For information about programs, or to arrange an educational program or group visit, connect with us at:

www.calvin.edu/go/preserve

(616) 526-7600 | preserve@calvin.edu

Walking trails are open to the public every day from dawn to dusk.

Bunker Interpretive Center (BIC) Hours:

Academic Year: M-F 9 a.m.- 5 p.m.

Summer: M-F 8:30 a.m. - 4:30 p.m.

Closed weekends and holidays

Admission to trails and BIC is free.

Restrooms in the BIC vestibule are available everyday from dawn to dusk.

Etiquette:

To ensure your safety and the preservation of our plants and animals, please stay on the trails and respect these rules:

Development and continued support of the Calvin Ecosystem Preserve &Native Gardens was made possible through grants and generous donations.

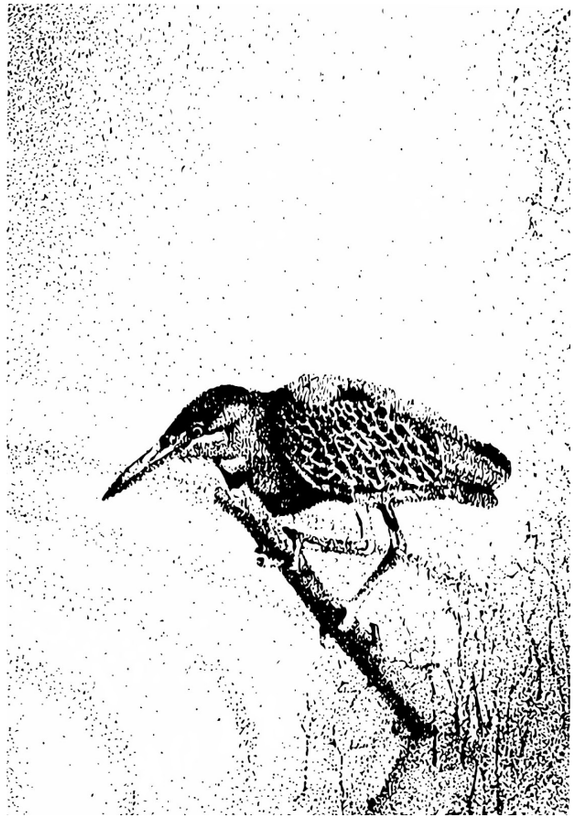
Calvin
Ecosystem Preserve & Native Gardens

