



University of Florida Conservation Area Land Management Plan
Bartram-Carr Woods

Introduction

Bartram-Carr Woods is the name of an almost 9-acre upland hardwood located between Center Drive and Newell Drive, west and south of the Frazier Rogers and Bartram-Carr buildings. This area was identified in previous master plans as a Preservation Area (11), due to the water quality, flood control and erosion abatement benefits the area provided. While these functions are still present, since that time portions of the understory have been taken over by invasive non-native plants that cover most of the ground and are winding up many of the pines and hardwoods.

The primary use of the property is as a respite from the hustle and bustle of campus for local building residents and as a pass through, or short cut, for people walking from health center facilities (south) to the other areas of campus (north & west). There are two cleared areas that bookend the woods on the southern side along the creek that provide sitting areas and picnic benches (the eastern cleared area is also known as Health Center Park). Additionally, some departments use this Conservation Area as an outdoor teaching area, due to its close proximity to the main campus.

Natural Area Inventory

Water Resources

Two small creeks converge in the southern floodplain of Bartram-Carr Woods, becoming Lake Alice Creek, flowing westward and ultimately into Lake Alice. These creeks receive their flow from stormwater runoff and seepage from upstream areas on the eastern quadrant of campus including the health center facilities to the south and areas around Museum Road to the north. Additionally, flow from areas east of US 441 (S.W. 13th Street) around Norman Hall and Sorority Row also contributes to these creeks.

Upstream of this Conservation Area, both creeks show heavy side bank erosion and down cutting due to the lack of upstream stormwater treatment and the high amount of impervious surface. Due to safety concerns, in 2006 the University's Physical Plan Department had contractors come in and replace deteriorating piping infrastructure as well as place instream counter measures like riprap to reduce further erosion. After convergence, Lake Alice creek (the creek was at one time called Cal's Canal, named after the person who oversaw its channelization) flattens out and begins to show the results of upstream erosion in the form of sedimentation buildup. In fact, the creek in this area acts effectively as a sediment trap in that water velocity slows down and allows for particulate matter to settle out. However, this sedimentation buildup creates a need for regular dredging so that the floodplain does not rise and culverts do not get filled in.

The woods themselves contribute relatively small amounts of run-off to the creek. Unlike impervious surfaces, water is taken up and slowed down by vegetation and recharge to the surficial aquifer. According to mapping completed by Casseaux and Ellington Inc., wetland and floodplain portions of this Conservation Area buffer the creek's path, with wetlands extending just slightly past the creek's normal flow path and floodplains extending further up bank to a maximum of 300 feet from the creek's edge. In a few areas stormwater outfalls empty into the woods, functioning like intermittent streams that only flow to the creek during large storm events. The base of these stormwater outlets (where the erosion is greatest) should be studied as potential locations for rain gardens or other treatment BMPs to treat and reduce velocities of stormwater emptying into the woods. An issue observed by the working group that inventoried this area was the unnecessary mowing along the north side of the creek.



Lake Alice Creek at Base of Bartram-Carr Woods

Natural Communities

Bartram-Carr Woods is comprised primarily of a mesic / upland-mixed hardwood forest. Upland mixed forests are characterized as well-developed, closed-canopy forests of upland hardwoods on rolling hills. Upland mixed forests often have limestone or phosphatic rock near the surface and occasionally as outcrops. Soils are generally sandy-clays or clayey sands with substantial organic and often calcareous components. In larger, less strenuous conditions, mesic forests typically support significant wildlife and plant diversity, which result from the nutrient rich nature of hardwood forests and flowering and fruiting plants. A formal plant and animal survey has been completed for this area.

Plant Species

This mixed hardwoods canopy is dominated by *Celtis laevigata* (Hackberry), *Liquidambar styraciflua* (Sweetgum), *Pinus taeda* (Loblolly Pine), *Prunus caroliniana* (Carolina Laurelcherry), *Quercus hemisphaerica* (Upland Laurel Oak), *Quercus nigra* (Water Oak), *Quercus shumardii* (Shumard's Oak) and *Quercus virginiana* (Live Oak). Also present are *Carya glabra* (Pignut Hickory), *Fraxinus americana* (White Ash), *Magnolia grandiflora* (Southern Magnolia), *Morus rubra* (Red Mulberry), *Persea borbonia* (Red Bay), *Prunus serotina* (Black Cherry), *Quercus michauxii* (Basket Oak), and *Sabal palmetto* (Cabbage Palm).

