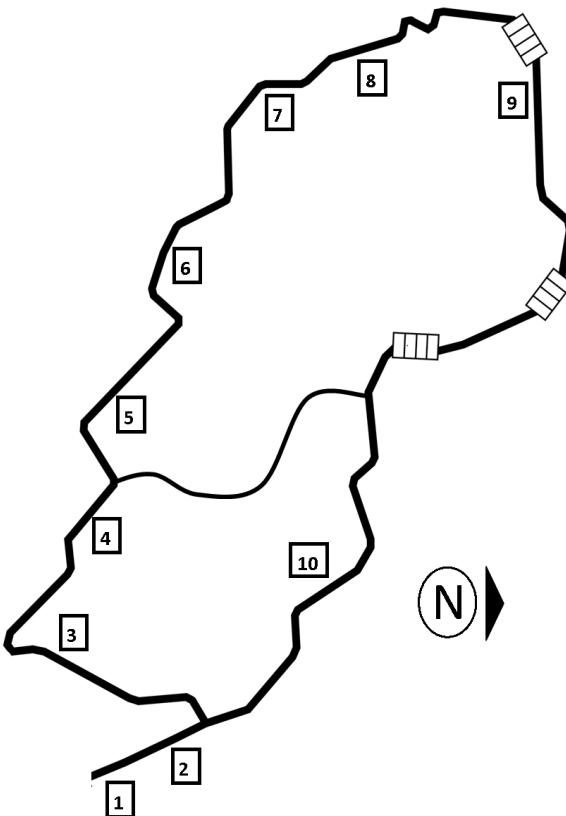


Green Earth, Inc.

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Brush Hill Nature Preserve Trail Guide



Green Earth

*Preserving Natural Areas For
Future Generations*

Welcome to Green Earth I, the first natural area acquired by Green Earth, Inc. This is a private nature preserve open to the public year-round from dawn to dusk. We hope you will enjoy your hike and that this trail guide provides you with a better understanding of the natural features, plant communities, and wildlife in this forest.

1. Trail Markers Numbered wooden posts correspond to the enumerated information in this trail guide. There are also white markings on trees to help guide you between stations. Please note that the trail map shows a two loops, the shorter loop is marked with an arrow sign.

2. Deer trails The trail you are walking on was originally a deer trail. Deer use these paths to travel back and forth between feeding areas and places to bed down. Deer are very common here, but you probably cannot see them because their coats blend in with the forest. Other signs of animals to look for include tracks, nests, burrows, droppings, and the remains of half-eaten seeds, leaves and berries.

3. Soil Erosion Many of the plants that once protected the soil on this trail are now gone. As a result, the soil on this hill will be carried by wind or water to the creek below. To reduce the loss or erosion of soil on this hill, waterbars have been strategically placed to reduce overland flow and capture the soil.

4. Woodpeckers Several species of woodpecker can be found in this forest, including red-bellied, red-headed, pileated, hairy, and downy woodpeckers, and the yellow-bellied sapsucker. Not only can we hear them at times, we can also see the cavities they create in trees from searching for wood-boring insects. Some woodpeckers also eat acorns, blackberries, dogwood berries, and other fruits of the forest. Woodpeckers are considered beneficial animals in the forest because they consume wood-destroying insects and their old cavities provide nesting sites for other animals such as owls, wood ducks, and squirrels. (Short Loop ►)

5. Double Harvest If a pioneer family were to discover this spot they would consider it a precious find. There are two kinds of trees here that they would have used for food. One is the sugar maple. Early each spring, when the sap flows freely through the maple tree, the pioneers would drill a hole into the tree's trunk and collect the sap. The sap would be boiled down to make maple syrup and maple sugar. In late fall, following the first frost, the pioneers would return to this spot to collect the small orange fruits of the persimmon tree to make pudding, bread, and cookies. A persimmon tree can be recognized by the dark square plates on its bark.

6. Coal Removal When money was scarce during the great depression of the 1930's, local families dug their own coal to burn in their furnaces and fireplaces. The pit below this railing is one place where a family extracted coal. Notice the small black stones as you walk down this hillside. These are pieces of coal from a seam of coal that lies very close to the surface here.

7. Seasonal Pond During spring, this temporary pond is teeming with wildlife. Spring peepers, leopard and gray tree frogs are the most vocal residents here. The calls of each species are very different and they use them to find their mates. Spring peepers call using a high-pitched single-syllable peep. If you hear a high-pitched trill, that is probably the call of a gray treefrog. Leopard frogs make guttural, vibrant snores or belches. The tadpoles feed on the short-lived aquatic invertebrates that are adapted to these seasonal habitats. By the time this pond dries up in the summer, another generation of frogs will be produced. When autumn arrives, the frogs retreat deep into the soil of the woods to survive the cold winter months.

8. Forest Gaps Notice the vegetation here is mostly herbaceous or non-woody. This gap in the forest provides resources for plants and animals that are not available in mature stands of trees. Light is more available here, allowing for many species of plants to persist in a forested area where they might otherwise become excluded from over time. These "pioneer" species increase the overall diversity of the area and provide food for wildlife. There

is a predictable sequence of plant communities that establish and change over time in response to forest openings and renewed resources. The succession of communities will take decades to return to the forest community that was originally present.

9. Abiotic Influences Notice the forest at this point consists of different tree species than those growing 100 yards up the hill. The primary factor responsible for the different forest communities is water availability associated with changes in elevation. Moisture is just one of the important *abiotic* (non-living) factors that influence plant and animal communities in an area. Other important abiotic influences include sunlight, precipitation, temperature, soil type, slope, and aspect (direction a hill slope faces). Lowland forest species around you that thrive in moist soils include river birch, sycamore, and black willow. These species can be found growing along river and stream margins throughout southern Illinois. As you walk up this hill, you will encounter forest species adapted to drier conditions such as sumac, persimmon, and sassafras.

10. Oaks and Squirrels The oaks, hickories and walnuts here were planted years ago by squirrels. Each year the squirrels bury a large supply of acorns in the soil to eat over the winter. Gray squirrels carefully bury individual nuts separately in the soil, whereas fox squirrels store as much as two bushels of food in one underground hole. The nuts that do not get consumed by the squirrels remain in the soil and potentially germinate into seedlings. Look above you to see if there are any squirrel nests in the trees. You can identify them by the large clumps of leaves and twigs nestled between the tree branches.

This concludes the trail. We hope you enjoyed your hike and will come back again soon. You may take this trail guide with you, otherwise please return it to the trail guide. Contact us for more information about Green Earth, guided tours, or school field trips. Be sure to visit all of our nature preserves in Carbondale.