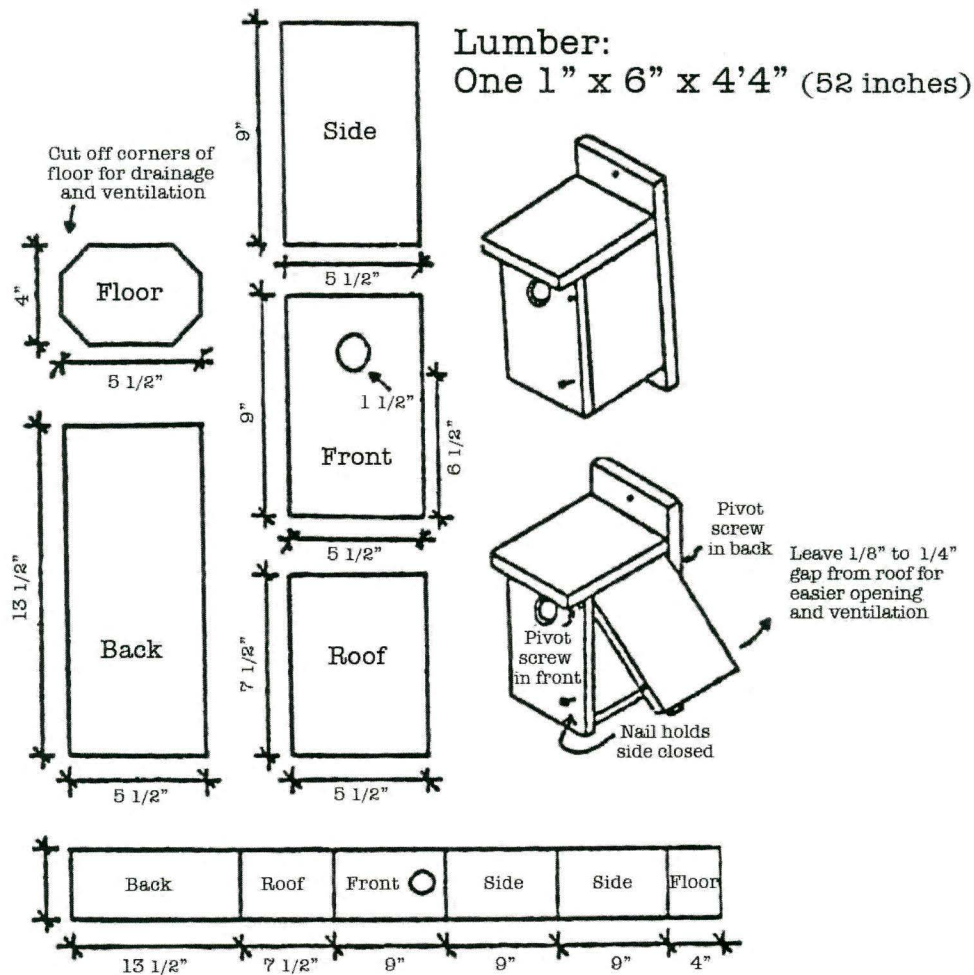


## Three Hickories Nature Trail Guide

### 1. HOME FOR A BIRD

Many different species of birds can be observed along the trail due to diversity of both woodland and open field habitat. Keep your eyes and ears tuned for our feathered friends, especially some of the less commonly seen, such as the red-bellied woodpecker, crested flycatcher, and towhee. Also, note the bird's location (ground, low bushes, tall trees); this will be his niche. The ecological niche of a bird is primarily determined by food – the towhee is a weed and seed eater and is found on the ground; the flycatchers are poised high in the treetops to catch insects winging by; woodpeckers will be on the trunks of trees boring for insects under the bark.



Plans courtesy of The Samuel Roberts Noble Foundation: [www.noble.org](http://www.noble.org)

## 2. CATASTROPHE IN NATURE

As you emerge from the dense forest into this opening of cedars, low shrubs, and briars, notice the sudden change of plant life. In this area what has interrupted the plant succession? (See diagram.) Was it interrupted by fire or could it have been caused by poor soil, livestock, or timber cutting? Either way, what you see is the first stage of natural succession in which one type of plant succeeds another until the mature forest is reached. Openings such as this are vital to wildlife as they provide cover and food. Native Americans were the first to use fire to stimulate new plant growth each year resulting in more food for wildlife. This would ensure a reliable supply of game. Do you think that Native Americans once burned off this opening?

