

**Rye Nature Center**  
**SELF-GUIDED INTERPRETIVE TRAIL**

Beginning just beyond the kiosk in the parking lot, this trail is marked with 4x4-inch guideposts numbered consecutively from 1 to 14. Basic ecological information is given for each of the marked areas whose locations are indicated on the trail map.

**GUIDEPOST #1**

The Breadloaf Rocks, so called because of their similarity to a sliced loaf of bread, are gneiss rock. Gneiss rock is a metamorphic rock. The principle minerals in it are mica, feldspar, and quartz. The rocks are gradually being converted into small particles of soil by physical and chemical weathering.

Physical weathering, in this case, is caused mostly by the freeze-thaw process. Water gets into small cracks and crevices. In fall and winter, this water freezes, expanding as it does so. The pressure of this expansion results in enlargement of the crack, allowing more water to get in next time, and leading to more and more cracking. Large pieces of rock can be broken down in this manner.

The chemical weathering process here is the result of the symbiotic relationship of algae and fungi in lichens. Lichens draw inorganic salts from and secrete many acids onto the rocks. Through these processes, lichens directly aid in the weathering of rocks.

Most of the rock outcrops that you see at the Center are part of the gneiss formation. There are, however, some large boulders that originated from far away. These are glacial erratics and were brought down to our area during the last ice age. The boulders are easy to spot because they are usually sitting alone and may look very different from the bedrock.

Also of interest is the very large, white, quartz vein to the right in the outcrop. This vein, along with others, continues throughout the gneiss formation at the Center.

**ON THE WAY TO GUIDEPOST #2**

Be sure to follow the path curving to the right to continue on the self-guided trail. The path on the left, leading up the hill, leads to one of the Nature Center's fields and is not part of the self-guided trail.

Before passing this path, notice the Jewelweed bush to your left. The interesting yellowish-orange flower of the plant should, in seed time, be named the "Touch-me-please." Press the 1-inch seed pod around Labor Day and see why. The seed pod will burst and release many small seeds.

As you round the bend, take note of the tall trees such as the Sour Gum, Tulip Tree, and Sweet Gum. The Sour Gum to the right of the trail, for instance, is one of the first to assume autumnal coloration: A few glossy purple to scarlet leaves may be seen even in late spring.

Taller than all the various oaks, maples, and beeches (and therefore somewhat difficult to pick out) is the Tulip Tree. Straight and tall, this king is one of the highest of all our Eastern trees; 190 feet tall and with a 6 foot diameter, it is second only to the Sycamore in girth. Native Americans made their dugout canoes from this grand tree. You may recognize it by its towering trunk alone.

Notice that the beautiful flowers and leaves both resemble tulips. The flowers cover the tree in the spring. Their green petals, banded with orange and yellow, make a spectacular show. The leaves of this tree are unique, protected in the bud and emerging like little flags.

Ancient in origin, the Tulip is considered America's "fossil" tree; the only closely related species is found in far-off China. Although its light wood is often mistaken for Poplar, this beauty belongs to the Magnolia family.

On your way to each guidepost, be sure to open your senses to what is around you. You may hear several different types of bird songs or the sounds of various insects. If you are quiet and observant you may see a toad, rabbit, or pheasant. In the spring, watch for buds and blossoms on the plants, and in the fall you can see the leaves change from green to brilliant shades of red, yellow, and orange.

## **GUIDEPOST #2**

There is a natural wood bench on the left side of the trail, opposite Guidepost #2. It is one of several set out along the trail. Note the tree under which it is situated. This tree is a midget survivor of the once abundant Chestnut.

Until the early 1900's, American Chestnuts were plentiful on the North American continent. Then, for variety, foreign chestnuts were introduced here. People were unaware at the time that these new chestnuts brought with them a fungal blight, against which the American Chestnut had little resistance. As a result, in 1904 and following years, the American Chestnut was brought almost to the point of extinction.