1750 East Beltline Ave. SE
Grand Rapids, MI 49546

CALVIN

ECOSYSTEM PRESERVE & NATIVE GARDENS

TRAIL GUIDE

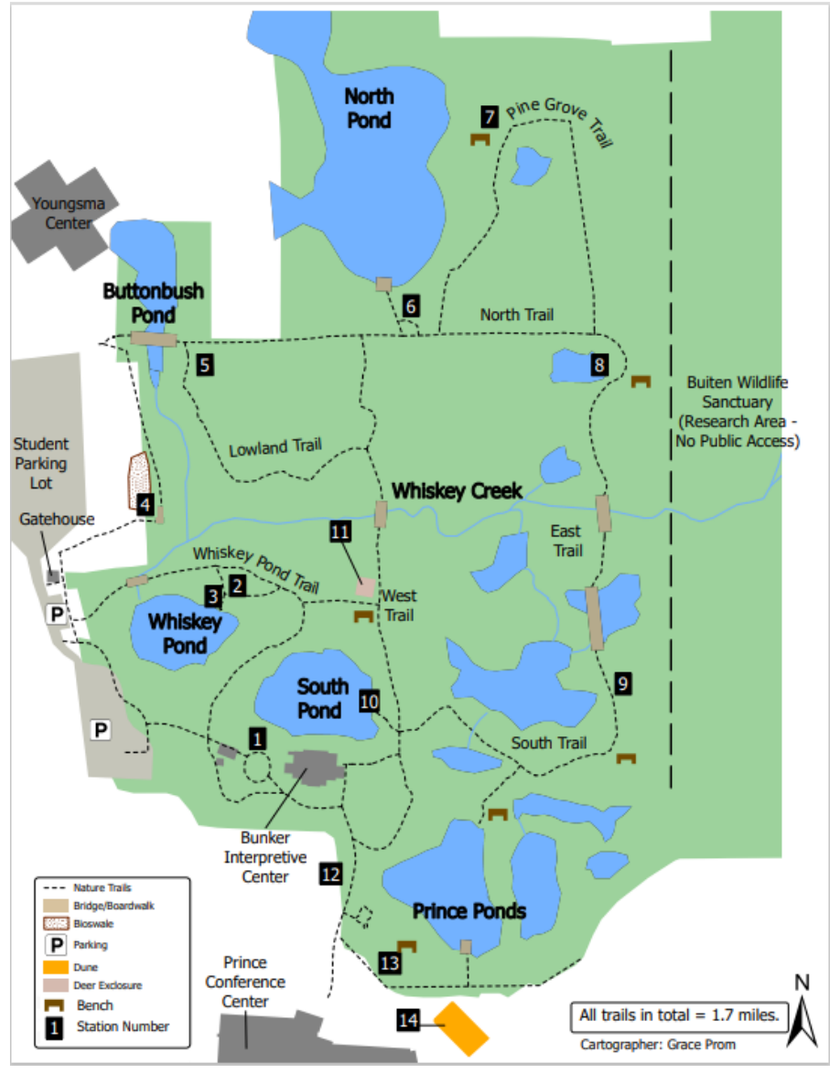


Sarah Taylor '92

Welcome to the Calvin Ecosystem Preserve &Native Gardens! The university set aside this area in 1985 to promote natural preservation, education, and research. The preserve encompasses over 104 acres of forest, meadow, and wetlands typical of the West Michigan area. Public access is provided to 40 acres of the preserve; the remaining 64 acres are maintained as a wildlife refuge, and for scientific research.

As the preserve becomes increasingly isolated by urban development, the integrity of its biological communities grows more and more precarious. Please help us protect the area and its wildlife by treating it with care as you visit.

1.7 miles of trails are available for wandering, taking in the beauty of each season, and discovering the flora and fauna of West Michigan. Trails are easy to hike and consist primarily of wood-chipped surfaces. Look for small, numbered station markers along the paths; information about each station is provided in this guide.

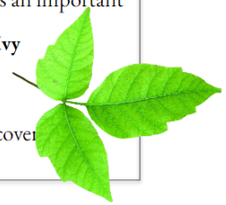


Be Aware of Poison Ivy

Poison ivy (*Toxicodendron radicans)* grows in abundance at the Ecosystem Preserve. It grows along trail edges and on tree trunks, so avoid brushing up against the vegetation with skin or clothing. Although people may be allergic to this plant, it is an important food source for many animals

General characteristics:

- Three leaflets with shiny leaves
- Uneven leaf margins
- Three forms: vine, bush, groundcover



Poison Ivy

1. Venema Plaza

These native gardens feature plants that have inhabited West Michigan since before European settlement. They don't require irrigation or fertilization; thus, they help conserve water and limit the use of chemical fertilizers and pesticides. Additionally, they are important sources of genetic diversity for wild populations of plants. Native plants also encourage animal biodiversity by providing food and shelter to birds and insects. In the spring and summer, butterflies, bees, and other pollinators can be seen sipping on the nectar of flowers. During the fall and winter, birds can be seen feeding on seed heads of plants throughout our gardens.

2. Invasive Species Control

This small sector is a common buckthorn control site. This nonnative (European) species is able to out-compete many native plants like sassafras, maple-leaved viburnum and dogwood. Overtime, the large canopy trees will "shade out" the invasive species like buckthorn, then maples, oaks, and beeches will fill the area. Once controlled, this area will be planted with native species that belong.

3. Whiskey Pond

This secluded pond is fed by a seep on the eastern edge. It is home to ducks, frogs, and native plants like buttonbush, duckweed, and the tiniest vascular plant in Michigan, water meal.

4. Bioswale

This project was designed in 2012 to divert water coming off of the student parking lot. The bioswale slows down and filters the stormwater discharge from the parking lot. This runoff would otherwise carry pollutants and cause erosion in other parts of the watershed.

5. Old Field Succession

In the early 1960's this area was a hayfield. Once cultivation stopped, a series of naturally occurring communities took over the site. Since that time, woody species (trees and shrubs) have become increasingly dominant. Today this area is in the process of developing into a mature forest with large trees and a relatively open floor.

6. Glacial Ponds

Most of the ponds in the preserve were created thousands of years ago by huge chunks of ice left buried underground by glaciers. As the ice slowly melted, it left large, water-filled depressions called kettles. North Pond is actually two kettles, each originally 30 to 40 feet deep. Over the last 13,000 years, sediment and debris have filled the pond,. The maximum depth today is only six feet.

