to your right, just behind post number four, for a large cinnamon fern. If you’re wondering where it gets its name, look no further than the cinnamon-colored fruiting bodies and fuzz on the bottom of the leaves. You might also spot bracken ferns, which are similar, except, for example, for the obvious lack of cinnamon-colored heads. While both ferns thrive in wet areas, cinnamon ferns can tolerate slightly wetter conditions than bracken ferns.

Continue along the path; post number three is straight ahead next to the bridge.
3. **Life in the Pond: Hide or Be Eaten**

You’ll see from a quick glance at the pond that there are a number of plants growing around and in it. What you can’t see, however—that is, without a microscope—is that there are also a number of plant and insect species so small in the pond that they cannot be seen with the naked eye. Many of these insects feed off of plants, such as lily pads, grasses, and fallen leaves, but many insects and animals have an additional source of nourishment: other plants and animals.

Dragonfly nymphs, which are young dragonflies who live in water rather than on land, feed on smaller insects and hide underwater in the mud and detritus, or decaying plant material. In turn, they become covered in algae, which makes them difficult for predators to spot. They spend about two years in the pond, after which point they crawl out and metamorphose into winged adults, who eat mosquitoes. Thank you, dragonflies!

Backswimmers are another pond-dwelling insect that excels at camouflaging itself. Backswimmers get their name for the way in which they swim: on their backs. They swim on their backs, however, to camouflage: their undersides match the color of the bottom of the pond, so that predators from above cannot see them; their backs match the color of the sky, so that predators from below cannot see them either. If they did not swim this way—or if their camouflage somehow failed—they would become food for fish, frogs, and turtles.

From here, cross the bridge on your left; when you reach the other side, follow the path as it bends off to the left.
4. **Hummock and Hollow**
   If you look to your left, you’ll see a small hummock, or mound, which was created when a large pitch pine fell in the 1990s. (If you look closely under the debris, you may still see part of the tree’s trunk.) The hummock is the collection of soil and debris clinging to the upturned roots and the fallen trunk, and the hollow is the ditch that the roots used to occupy. Since the hummock is raised, it remains drier; since the hollow is lower, it remains wetter. Thus, each location may have different species growing in it, though this depends, of course, on the time of year, amount of precipitation, and other factors. In fact, sometimes these two locations look pretty much the same.

   Turn back around and cross the bridge again. Once you reach the other side, continue straight ahead. Watch your step: the path dips down here.

5. **Forested Wetland**
   The area surrounding you is a forested wetland, given its name because of its high water table in late winter and early spring, when the water reaches (and sometimes passes) ground level. Since the predominant tree in this wetland forest is the pitch pine, this forested wetland is known as a pitch pine lowland. (Other forested wetlands in the Pine Barrens include hardwood swamps and Atlantic white cedar swamps.)

   Of course, while pitch pines dominate this area, they are not alone. The wetland trees, for instance, include red maple, black gum, and Atlantic white cedar, all of which you will have met by the time you reach the end of the trail.

   Step onto the boardwalk and continue straight ahead. Post number six will be on your left.

6. **Atlantic White Cedar**
   As you cross this bridge, you’ll notice that you are surrounded on all sides by Atlantic white cedars. These tall trees are known for their scaly leaves and beautiful ridge-covered bark.

   When colonists first arrived in South Jersey, they came across very old cedar swamps—in fact, some of these swamps contained thousand-year-old trees six feet in diameter. Throughout the years, however, with little thought to the regeneration of Atlantic white cedar, people cut them down in massive amounts, as cedar wood is known for its strong water resistance, making it useful in damp locations. In fact, Whitesbog’s sluice, or water-control, gates were constructed of cedar.
Examine the bark of the trees not only for its ridges, but for signs of damage as well. Often, this is due to male deer, which rub their foreheads and antlers against bark in late summer or early fall to remove the velvet coating new antlers and to excrete scents that mark territory and attract mates.

Below the trees, in the undergrowth, you might spot more highbush blueberry, wild cranberries, and mosses. Though you might be tempted to step off the path, please stay on it: there is plenty to admire from where you stand!

Follow the boardwalk to its end; post number seven will be directly across from where the boardwalk reaches the trail.

7. **Edge of the Forest**
   When you reach the end of the bridge, stop and look out through the trees over the meadow. The meadow that you see here was once a cranberry bog; however, as the bogs were redesigned, there was no longer any need to flood this area with water. Meadow grasses have since taken over. On a sunny day, the grasses seem to light up, and you might see birds flying through in search of food or nesting materials.

   Continue along the trail to your left. Post number eight will be on your left, just a few steps ahead.

8. **Native Oaks and Introduced Oaks**
   In the foreground there are several pin oak trees, which are not native to the Pine Barrens. Its leaves are similar to those of the scarlet oak, which is native to the Pine Barrens; the telling difference between the two is that the lower branches of the pin oak droop. Most oaks prefer dry ground, and this is true of the pin oak as well, except the pin oak does withstand wetter conditions better than many other oak varieties. Perhaps this is why it has done so well in Whitesbog.

   From here, continue along the trail. Post number nine will be on your right.

9. **Sweet Gums and Black Gums**
   Rising up behind the holly to the left of this post, there is a large sweet gum tree;
to the right is a large black (also known as sour) gum tree. Although these trees are both known as gums, they are not related.