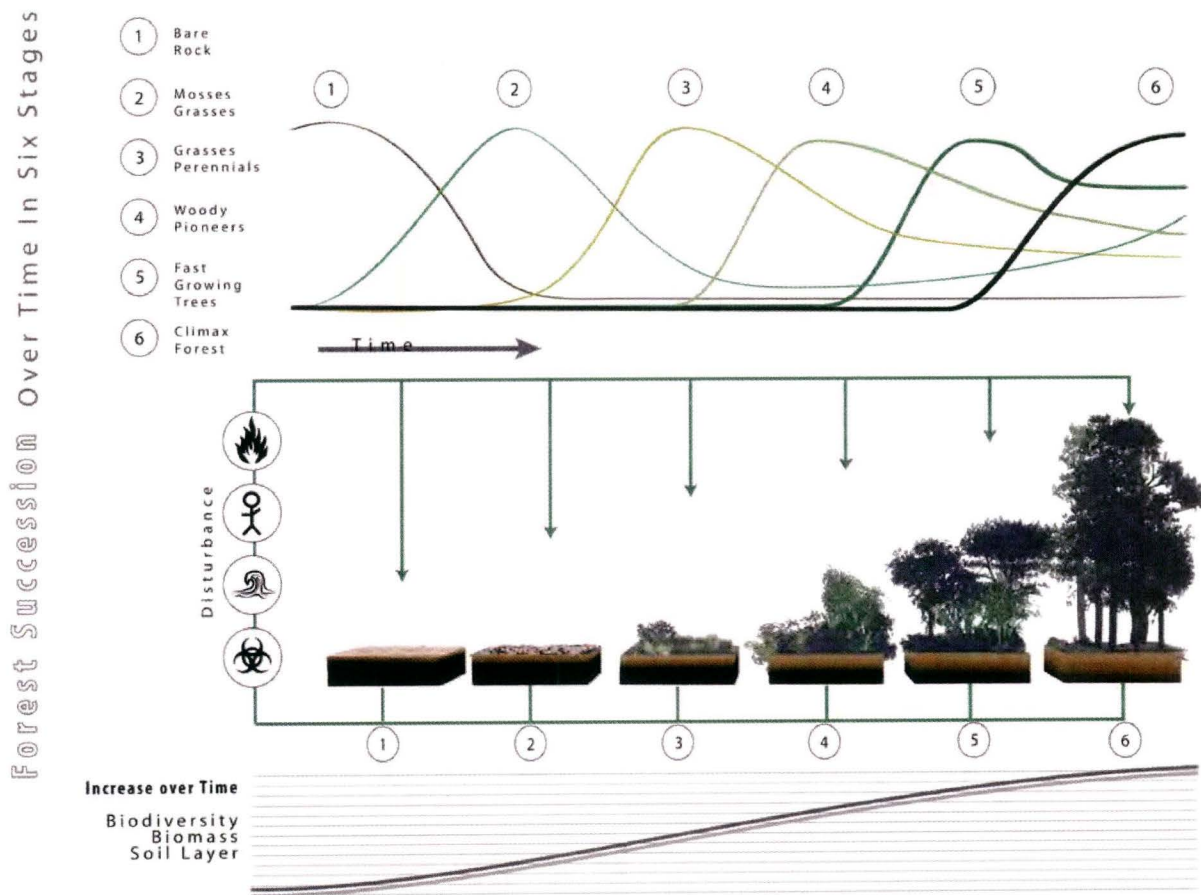
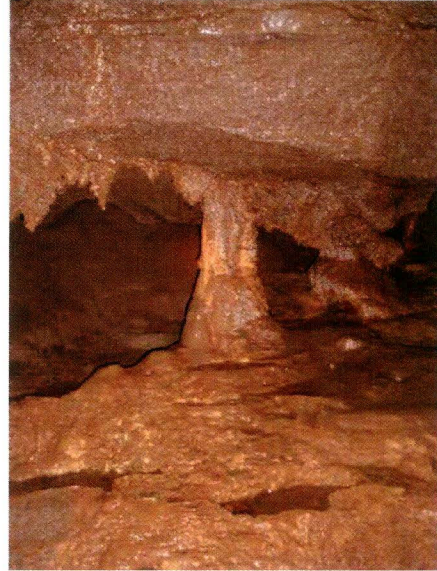


Image produced by Lucas Martin Frey, Louisiana State University.

### 3. BOOMSHAW!

The trail at this point navigates around a sinkhole or *beinSHAWee*, a Shawnee expression meaning "deep water" or "big water." Today, some locals call such an area a Boomshaw, a word derived from the Native American expression. Geologists use the term karst to describe these areas characterized by limestone country, sinkholes, caves, disappearing creeks, and limestone outcroppings. How is a Boomshaw formed? An underlying cavern gradually enlarges as water seeps through the soil and rock and dissolves the limestone. The top layers of ground collapse and this cave-in forms the sink. There may be water in the bottom of this sinkhole. The level may fluctuate with that of the lake and is probably connected by underground passages. The moist environment of this sinkhole provides a habitat for a variety of plant and animal life.