There are a lot of dead trees around the outer edge of this pond because the pond level has risen over time and the soil has become too wet for trees to thrive. The pond was drained by a small culvert when the area was used for agriculture, but currently the drainpipe has been filled in to restore the natural hydrology of the ponds. When the pond overlook was built in 1985, the vertical posts were not in water.

7. Pine Grove

In 2017 this area was purchased and incorporated into the Ecosystem Preserve. A trail loop was built in this section to allow public access to this portion of the preserve. Pine grove contains mainly deciduous trees but there is a small grove of pine trees along the trail.

8. Vernal Pools

This is the Preserve's best example of a vernal pool, also referred to as an ephemeral pond. Vernal pools are depressions in the ground that temporarily hold water in the spring and early summer. They are usually found in mature hardwood forests after snow melt and heavy rains. These wetlands slowly lose water throughout the warmer months, often completely drying out. They are isolated without a permanent inlet or outlet. Vernal pools are an important part of our ecosystem, as they are home to indicator species (species that are completely dependent on vernal pools for parts of their life cycle), such as the blue spotted salamander, wood frog, and fairy shrimp. Because fish species cannot thrive here, vernal pools are a safe place for reproduction of amphibians and invertebrate species.

9. Forest Structure

As you look into the woodland you can see that the plant community has a three-layered appearance. The first layer is covered by short plants: seedlings and spring wildflowers. The understory is made up of large shrubs like spicebush and witch hazel, saplings, and ironwood trees. These trees do not reach the top of the woodland, the canopy. The canopy is composed of the largest trees in the woodlot, including maples, oaks, and beeches. Keep your eye out for dead and fallen trees! These are very beneficial for the ecosystem: homes for woodpeckers, raccoons, and owls. Rotting logs are also home to detritivores.

10. South Pond Observation Deck

This is a favorite area for viewing a variety of wildlife. You might see a muskrat collecting vegetation in the spring, painted turtles basking in the summer sun, snapping turtles, or occasionally a mink on the prowl. Watch for the great blue heron and mallard ducks that often feed here.

11. Deer Exclosure

This exclosure was built in 2021 as a part of a long-term study of the grazing impacts of white-tailed deer on wildflowers. This location has historic populations of spring ephemeral wildflowers and the study aims to evaluate the impacts of deer browsing on these wildflower populations and tree regeneration.

12. Tallgrass Prairie Construction

This area is being restored as a tallgrass prairie habitat. Nonnative species such as sweet clover, Queen Anne's lace, and spotted knapweed are being replaced by native prairie plants like yellow and purple coneflower, prairie dock, black-eyed Susan, and a variety of native grasses.

13. Water Quality Protection and Restoration

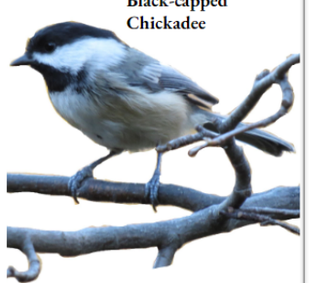
Prior to the restoration, this area was a dump site. These retention ponds were created in 2002 when the Prince Conference Center and DeVos Communication Center were constructed. The purpose of this series of three ponds is to retain water and to allow time for sediments and contaminants to settle out of the water before the water enters the preserve. This is important because the ponds in the preserve are the breeding places for salamanders and frogs that are sensitive to pollution.

A variety of demonstration garden beds (including a Monarch garden with 8 species and a sand prairie featuring natuive cacti) have been created to increase biodiversity in this area. The biggest restoration is the Prince Ponds shoreline restoration project. Invasive plants were replaced by 10,000+ native plant plugs. Unlike the native garden beds that surround the Venema Plaza, this area is informally planted. The Prince Pond Restoration area includes prairie species, woodland species, and wetland species.

14. Perseverance Dune

This dune demonstration was established as a teaching and research tool in 2020. It is now home to a variety of dune species. The rain garden at the side and bottom is designed to catch water coming off the lawn to prevent sand from being eroded.

As you walk through the preserve, look and listen for the variety of birds that live in the woodland. Year round, cardinals, blue jays, and chickadees are often seen. In summer, the gray catbird and red-eyed vireos are often heard.



Black-capped Chickadee