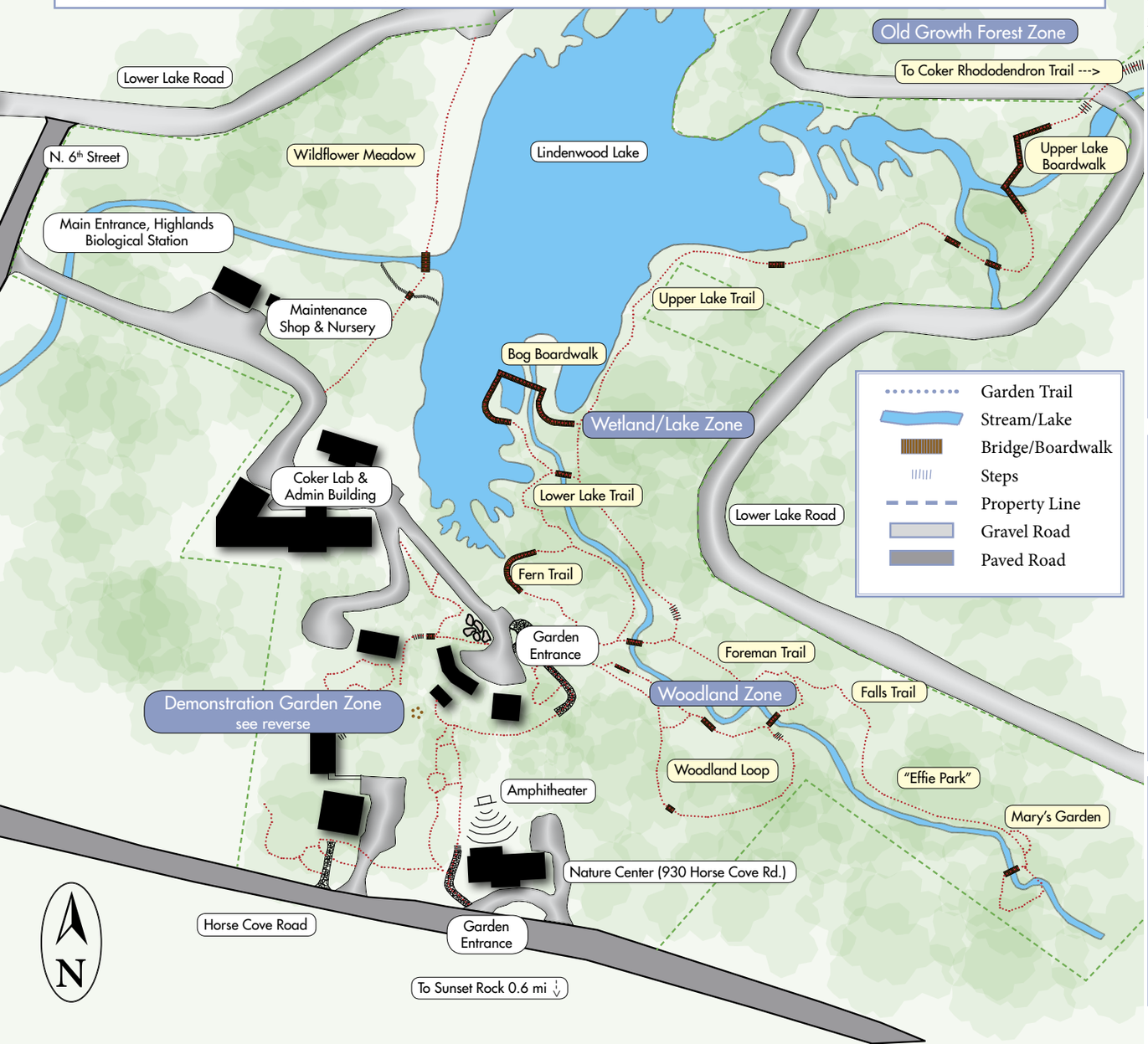
The Highlands Botanical Garden was established in 1962 as a refuge and demonstration garden for the diverse flora of the southern Appalachians, showcasing some of its unique communities. Nearly 500 species of native mosses, ferns, wildflowers, shrubs and trees flourish in natural forest, wetlands, and old-growth plant communities in the Garden, connected by trails and boardwalks. Several unique demonstration gardens are located throughout the grounds. See reverse for more information about these gardens. Support comes from Highlands Biological Foundation membership, donations, and proceeds from annual events. The Botanical Garden is a living museum of labeled plant specimens; please stay on the marked trails and do not pick or remove any plant material. We hope you enjoy your walk in the Garden!