### 4. EFFECTS OF MAN

Man often has an effect on his environment. Here you can see some of his effects long after he has gone – deteriorating lumber from an old shed, domestic flowers, and an old fence. The land often takes many years to recover from man's presence. Look for other effects of man as you walk the trail.

### 5. MIDDLE TENNESSEE'S EVERGREEN

There would not be much green in the winter landscape of Middle Tennessee were it not for the Eastern Red Cedar. This tree does not lose its foliage like most other area trees. Since it keeps its cover, it provides much needed shelter for many birds and small mammals when it gets cold and nasty. The bark, which readily peels off in strips is a favorite nest-building material for the cardinal. The tree is actually a juniper but is called "cedar" because of its similar bark and quality wood used for chests, trunks, and decorative boxes. These finished wood products have a beautiful red color and pleasant aroma.



## **6. LIFE ALONG THE LAKESHORE**

The shoreline of a lake will usually provide more opportunity for viewing animals including birds, turtles, snakes, and insects than will any other type of habitat. Why would that be? See how many types of wildlife you can see along the edge of the water before the trail leaves the lakeside.



**Deer Tracks**



**Raccoon Tracks**

## **7. NATURE'S CLASSROOM**

Mother Nature has created her own outdoor classroom with an arrangement of rock outcroppings in the form of an amphitheater. Notice the sharp-edged flutings on the rock. How were these formed? A cedar stump serves as a speaker's podium. Nature study groups are invited to use this classroom for instructional periods as they walk the trail.

## **8. SLEEPING TREE**

This tree appears to have lain down for a nap. Or perhaps, it is bending over as if to bow for applause. In all likelihood, however, the old oak probably was struck by lightning and snapped almost in two. Miraculously, it somehow survived this injury for years and seems to have fully recovered, albeit horizontally. Marvel at its defiance of gravity!

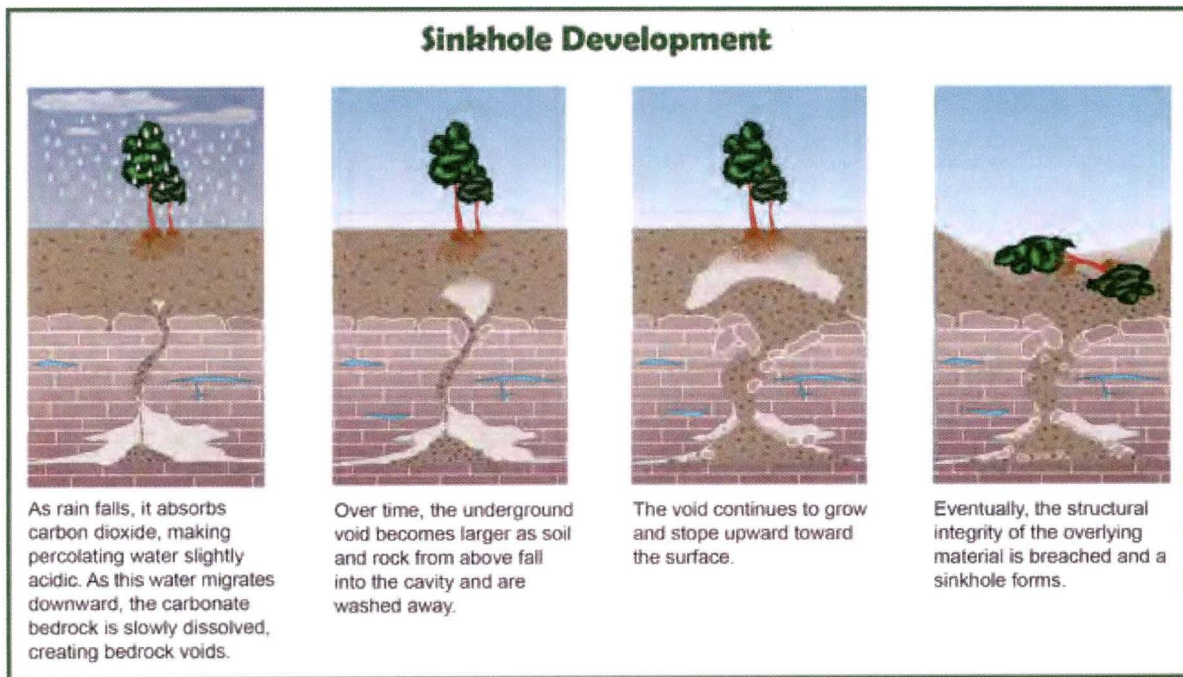
## **9. REMINDER OF BYGONE DAYS**

A rock fence stands ancient (over 100 years old) and molding with moss. This type of fence is a relic of a bygone era when slaves were used for its construction. Contrast this with the

wire fence it joins - a good example of old versus new. Which is better? The fence lizards and chipmunks would certainly choose the rock fence. Unfortunately, beautiful rock fences like this one are less and less commonplace.

