

More information about TNC is available on our website, [www.tenaflynaturecenter.org](http://www.tenaflynaturecenter.org); by email at [info@tenaflynaturecenter.org](mailto:info@tenaflynaturecenter.org); or by phone at 201-568-6093.

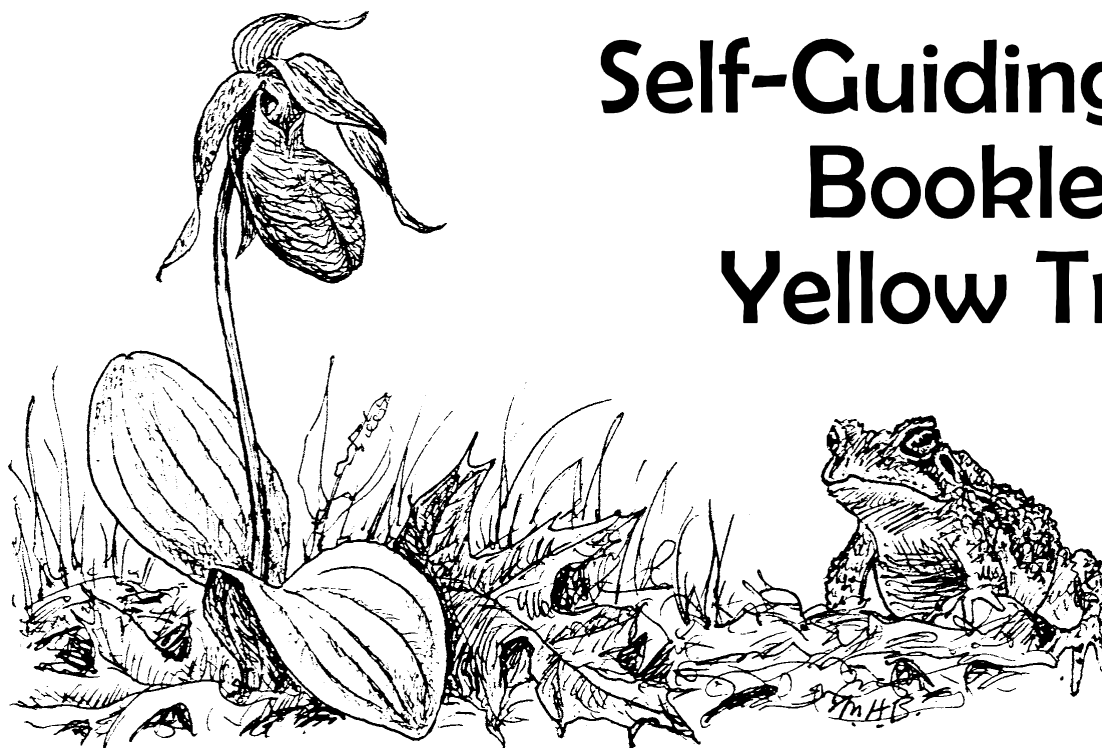
- And the satisfaction of supporting our goals of environmental education and land stewardship.
- Priority registration period for Discovery Classes and Nature Day Camp;
- Discounts on nature books, bird feeders, and other merchandise;
- Free or reduced rate programs;
- Our quarterly newsletter, *TNC NEWS*, which lists upcoming programs, local natural history events, and more;

*Benefits of membership include:*

The Tenafly Nature Center Association (TNC) is a non-profit, member-supported organization. TNC offers year-round programs for children and adults and maintains the John A. Redfield Building which houses live animals, natural history exhibits, and the Stephen Minkoff Memorial Library. The Center's 52-acre woodland includes three marked trails and a three-acre pond/wetland. TNC's trails connect with those in the Borough's 330-acre Lost Brook Preserve, creating a trail network of approximately six miles.