# Zone and Trail Descriptions

The Highlands Botanical Garden consists of a main garden area with three zones emulating natural communities: Woodland, Wetland & Lake, and Old Growth Forest. UNC Herbarium botanists define natural communities as "distinct and reoccurring assemblages of populations of plants, animals, bacteria, and fungi naturally associated with each other and their physical environment." Natural communities are characterized by their unique blend of vegetation, animals, and other organisms in the context of topography, geological substrate, hydrology, and soil characteristics. Factors like elevation and slope aspect are also important, shaping microclimate. The naturalistic main garden is complemented by a Demonstration Garden zone in the heart of the developed campus, featuring a number of smaller specialty native plant gardens.

The **Old Growth Forest Zone** is a classic southern Appalachian Acid Cove Forest. Cove forests occupy shallow to steep-sloped sites at mid- to low elevations in the southern mountains. There are "Acid Cove" and "Rich Cove" subtypes. Acid Coves have nutrient-poor soils of low-pH dominated by heaths such as Dog Hobble and Great Laurel Rhododendron, with hardwood and conifer stands dominated by Eastern Hemlock. Herbaceous plants are limited. Rich Cove forests have more basic soils with greater nutrient availability, and richer overall species diversity. (Note: many sites have physical characteristics and plant communities intermediate between these extremes.)

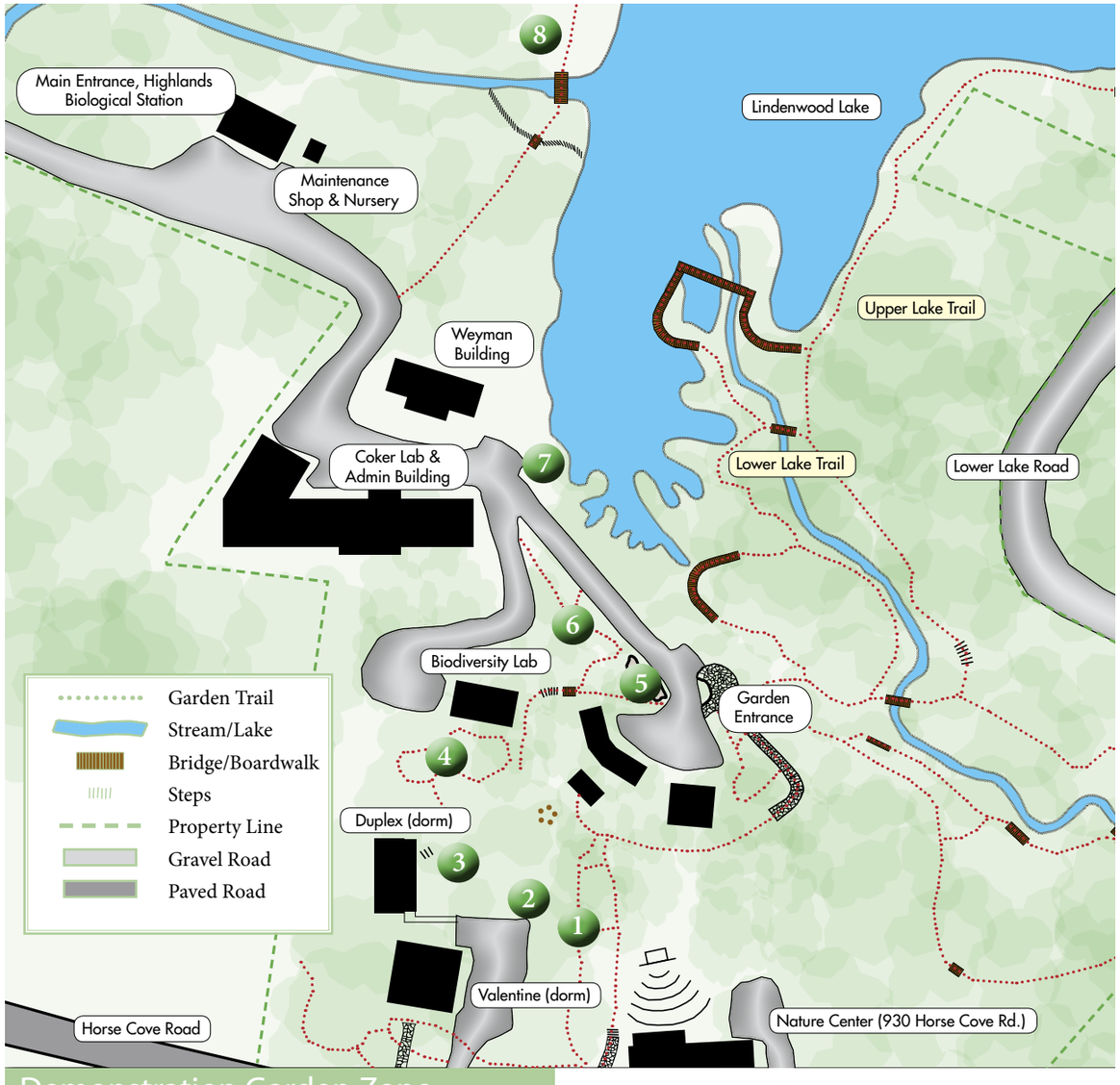
- **Coker Rhododendron Trail** - begins on Lower Lake Road, near the junction of Upper Lake Trail, and dead-ends at a stream crossing. Hikers should turn around at the stream to avoid trespassing on private property. Moderate to challenging, with steep inclines and roots. Distance: 0.2 mi.