On the right side of the trail, a little past the post is a depression which collects melting snow and spring rains, periodically forming a pond. Temporary ponds, such as this, are important because they are nurseries for amphibian life. They may even hold water long enough for tadpoles to hatch and develop into frogs. Many larval insects also depend on these ponds for their development.

## **ON THE WAY TO GUIDEPOST #3**

On the way to Guidepost #3, you may see on the trail the one-inch prickly seed pods of the common, star-leaved Sweet Gum tree. It retains many seed balls all winter. The Sweet Gum tree's exuded sap was often chewed as gum.

Continue straight ahead, through the intersection, to Guidepost #3.

## **GUIDEPOST #3**

At Guidepost #3, you can see many small plants, about one to two feet in height. This ground vegetation around post #3 is composed largely of Sarsaparilla and Maple Leaf Viburnum.

Note that several of the trees here, both black birch and oak, seem to be growing out of the rock. They are actually existing here on a very thin layer of soil. This is an interesting example of how seeds can germinate under rugged conditions. These trees are truly opportunists.

Across from the post, you may see a small tree whose leaves have tiny brownish-red stalks on them. These are not normal parts of the plant. They are black cherry insect galls. The galls provide protection and nutrition for the developing insect larvae.

The adult female insects are host specific, returning to the same plant species to lay their eggs. Look for other types of insect galls as you walk the trails.

## **ON THE WAY TO GUIDEPOST #4**

Soon after Guidepost #3, you will see a large rock on the left. It is one of the gneiss type rocks mentioned earlier. In the sunlight, you can see how some parts are very shiny: this is the mineral mica. The white bands in the rock are quartz, and the pink flecks are feldspar. There is also some lichen living on this rock.

On the right of the trail are Sassafras and Wild Sarsaparilla, the first a medium-sized tree, and the other a 2-foot high plant. Both of these have aromatic roots and are used as a flavoring in tea and soft drinks (root beer and sarsaparilla). The Sassafras is interesting because it has three differently shaped leaves. They are football-, ghost-, and mitten-shaped. The Sarsaparilla has a unique single leaf which spreads umbrella-like into triple compound leaflets.

While crossing the Nanderwhere Pond bridge, notice the plate in the left rail citing the builders, Boy Scout Troop #3. Nanderwhere was one of the Native Americans who, in 1661, sold John Budd, "one track of land lying on the mayn, Apawammis, buted on the wast with Mockquams River (Blind Brook), and north up to the marke trees nyeer Westchester Path (Post Road)." This area extended as far as the Nature Center and to what is now Rye Neck.

After crossing the bridge, stay to the left and continue on to Guidepost #4.

## **GUIDEPOST #4**

Evergreen Eastern hemlocks (H-10) have been planted at this pond and throughout the Center by dedicated volunteers and friends of the Center. Other transplants include the Osier Dogwood (D-2) and Viburnums (S-86) as natural food and

cover.

The large number of Pin Oaks (O-5), so called because of their pendant branches and pin-like twigs, affects the water quality of the pond. Their leaves contain a high level of tannic acid. When they fall into the pond, they make the water more acidic, which affects pond life.

The pond itself is home to many organisms, both plant and animal. Its water level depends on rainfall and therefore fluctuates through the seasons. In late spring and early summer, water evaporation and transpiration generally exceed rainfall, and the water level in the pond drops. It is during this time that you can see that leaves and other plant matter fall into the pond and collect on the bottom. Succession may result in the gradual filling of the pond. The succession stages may include the following: swamp, wetland, field, and lowland forests.

## **ON THE WAY TO GUIDEPOST #5**

On the trails you may see small diggings. These are due to the actions of skunks, squirrels, and chipmunks. Skunks may be looking for insect grubs, while squirrels and chipmunks may be digging for nuts and seeds that they buried the previous fall.

You may notice ferns growing in the area between Guideposts #4 and #7. This is because the ground here is lower and remains more moist than other areas of the Nature Center.

Look also in this area for the aromatic Spice bush (S-84) and Sassafras tree (S-1).