# Self-Guiding Trail Booklet Yellow Trail



**Tenafly Nature Center**

313 Hudson Avenue, Tenafly, NJ 07670 ♦ [www.tenaflynaturecenter.org](http://www.tenaflynaturecenter.org) ♦ 201-568-6093

*Lift to Begin* ↓

# Welcome to the Yellow Trail

a 1/3 mile path that starts at the John A. Redfield Building by the Model Backyard Habitat and ends on the Main Trail near Pftister's Pond. You will find signs along the trail that correspond to the numbers in this guide. Enjoy your walk!

## 1. Sssshhh, Do you hear anything?

Try watching the bird feeders. If you step back and watch quietly for a few minutes, you may see birds taking seeds from the feeders. In spring, songs from migrating and nesting birds fill the forest. Each year over 120 species (kinds) of birds feed on the insects, seeds, nectar, and fruits that the Nature Center's forest provides. Fifty species raise their young in this 380 acres of **Northern Mixed Oak Forest**. This booklet focuses on some of the plants of the forest.

As you follow the trail keep your ears and eyes open for our feathered friends. Follow the fence around the garden where Station 2 will be on your left as you cross a rock outcropping.

## 2. What have you eaten from this species of tree?

This is called a **Sugar Maple** (*Acer saccharum*) because its sap (the blood of the tree) has a very high sugar content. The sap is collected and most of the water is boiled away to make maple syrup. Sap is usually collected from late February through early March. It takes 35-40 gallons of sap to make **ONE** gallon of syrup for you to enjoy on pancakes, waffles, oatmeal, and ice cream.

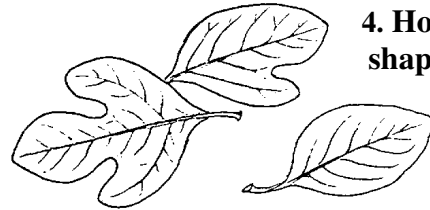
You can identify trees by looking at their structure. The maples have simple leaves with pointed lobes, and oppositely-arranged (paired) branches and buds.

Station 3 will be on your left at the corner of the main Yellow trail and this spur trail.

## 3. Look how straight and tall Tuliptrees grow!

It's one of the tallest and straightest American hardwood trees. You can recognize the **Tuliptree** (*Liriodendron tulipifera*) by its straight trunk; its shield-shaped leaves; dark, flattened buds; and its orange, green, and yellow tulip-shaped flowers. They bloom in late spring and give this tree its name. In winter, young Tuliptrees can still be distinguished by their finely-lined bark.

Look for Station 4 on your right.



## 4. How many differently shaped leaves can you see on this tree?

Sassafras (*Sassafras albidum*) has green twigs and leaves with three different shapes—

**almond-, mitten-, and ghost-shaped**. The lemon smell of the twigs helps identify this species. The root, however, has a very different odor—that of root beer! In the winter you can look for the green twigs.

Station 5 is on your right.

## 5. Have you ever seen a tree that flowers in autumn?

Here's one right in front of you! **Witch-hazel** (*Hamamelis virginiana*) is uncommon in the Nature Center. It's the only woody plant that flowers in late autumn, when it, and most other plants, have lost their leaves! The plant's odd bloom time brought it to the attention of Native Americans and settlers, both groups found uses for it that border on magical.

This plant has earned other names, too. A few examples are "Winterbloom", since few other plants bloom in winter; "Spotted or Striped Alder" since in size and leaves it resembles alders; and "Snapping Hazel" refers to the explosive seed capsule, which can throw seeds up to 30 feet. But how often are we quiet enough to hear seeds popping?

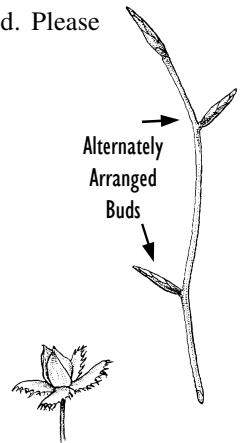
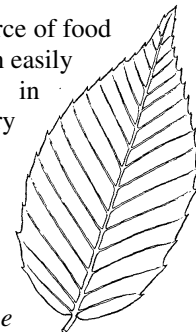
## 6. Look for the American Beech's smooth bark.