The **Wetland/Lake Zone** of the Garden is an area of moist, shaded woodland and open lake edge, wetland, and bog. Southern Appalachian wetlands have soils thoroughly saturated by water that moves slowly or not at all, allowing colonization by plants tolerating (or requiring) very wet, acidic conditions. Wetlands are dynamic. Some last for years to decades, others hundreds of years, depending on their origin and local conditions. The acidic conditions of wetlands stems from sphagnum moss and other accumulated organic matter. Over time sphagnum acidifies the water and builds up as peat. Eventually a wetland can accumulate so much peat and other organic matter that woody plants can get a root-hold; trees and shrubs then begin to create a canopy, further changing ecological conditions.

- **Fern Trail** - Crosses silty soil hosting wetland species and ferns. Easy, muddy at times. Distance: <0.1 mi.
- **Lower Lake Trail & Bog Boardwalk** - Follows a stream through riparian hardwood forest, crossing a boardwalk over a southern Appalachian bog. Easy. Distance: <0.1 mi.
- **Upper Lake Trail** - Winds through a heath forest along the eastern shore of the lake across a boardwalk through a former beaver pond area. Moderate, narrow bridges, roots. Distance: 0.2 mi.

The **Woodland Zone** is the most extensive of the natural areas in the Highlands Botanical Garden. Much of it is upland woods - at our elevation a blend that has characteristics of Northern Hardwood Forest Community type and the mixed hardwood and conifer Acid Cove Forest community prevalent at mid-elevations in the southern mountains.

- **Woodland Loop** - Winds through a hardwood-dominated forest typical of Highlands. A variety of woodland wildflowers and understory tees and shrubs can be seen. Average, some stairs. Distance: 0.1 mi.
- **Foreman Trail** - Passes through a hemlock-hardwood forest. Average, some stairs. Distance: 0.1 mi.
- **Falls Trail** - Follows a shaded stream and loops past a small cascade at the property border. Some modest inclines, stairs; easy to moderate. Distance: 0.1 mi.