As you walk, keep an eye out for wildlife associated with the pond, such as dragonflies, frogs, turtles, or ducks. You may be able to see some of their tracks. Tracks indicate the use of the pond for drinking or bathing, or as a place to forage.

## **GUIDEPOST #5**

This is a good area in which to see the layers of the forest. The trees, shrubs, and ground cover filter the light as it comes through the trees. The large trees here are Beech, Birch, and Red Oak. Also take note of the large tree in front of the guidepost with the lightning scar.

The forest can be divided into three main layers. The very tall trees make up the top layer, or canopy. Shrubs and young trees make up the middle layer while smaller plants, such as ferns, grasses, and ground vegetation, make up the lower layer. Each layer of the canopy takes up its own share of the available sunlight, so that very little is seen to actually reach the forest floor. Competition for sunlight, water, and available space determines the canopy heights and plant distribution. Intensity of the sunlight decreases as it penetrates the forest canopy. Those plants in the middle and lower layers have adapted to lower light conditions.

## **ON THE WAY TO GUIDEPOST #6**

As you walk towards Guidepost #6, you will note that there is a fork in the path. The path on the right leads to the fence surrounding the Center. The other turns towards the left. The interpretive trail is the left path and leads to Guidepost #6. As you near the post, you will see (and smell) the swamp on the right.

## **GUIDEPOST #6**

The area at Guidepost #6 is notable because it is a swamp and wetland area. It has a most varied ecology dominated by the swamp (dry during droughts). The level of water in the swamp as well as in the other Nature Center ponds fluctuates with the level of the water table. Wetland areas, like ponds, are home to a variety of plants and animals that may have adapted to these fluctuations.

The Red Maple is one of those. It is also one of the first trees to bloom in the spring and provides a feast for early birds and insects. The flowers, twigs, and buds are all crimson.

In the late winter and early spring, look in the swampy area for early blooming Skunk Cabbage and later for the Jack-in-the-Pulpit.

## **ON THE WAY TO GUIDEPOST #7**

On the way to Guidepost #7, note the great number of large oaks such as the White Oak (O-10) or Red Oak (O-7). In early New England, such oaks were saved for ship-builders and often outlived man. Some hardy gnarled giants have reached 150 feet in height, 8 feet in diameter, and a grand old age of 800 years.

The leaves of White Oaks are round-lobed, while the lobes of the Red Oak are pointed. White Oak seeds, which are favored by birds and mammals, are typically 1/4th enclosed by the cup of the acorn. Native Americans and colonists boiled and prepared oak seed for flour and extracted tannic acid from the bark for tanning.

## **GUIDEPOST #7**

At this post, you are near part of the fence which surrounds the Nature Center. The property directly on the other side of the fence was once part of the Parsons estate which included both land and the old gate-house.

Trees that grow in open spaces without the competition of other trees develop several lateral branches. These are called "wolf trees." Trees which grow in forests, on the other hand, have competition from other trees, and their branches grow into more vertical shapes.

Opposite and to the left of the guidepost is a good example of a "wolf tree." It is a White Oak (O-10).

## **ON THE WAY TO GUIDEPOST #8**

Soon after Guidepost #7, the trail you are following will join onto another, forming a "T." Turn left at this intersection to continue on the self-guided trail.

## **GUIDEPOST #8**

At Guidepost #8 there are many trees with a uniquely smooth gray bark. These are American Beech (B-5) trees. The beech has often attracted the thoughtless knives of lovers whose habit of scarring it with their initials has given this tree the nicknames, "Lover's tree," "Initial tree," and in today's terms, perhaps more appropriately, "Graffiti tree." Such damage to the bark is harmful to the tree. The bark acts as a protective covering similar to our own skin. Damage to the bark increases the chances of insect entry.

Beech tree bark is so smooth and gray that it has often been likened to elephant skin. Compare this bark to that of the Oak tree. Note how roughly textured the oak bark is. A curious phenomenon of the Nature Center is the number of beech trees which appear as twins and even triplets, sometimes entwined with other species.