If given a chance, this tree will become one of the largest and most beautiful in the forest. The bark of the **American Beech** (*Fagus grandifolia*) is typically smooth and light gray, but in populated areas, it is often carved up with hearts and initials. This practice breaks the bark and allows disease organisms to enter, much as a cut in your skin may become infected. Please don't carve a living tree.

Beechnuts are a source of food for wildlife. You can easily recognize this tree in winter by its very

long, light-brown buds and the dead leaves that often remain attached to its branches.

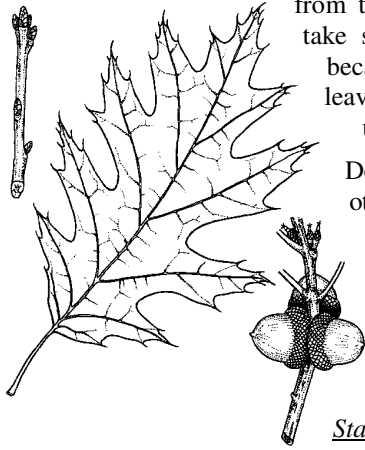
Look for Station #7 on your left, slightly off the trail.



## 7. It's New Jersey's state tree!

Notice the bark of this young **Red Oak** (*Quercus rubra*). This newer, dark-gray bark shows "ski runs" of lighter bark. A quick glance in the area around this tree will show other trees with "ski runs." All are Red Oaks, perhaps the most common tree in these woods. Red oaks have 9 to 11 sharply-pointed lobes per leaf, and large acorns which provide food for White-tailed Deer, Gray and Flying Squirrels, Wild Turkeys, and other animals that inhabit this type of forest.

This is a drawing of a Red Oak leaf. Can you find one on the ground? Now, can you find a leaf from last year, and another from the year before? Oak leaves take several years to decompose because the tannins in their leaves is a preservative once used to “tan” leather.



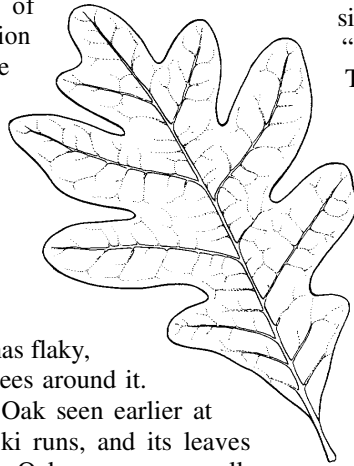
Do you know New Jersey’s other state symbols? The flower is the Purple Violet; the insect is the European Honeybee; and the bird is the American Goldfinch. All of these can be found at Tenafly Nature Center.

Station #8 will be found on a tree on your right.

### 8. What do you notice under your feet?

The rock you see throughout this forest, including that large pile to the right of the trail, deep in the woods, is **diabase** or “traprock.” It comprises the Palisades on which you are standing. This formation extends along the Hudson River from Staten Island to Mount Ivy.

Diabase is an igneous rock that, when molten magma intruded (was pushed sideways) into softer sedimentary rocks. It cooled very slowly deep underground to form a fine crystalline structure comprised of pyroxene and feldspar. After ~195 million years of weathering and erosion, the surrounding sedimentary rock has eroded away exposing the diabase. Striations, or scratches on the rocks, were left by the glaciers that covered this land around 15,000 years ago.



### 9. Can you find a leaf from this tree on the ground?

This **White Oak** tree (*Quercus alba*) has flaky, gray bark as do several of the large trees around it. All are White Oaks. Unlike the Red Oak seen earlier at Station #7, the White Oak has no “ski runs, and its leaves have 5-9 smooth, rounded lobes. White Oak acorns are smaller and sweeter than those of the Red Oak, were made into flour by Native Americans.

Station #10 will be on your right.

### 10. Is this “blue” berry a “Blueberry”?

**Yes!** The **Common Highbush Blueberry** (*Vaccinium corymbosum*) provides food for the wildlife. Even before its spring leaves are fully grown, small, white, bell-shaped flowers line this shrub. In August the fruit appears and is easily recognized as the blueberry. In autumn the leaves turn a pleasant reddish-purple, and in winter the very fine greenish or reddish branchlets identify this shrub. The cultivated variety of blueberry is derived from this wild species.