Sweet gum is usually found along streams and in moist soils at the edges of the Pine Barrens, rather than in the middle of the region, so the large one on your left was likely brought to Whitesbog as a shade tree. You’ll note that its leaves are star-shaped, and its fruit, commonly known as sticker balls, are hard to the touch. Their prickly points serve as a defense against birds and squirrels.

The black gum, on the other hand, is native to the Pine Barrens—it is often found with red maples in hardwood swamps. Its leaves are oval-shaped, and its fruit, a dark blue, bitter berry, is a common food source for migrating birds. In the fall, the leaves turn bright red, which attracts the birds to the seeds. The birds eat the seeds, fly away, and scatter the seeds in other locations.

If you look to your left, you should see post number ten—it is very close.

10. Holly Haven
Here, the trail bends off to the right and is lined with hollies. In fact, the ones you see here are descendants of the ones that Elizabeth White cultivated for Holly Haven, which she started in 1951 to specialize in the cultivation and sale of ornamental plants like holly and Franklinia.

Holly’s leaves stay green all year, which makes them a popular Christmas decoration. The bright green of the leaves, as well as their shiny quality, paired with holly’s red berries, make it a very attractive specimen.

As you round the corner, look out for the little bench on your right. Consider stopping in this quite place, looking up at the hollies and other trees around you, and listening for the calls of birds and the scurrying of squirrels. Ah! the sounds of the Pine Barrens!

Follow the mossy trail to the bridge. Post number eleven is on the right at the end of the bridge.
11. Succession of an Abandoned Cranberry Bog
Where you are standing now is a cranberry bog that was abandoned about fifty years ago. Originally called Old Bog, this is one of the three original cranberry bogs created by James Fenwick, J.J. White’s father-in-law, in the mid-1800s. This bog was hand-cleared of cedars and then dug down five feet.

Since this bog is no longer in use, it remains mostly dry, although you might still see canals here and there in which water still runs. Most of the original cranberry vines have died, but some from the 1850s still remain in the wettest areas of the old bog.

Step onto the boardwalk. Post number twelve is on the right, about halfway across.

12. Microhabitat on a Maple
Earlier, at post number four (Hummock and Hollow), you read about the microhabitats on the mound and in the ditch. Here, on the bark of this red maple, there is another microhabitat.

If you look closely at the bark, about three feet up the tree, you’ll spot some frilly and some flat green growth called lichen. You have likely seen some on the posts and numbers along your way here, too.

A so-called pioneer plant, lichen, which is a mix of algae and fungus growing together, is among the first plants to colonize an area. The whitish strands, which form the plant’s actual structure, come from the fungus; and the greenish parts, which color comes from the algae’s chlorophyll-containing cells, use sunlight for photosynthesis, which creates food for the plant.

At the base of the tree you can spot more lichen, as well as some mosses—most notably sphagnum. Notice that moss grows all the way around—not just on the north, as you’ve likely heard before. While it is true that moss does often do better when it faces north (north is cooler than south, after all), if you’re ever lost in the woods, using moss to determine which direction is north could get you even more lost. Again, look at the base of the tree for a plush carpet of sphagnum moss. Considering its abundance along this trail, you can understand why it has had such a long history of varied uses: its versatility, wide availability, and quick
renewability make it an excellent choice for commerce.

Continue along the boardwalk to the bark-mulch path on the other side. Post number thirteen, the last post, is at the fork in the path straight ahead.

13. **Elizabeth White’s Formal Garden: Our Last Stop**

You might have noticed that the ground upon which you’re walking has changed: it is now a light-colored bark mulch. This means you have reached Elizabeth White’s formal garden, encircling her home Suningive.

For some time after White’s death, the garden was unmaintained, and through the process of ecological succession, much of it was overtaken by other Pinelands plant species. However, in recent years, the garden has been being restored. If you walk the paths in the spring and summer, you’ll find a number of flowering plants and shrubs, including a few massive rhododendrons. In fact, this post was recently moved, as it had been hidden behind the large rhododendron to your left! While the garden certainly is beautiful now, there is still more work to be done in its restoration.

If you would like, feel free to explore the garden now—the path to the right winds around and forks a bit. Whenever you are ready, you can head off to the left, towards Whitesbog Road, which leads back to the Village.

**A Thank-You**

Thank you for exploring Whitesbog’s Old Bog Nature Trail. If you are interested in seeing more of Whitesbog’s environment, you might consider picking up the guide to the driving tour in the General Store as well. At any rate, we hope to see you again soon!

**Scientific Names of Plant Species, Including Trees, Herein Noted**

(And others that may be found at Whitesbog)

- Pitch pine: *Pinus rigida*
- Gray birch: *Betula populifolia*
- Sphagnum moss: *Sphagnum*
- Highbush blueberry: *Vaccinium corymbosum*
- Water lily: *Nymphaeaceae*
- Cinnamon fern: *Osmundastrum cinnamomeum*
- Bracken fern: *Pteridium*
- Atlantic white cedar: *Chamaecyparis thyoides*
- Red maple: *Acer rubrum*
- Black gum: *Nyssa sylvatica*
- Wild cranberry: *Arctostaphylos uva-ursi*
• Pin oak: *Quercus palustris*
• Sweet gum: *Liquidambar styraciflua*
• American holly: *Ilex opaca*
• Franklinia: *Franklinia alatamaha*
• Rhododendron: *Rhododendron maximum*

Acknowledgments

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A Note About the Guide

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