The beech and oak (Guidepost #7) trees are sometimes considered "semi-deciduous." Due to imperfect or incomplete formation of the abscission layer, a dead leaf is allowed to cling to the tree much longer than its truly deciduous counterparts. As a result, certain beech and oak trees may retain some of their leaves late into the winter. However, these leaves do eventually fall off.

Beech trees, related to the chestnut, have bristle-covered husks enclosing a tasty fruit. Check the leaf litter on the forest floor for beech nuts. The tree's long, thin, sharp-pointed buds, present in winter, were called "spearheads of spring" by Thoreau. Some people also describe them as cigar-shaped buds.

## **ON THE WAY TO GUIDEPOST #9**

You may have noticed that there are many other trails branching off of the interpretive trail you are following. Please feel free to explore these if you wish. This guide takes you on a trail that has a wide variety of things to see and hear, but there are other interesting areas in the Center.

Soon after Guidepost #8, for example, there is a path which goes off to the right. This is the Fire Break trail and leads to one of the Center's field habitats. In season, bird-watchers put this trail to good use.

## **GUIDEPOST #9**

To the left of Guidepost #9 is a low ridge which divides the pond (Guidepost #4) from the swamp (Guidepost #6). It greatly affects the drainage in the area by dividing the area into separate watersheds. Rain runoff on this side of the ridge adds to

the water in the pond and, on the other side, the water goes into the swamp.

Guidepost #9 is also a directional post. To continue on the interpretive trail, you should take a sharp, right-hand turn and continue on the path to Guidepost #10.

## **GUIDEPOST #10**

The forest canopy here consists mostly of oaks, with some Sweet Gum, American Beech, and Black Birch. Note the small Hickory to the right of Guidepost #10.

Just before reaching the intersection of the interpretive trail you will note several mid-level evergreen trees. They remain green year-round by retaining their leaves or needles. These particular evergreen trees are Hemlocks and are adapted for growth in low-light conditions. They patiently wait for an opening in the tree canopy that will allow them to achieve their maximum potential growth. Note the stomate stripes on the underside of the needles. These are the "noses" of the trees, through which gases are exchanged.

Hemlocks are just one of a number of evergreen species that appear in the Nature Center. Compare the evergreens with the deciduous species. Their differences are especially easy to see in the winter.

## **AT THE INTERSECTION**

If you wish to return to the beginning of the trail at the parking lot, take the path to the right - you will then be backtracking over the trail on which you began. If you wish to continue on to Guidepost #11, walk through the intersection to the path almost directly in front of you.

## **ON THE WAY TO GUIDEPOST #11**

As can be seen from the map, Guidepost #11 is a fair distance from the intersection. Do not worry if you don't see it right away. The guidepost will be on the left side of the trail, in front of a rock outcrop.

## **GUIDEPOST #11**

In the spring of 1970 and again in 1985, fires burned the area on the left hand side of the trail. Nearly two acres of forest were destroyed. However, Thorny Catbriar covered the area within a short time. Almost no signs of the fire can be seen today. It is amazing how the forest heals itself.

There are also some small Sweet Gum trees here - look for their star-shaped leaves and Sweet Gum balls. However, if you look up past the rock outcrop on your left, you will see patches of open sky. The upper canopy in this area, eliminated by the fires, has not yet fully reestablished itself. Compare this view to that opposite the post, especially in the summer.

One of the more common trees in the Center is the Black Birch (B-10) with the characteristic thin, horizontal birch stripes and inverted V's about the trunk's bark. The broken twigs impart a pleasant, spicy, wintergreen odor. This is a hardy tree, often found on and among massive rocks. One inch fruit catkins persist all winter as food for birds and are an identifying trait when leaves have fallen.

Fermented sap from this birch is used in birch beer, and Oil of Wintergreen is extracted from the sap and leaves. Although some of the birches at the Center attain an impressive size, none reach the record diameter of 5 feet and a height of 80 feet.