The Highbush Blueberry may grow to a height of ten feet. Several examples of a close relative, **Lowbush Blueberry** (*Vaccinium angustifolium*) can be found directly behind you.

Station #11 will appear directly in front of you before the trail veers off sharply to the right at the water’s edge.

### 11. Floating Boardwalk

As you walk out on the boardwalk from spring until autumn, you may see the tiny green leaves of **duckweed**, floating on the surface of the pond. Growing out of the water is **Spatterdock** (*Nuphar advena*)—a yellow water-lily which has spread over most of the pond.

Once at the end of the boardwalk, you will be in the midst of **Buttonbush** (*Cephalanthus occidentalis*) whose white, rounded flowers are visited by many insects in early summer. After being pollinated by these insects, the flowers turn into button-like fruit visible in late summer and early autumn.

The patient observer can see Red-winged Blackbirds that often nest in the Buttonbush as well as Great Blue and Green Herons, Belted Kingfishers, Wood Ducks, warblers, grackles, and kingbirds. You may also see many insects typical of the pond habitat, such as colorful dragonflies.

Enjoy being a part of this peaceful setting. Then quietly proceed on the boardwalk, while watching for frogs, turtles, and Muskrats.

Station #12 will follow on your right just before two large rocks on the trail.

### 12. What would you call this plant?

The lay-person commonly does not distinguish between three similar plant families. A little jingle helps tell them apart: “sedges have edges, rushes are round, grasses have joints.”

The masses of grass-like plants in this area are **sedges** (Family *Cyperaceae*.) They have no joints (unlike, corn, which is a grass) and prefer moist environments such as this one. Many other species of plants are associated with sedges, the most evident being the Meadowsweet, Red Maple, and Arrowwood Viburnum.

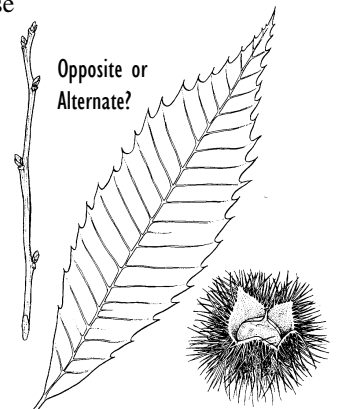
Look for Station #13 on a large tree on your left just beyond a rocky area.

### 13. American Chestnut

This number plaque is attached to a very large Tuliptree as discussed in #3. More interesting to us is a shrubby growth to the left whose long, fine-toothed leaves identify it as an **American Chestnut** (*Castanea dentata*).

The American Chestnut was once the dominant tree of our Northeastern forests, providing an abundance of food for wildlife. In 1906, a fungal disease accidentally introduced from Asia spread rapidly, wiping out the chestnut forests in just a few decades. All that remains today are a few shrubby growths which die after a few years. The roots, however, live on and send up new growth until that new growth becomes infected and dies.

Your next stop, Station #14, will be on your right.



#### 14. What type of plant is this?

Many different species of **fern** grow in this forest. You can see three of them in this spot from spring until autumn. To your left, as you face this sign, you will see a small fern which is tapered all the way to the ground. It is the **New York Fern** (*Thelypteris noveboracensis*). To the right of this sign is a larger species, called the **Cinnamon Fern** (*Osmunda cinnamomea*) for its cinnamon-colored tufts which you can see in early summer. Behind you amidst more Cinnamon Ferns are a few similar ferns

which have a more rounded appearance than the others. This is the **Interrupted Fern** (*Osmunda claytoniana*) so-named for its “leaf” (properly called a frond) which is often interrupted by dark, curled fertile “leaflets” (properly called pinnae).

Station #15 will be on your left.



#### 15. Dead Tree

Even a dead tree plays an important role in the forest ecosystem. Woodpeckers chip away at it in search of insects which live in the soft, rotting wood. A larger, baseball-sized hole near the top of a dead tree indicates that it was once home to a family of woodpeckers. This kind of cavity

may be used later by other cavity-dwelling animals like Flying Squirrels, Screech Owls, or Black-capped Chickadees.

