

SUCCESSION PATH (print out this two-page guide and take it with to the park)

This mile-long, roundtrip hike starts at the bottom of the valley traversed by Observatory Avenue. Beginning at the Valley Trail marker, walk 100 yards down the Valley Trail. At the Ridge Trail marker on the left, leave the Valley Trail and climb up the Ridge Trail to the bench.

A little over two centuries ago, the Cincinnati area was entirely covered by the forest that now surrounds you. Note that a forest tree grows upward toward the sun and displays few branches on its shaded, lower trunk region.

Continue up the path until you reach the field. (Do not follow the Ridge Trail when it turns to the right at the trail marker; you will return to the Ridge Trail at the far end of the field.)

Beginning a couple hundred years ago, Cincinnati settlers cleared sections of the forest in order to establish building sites and farm fields. Only a few trees were allowed to remain and grow to provide shade for livestock and humans. Note that sunlight reaches the lower portions of widely spaced trees, and so they retain their lower branches.

Continue walking onward and upward through the grassy field, paralleling Observatory Avenue on your left. At the end of the field, turn right at the Ridge Trail marker.

Since plants provide food for animals, the animals in this field are primarily feeding below your eye level. It may be easier to spot animals in the taller vegetation to your left where invading shrubs are shading out the grasses and other field plants.

Pause when you reach the bench.

Shrubs today cover a former park meadow that is located downslope behind the bench. This shrubland is sited on the south bank of an abandoned east-west channel of the Ohio River. In a few minutes you will learn why the river moved from this channel to its present location on the Ohio-Kentucky border to the south of here.

Continue to follow the Ridge Trail past the bench and into the shrubs.

Here, too, shrubs have replaced the grasses and other field plants that initially established themselves in this cleared area. Animals in this shrub community mostly feed at your eye level since that's where the leaves and fruits are located. Fruit-eating birds and mammals unknowingly transport the shrubs' seeds into adjacent fields.

Continue straight ahead on the Ridge Trail (don't turn right at the trail marker).

You are now entering a park section where trees are replacing shrubs. Tree seeds reached this area when birds, mammals and winds carried the seeds here from nearby woodlands. Although they grow more slowly than shrubs, trees eventually shade out the shrubs that previously had shaded out the field plants. This replacement of one plant community by another is known as ecological succession.

Continue walking down the Ridge Trail several hundred yards into the forest.

Here trees have displaced most of the shrubs. The area now looks much like the forest that once covered all of this land. In summer it's difficult to see animals here, since most of them are feeding in the tree canopy overhead. As you walk down through the forest, note that the trail follows the abandoned trace of City Road, a stagecoach route that connected Cincinnati with Chillicothe.

Continue hiking down the Ridge Trail for several hundred more yards (passing the Bur Oak Trail marker) until your feet touch the base of the fill for a railroad line. Now retrace your steps 15 yards back up the trail to the large, embedded, concrete-like rocks —rocks made up of small, glacial-transported stones cemented together by glacial meltwater.

These conglomerate rocks were deposited here 250,000 years ago by a continental glacier. As this glacier pushed into Cincinnati from the north, it blocked the Ohio River's old channel and caused the stream to seek a more southern path that is now its present course.

During the times of the Late Ice Age when this region wasn't blanketed by glaciers, the land usually was covered by a cold-tolerant forest dominated by spruces and firs. That boreal coniferous forest was replaced by the present temperate deciduous forest as the climate warmed following the Ice Age.

Again walk forward to the railroad fill, turn right past the concrete block, descend the steps, and turn right onto the gravel Valley Trail.

The forest on this valley bottom has been disturbed by the installation and then the subsequent repair of a sewer line running beneath your feet. The last repair work in this section of the valley took place over 30 years ago, and so the grassy field that first colonized this cleared area has given way to shrubs and young trees.

In about three hundred yards, the trail enters a valley segment in which sections of the sewer line were recently repaired. These sections are still dominated by the grasses and other herbaceous plants that initially invade disturbed areas.

In another few hundred yards, the trail enters a valley segment in which the sewer line never has been repaired since its installation. Note that trees are replacing the shrubs that replaced the grassy plants that pioneered this area immediately after the sewer line's construction. Within a century, succession has returned this area to forest.

On your left along the trail, you can see lengths of sewer pipe where it has been exposed in the streambed. The sewer district someday will have to dig up and repair this section, causing succession to start anew.

A landslide, windstorm or lightning-ignited forest fire also could initiate a succession sequence in this valley. Without such natural disturbances leading to a succession of plant communities, there would be a much poorer natural species diversity in the forested Cincinnati region.

Follow the Valley Trail onward to your starting point.