### 10. SINKHOLE DEVELOPMENT

Is this one of those vertical openings in the horizontal layers of limestone found in the karst area of Middle Tennessee? In other words, is this a Boomshaw? You betcha! An underlying cave passage gradually enlarged from water which seeped through the soil and dissolved the limestone. The top layers collapsed and the resulting cave-in formed this sinkhole which is similar to the one at Station 3.



*Illustration courtesy Missouri Department of Natural Resources*

### 11. BACK TO EARTH

These logs are in different stages of decomposition. They are in the process of being absorbed back into the forest floor from whence they came. However, before their decomposition is complete, they will serve as a home for numerous insect and animal creatures.



## **12. EVIDENCE OF FLOODING**

Look along the shoreline for animal and bird tracks – they may be from raccoons, opossums, minks, muskrats, coots, great blue herons, or others. Also, you will notice in places a row of sticks, logs, and other assorted materials that seem to lie along the same contour of the land – this is known as the “debris” or “drift” line. This line was established by floodwaters that left the drift high and dry when the waters receded. This debris is a favorite nesting habitat for Canada geese.

## **13. TORNADO STRUCK HERE!**

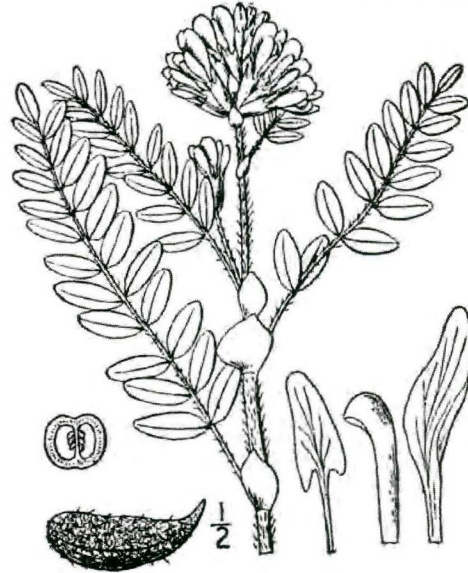
Some of the broken and twisted trees you encounter along the trail are the result of tornadoes. This section of Tennessee lies in a zone that experiences tornadoes quite often. Try to imagine the power of a wind that can twist and snap a large tree!



#### 14. CEDAR GLADE: VANISHING GARDEN

Tennessee Milk Vetch

You are standing in an example of Middle Tennessee's most unique natural areas. It is a cedar glade with shallow soils and rare and endangered plant species. Some species of plants that grow in these glades grow nowhere else in the world. Because of their uniqueness, the cedar glades are known and valued by naturalists across the nation, yet they are rapidly vanishing beneath the encroaching development. When visiting the fragile cedar glades, tread lightly. Look closely, but carefully for plant species such as the pale blue glade phlox that carpets rocky outcrops; psoralea, with its silvery leaves and spikes of deep purple flowers; the Tennessee milk vetch with its pale yellow flowers; and Gattinger's petalostemon, its rose-purple flowers blooming in masses in early June. Rare species, seasonal beauty, and scientific significance - what more is required to deserve our reverence when visiting cedar glades?



#### 15. HOW DOES A TREE GROW?

This stump is made up of many concentric rings, which are usually added once each year, but not always. Climatic changes, fires, and competition from other trees can alter the formation of annual rings. In a very dry year, the tree might not grow at all and no ring would be added. The dark central portion of this stump, labeled "A", is called the **heartwood**, which serves primarily as sturdy support. Surrounding the heartwood is the **sapwood**, labeled "B". The sapwood is lighter in color than the heartwood because of the countless pipelines that run through it transporting water and nutrients. Only the outermost ring of cells around the sapwood, called the **cambium layer**, "C", is still growing in a live tree. It is solely responsible for the growth of the tree. The outer bark of the tree serves to protect the tree from insects, fire, and disease.

## **16. OLD HOME SITE**

Travel down this short side path and you travel back in time 30, 50, or 100 years. You will find what remains of an old house - somebody's home from the years before the lake was impounded. Whoever lived here lived in a different era. A time of subsistence farming, working the shallow soil with hand tools and plenty of sweat. A time spent closer to nature. Did people in the past better understand the relationship between themselves and Earth? Let us appreciate our journey back to the past and remember our continued role as stewards of our environment.