In the early stages of decay, fungi and other decomposers, such as sow bugs and beetle larvae begin to break down dead wood. Bacteria and a series of other micro-organisms continue the process, which liberates nutrients to be used by nearby plants, which in turn support the animals which feed on them.

Station #16 will be on your left, at a spot where you can see the edge of the pond again.

#### 16. Do you remember how the Cinnamon Fern got its name?

In front of you is a magnificent stand of **Cinnamon Fern** (*Osmunda cinnamomea*) seen earlier in a stunted condition (Station #14). You may be able to see the cinnamon-colored spore cases which stand high above the fronds, leaving no doubt as to what species of fern this is.

Station #17 will appear on your right.

#### 17. Do you like honey?

The flowers of the **Black Gum** (*Nyssa sylvatica*) also known as the **Sour Gum** or **Tupelo**, are highly valued in the South as a source of nectar used by Honeybees to make the most prized of American honeys. Unlike most other trees, its branches tend to grow at right angles to the trunk. Black Gum has sour-tasting oval leaves, which often turn brilliant shades of red before the other trees start to change in autumn.

Please continue to Station #18, which is located where the trail turns away from the pond.

#### 18. Are you ready for a test?

Test yourself to see how well you remember what you have learned so far on this trail. The answers are upside down on the bottom, but no peeking! Good luck!

What type of tree is this? 1. (Hint: notice the “ski run” pattern on the trunk.) To the left is a tall shrub with edible fruit, a perfect example of 2. At the base of the tree are several large rocks called 3., of which the Palisades are comprised. The forest floor is littered with dead branches which are being decomposed by 4. You may also recognize two species of fern behind this sign and to the right. The one with the more rounded appearance is the 5. Finally, the other smaller fern that is tapered all the way to the ground is the 6.

Scoring: 6 correct: Botanist  
5 correct: Naturalist  
3-4 correct: Naturalist Wanna Be  
2 correct: Hiker  
0-1 correct: Go back to Station #1 and begin again!

A short distance from here is Station #19, halfway up a small hill on the right.

#### 19. Look up for the Wild Grape

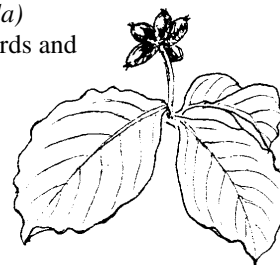
If you follow the vine behind this tree upward, you will find that mixed among the leaves of this White Oak are rounder leaves belonging to the **wild grape** (*Vitis* species). By using a vine, the plant can climb very fast without producing a thick, heavy trunk for support. It produces a tendril, a tightly curled leaf, that waves in the wind to seek and attach to the nearest object and allows the main stem to climb upward with only a little support. The grape vine needs to position its leaves high enough to catch the sunlight so that it can make its sweet fruit.

Station #20 is a short distance ahead, to your left.

#### 20. Flowering Dogwood

Just to the right of this White Oak is a native tree commonly planted on suburban lawns for its beautiful springtime flowers, which are equally attractive in their natural woodlands. This is a **Flowering Dogwood** (*Cornus florida*)

whose red fall fruit is eaten by wild birds and other animals. To the right of the dogwood is a low-growing, thinly-branched shrub that you may have noticed along the entire trail. This is the **Maple-leaved Viburnum** (*Viburnum acerifolium*) so-called for its maple-shaped leaves.



*This marks the end of the Yellow Trail. We hope that you have enjoyed your tour, while learning that there is so much to know about every tree and shrub around you. If you would like to learn more, explore the books in the Stephen Minkoff Memorial Library inside the visitors center.*

**Please conserve trees, energy, and printing costs by returning this booklet for other visitors to use or, you may keep it as a reference if you wish.**

Review Answers: 1) Red Oak 2) Common Highbush Blueberry 3) Diabase Rock 4) Fungl, insects and micro-organisms 5) Interrupted fern 6) New York fern.