## Demonstration Garden Zone

**1. Azalea Garden.** Sponsored by Highlands Rotary, this garden showcases the spectacular native azaleas of the southern Appalachians. Highlights include the common Flame Azalea and the rare Pinkshell Azalea and Pinxterflower. May is the best month to see all of them in bloom!

**2. Native Grass Garden.** Hardy and subtly beautiful in texture and color, many of our native grasses are great choices for the garden. This garden features a selection of the wonderful grass diversity of the southern Appalachians.

**3. Phenology Garden.** Phenology refers to the timing of such biological events as bud-break, flowering and fruiting in plants, and migration and nesting in animals. In relation to climate change, recording phenological events over time can teach us how organisms respond to shifts in temperature or precipitation patterns. This garden, made possible by a grant from NOAA, is a state-of-the-art "e-garden" featuring selected native and non-native species with weather instruments and a remote-controlled webcam allowing observations to be made via the internet. See HBS website.

## ... Demonstration Gardens Cont'd

**4. Cherokee Garden.** This garden honors the Cherokee people and the traditional uses of native and introduced plants in their daily lives. A gift of the Mountain Garden Club of Highlands, its selection of herbs, shrubs, and trees provides examples of nutritional, craft, ritual, and medicinal plant uses.

**5. Rock Outcrop.** This garden is designed to bring the unique plant communities of granite dome peaks to you. It features a selection of the hardy plants, given in honor of Caroline Goforth, that are capable of withstanding the extremes of temperature and moisture that characterize exposed rock outcrops of our region.

**6. Moss Garden.** Bryophytes are ubiquitous but too often unseen. Yet these plants bring a wealth of beauty to the garden. Relaxing in our Moss Garden is a great way to appreciate the textures and green hues of mosses and their relatives. Given in memory of Leila Barnes Cheatham.

**7. Butterfly Garden.** Planting good nectar-producing plants that bloom at different seasons can attract a rich diversity of butterflies from spring through fall. A good strategy to ensure lots of butterflies is to provide an abundance of food for their caterpillars too!

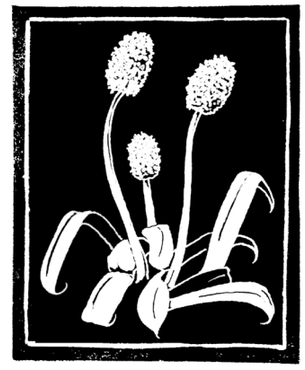
**8. Wildflower Meadow.** Perhaps the scarcest plant community in our region, meadows abound with a rich variety of wildflowers. The slope of the earthen dam of Lindenwood Lake makes for a fine meadow. It is seen to best advantage in late summer and fall, when the asters and goldenrods are at their peak.

## Other Garden Features

**NC Birding Trail, Mountain Region**. On the Highlands Plateau, an Important Bird Area, the HBS portion of this trail begins at the Nature Center and continues past the amphitheater to the main garden. Enjoy birding along the Lower Lake, Bog Boardwalk, Upper Lake, and Coker Rhododendron Trails. You can take an alternate route back to HBS: bear right on Lower Lake Rd. and take trail on the left leading across Lindenwood Lake Dam.

**Highlands Plateau Greenway.** The HBS campus portion enters from Big Bear Pen Rd. via a connector trail through the Ilges Property. Follows Upper Lake Trail to Coker Rhododendron Trail. Or continue past Nature Center from Sunset Rock and follow the NC Birding Trail.

**HBS William Bartram Trail.** Showcases native plant species with a connection to the Bartrams, many of them described by William Bartram during his travels through the southeast in the 1770s.



# Highlands Botanical Garden

# Trail Map

*Part of the Highlands Plateau Greenway & North Carolina Birding Trail*

Highlands Biological Station
265 N. 6th St. | Highlands, NC 28741
Tel: (828) 526-2602 | highlandsbiological.org

The Highlands Botanical Garden is free and open to the public year-round from sunrise to sunset.