## **GUIDEPOST #12**

Directly after Guidepost #12 is an optional path on the left that leads up the ridge to an overlook. This ridge is one of the highest areas in the Center. The path provides a better view of the fire-damaged area as well as a view of local church steeples. If you take this side path, carefully follow the trail map in order to retrace your steps back to Guidepost #12.

## **ON THE WAY TO GUIDEPOST #13**

Continuing on the main interpretive trail, you will note, just to the right, the Center's "Fern Dell." It exists because the area is low and shady, trapping water and remaining a fairly moist environment. Nestled at the base of the rocks, Shining Club Moss lives in combination with Cinnamon and Interrupted Ferns. The area hosts, in addition, several vine and ivy plants,

such as Wisteria, Poison Ivy, English Ivy, and Virginia Creeper.

Note that on the way to Guidepost #13, you walk over some exposed rock. This is again gneiss, the rock type found all over this area.

Following the trail will lead you out onto the Nature Center's driveway. Cross the road (first look both ways for cars) and walk left, down the slope, until you see the marker for #13 in front of a small pond on the right.

### **GUIDEPOST #13**

The water in this pool has several sources. The first is a spring nestled in the base of the rocks. It once served as a source of water for the Parsons residence. Although dependable during their residence, this source is now gone during the summer and appears only during the heavy spring rains.

The second source is a terra cotta pipe near the driveway. It drains water from the man-made Small Pond located near the Museum. The third source is natural drainage from the surrounding area, which also adds water to the pool.

Look for the Sycamore (S-15), Hemlock, Red Maple, White Birch, and Yellow Birch trees in this area. Other plants found in this moist environment are the Spice Bush, Spiderwort, (opposite the pond), Wild Iris, and Yellow Lily. Note the narrow trails winding down the rocky slope on the far side of the pond. These are animal trails and are an indication of the importance of this pond as a water source for the Center's inhabitants. Depending on the time of year, you may be able to see part of the foundation on top of the slope.

### **ON THE WAY TO GUIDEPOST #14**

Follow the drive up the hill to Guidepost #14. En route, look for a large fern, the Bracken Fern, easily identifiable by the division of the stem into three large fronds. Also look for the Sensitive Fern.

Walk up around the bend until you see the old foundation of a house on your left. This is the house that was the home of the Parsons family.

### **GUIDEPOST #14 - THE FOUNDATION**

Some of the most common questions asked at the Center involve this old, burnt-out home foundation directly in front of Guidepost #14. The Center includes a part of the former estate of Marselis C. Parsons, Sr. His beautiful, spacious home was completed in 1906 and was destroyed by fire in 1942, a year after his death. Workmen left hot fireplaces to the quirks of winds during renovation.

Mr. Marselis Parsons, Jr., who grew up here, has provided some additional interesting notes on the plantings around the old home. In 1907, the large Pin Oaks were planted along the driveway and the tennis court, now the parking area. In 1910, two gnarled, Split Japanese Maples and the large spreading Norway Maple (M-10), a beautiful umbrella of yellow in the fall, were planted by the Parsons children. The plentiful English Ivy is descended from sprigs gathered from a trip abroad to Kenilworth and Warwick Castles of ancestral England. In 1912, the decorative arbor vitae (Northern White Cedar, C-5), a Red Cedar (C-6), and an Eastern Hemlock (H-10) were planted.

Just beyond the picnic area is a large evergreen tree. This tree is a spruce. It was planted by the Parsons family after they had used it as a Christmas tree.

Until Mr. Parsons, Sr.'s death, the land from the house to the Post Road was a well-kept lawn with few trees. Note how quickly the area has reverted to a natural state.

Two introduced flowers, Coltsfoot and Goat's Beard, flourish. Both resemble dandelions, but the Coltsfoot is unique in that the flower comes out before any leaves appear.

There are a few established trails around the foundation which you may want to follow. However, please DO NOT climb into the ruins. Many of the stones are loose and therefore unsafe.

This is the last stop on the self-guided interpretive trail. We hope that this tour has stimulated your sense of wonder at all forms of Nature's ever-changing beauty. Please visit again.