Native understory shrubs, vines and herbaceous species include *Bignonia capreolata* (Crossvine), *Callicarpa americana* (American Beautyberry), *Campsis radicans* (Trumpet Creeper), *Coccoloba caroliniana* (Carolina coralbead), *Cornus asperifolia* (Roughleaf Dogwood), *Crataegus uniflora* (Dwarf Hawthorne), *Elephantopus carolinianus* (Carolina Elephantsfoot), *Erythrina herbacea* (Coralbean), *Eupatorium capillifolium* (Dogfennel), *Ilex vomitoria* (Yaupon), *Oplismenus hirtellus* (Woodsgrass), *Phytolacca americana* var. *rigida* (American Pokeweed), *Pleopeltis polypodioides* (Resurrection Fern), *Ruellia caroliniensis* (Carolina Wild Petunia), *Sabal minor* (Bluestem Palm), various *Smilax* (Greenbriar) species, *Toxicodendron radicans* (Poison Ivy), *Vernonia gigantea* (Giant Ironweed), and *Vitis rotundifolia* (Muscadine Grape).

Despite the abundance of exotic invasive plants in this natural area, a few noteworthy natives manage to persist. These include *Arisaema dracontium* (Greendragon, an uncommon species), *Clematis catesbyana* (Satincurls, an uncommon species), *Cocculus carolinus* (Carolina Coralbead, an uncommon species, located in the small strip just below Bartram and Carr Halls and in the western part of the natural area) and *Matelea floridana* (Florida Milkvine, endangered-FL, in western part).

Invasive non-native plant species

Future management of the site will need to address invasive plant management. Non-native trees common throughout include *Cinnamomum camphora* (Camphor Tree) and *Ligustrum lucidum*. Occasionally found were *Ehretia acuminata* (Kodo Wood), *Lagerstroemia indica* (Crapemyrtle), *Melia azedarach* (Chinaberry Tree), *Pistachia chinensis* (Chinese Pistachio) and *Podocarpus macrophyllus* (Yew Plumpine). The understory is dominated by a suite of invasive exotics, most notably *Ardisia crenata* (Scratchthroat), *Dioscorea bulbifera* (Air Potato) and *Macfadyena unguis-cati* (Catclaw Vine). In places these species have completely taken over: *Ardisia* at the ground level, and the vines covering the ground, small shrubs, and climbing up many of the trees. Other less abundant non-native shrubs and vines include *Ipomoea cairica* (Mile a Minute Vine), *Lantana camara* (Lantana, quite common at edges of property), *Lygodium japonicum* (Japanese Climbing Fern, at western end of area). *Colocasia esculenta* (Wild Yam) is common in the steam running along the southern end of the property.

Animal Species

Bartram-Carr Woods is relatively small in size, which limits the amount of habitat for terrestrial species. The following animal species have been documented on site: American Crow, American Goldfinch, American Robin, Bald Eagle, Baltimore Oriole, Black and White Warbler, Belted Kingfisher, Blue-Gray gnatcatcher, Brown-headed cowbird, Blue-headed Vireo, Blue Jay, Brown Thrasher, Boat-tailed Grackle, Carolina Chickadee, Carolina Wren, Cedar Waxwing, Common Grackle, Downy Woodpecker, Eastern Bluebird, Eastern Phoebe, Eastern Tufted Titmouse, Fish Crow, Great Crested Flycatcher, Gray Catbird, Hermit Thrush, House Finch, Killdeer, Mourning Dove, Northern Cardinal, Northern Flicker, Northern Mockingbird, Northern Parula, Osprey, Palm Warbler, Pine Warbler, Pileated Woodpecker, Red-bellied Woodpecker, Ruby-crowned Kinglet, Rock Dove, Red-Shouldered Hawk, Red-winged Blackbird, White-eyed Vireo, Yellow-bellied Sapsucker, Yellow-rumped Warbler, Yellow-throated Warbler, Brown Anole, Gray Squirrel, Cotton Mouse (1), Black rat (2), Raccoon and Opossum.



Bartram-Carr Woods – Air Potato Vine Prior to Treatments

Soils Inventory

The following soil information for on-site soils was gathered from the Soil Survey of Alachua County (1985).

Blichton Sand - Urban Land Complex (0-5% slope)

This gently sloping, poorly drained soil is on gently rolling uplands. Slopes are slightly convex. The areas are mostly irregular in shape and elongated and range from 10 to 40 acres. Typically, the surface layer is dark brown sand about 6 inches thick.

Millhopper Sand - Urban Land Complex (0-5% slope)

This nearly level to gently sloping, moderately well drained soil is in small and large irregularly shaped areas on uplands and slightly rolling knolls in the broad flatwoods. Typically, the surface layer is dark grayish brown sand about 9 inches thick. The subsurface layer is sand or fine sand about 49 inches thick.

Cultural and Passive Recreational Resources

Bartram-Carr Woods serves primarily as a quiet walking area for residents of the surrounding offices and classrooms and as a cut through for people walking between health center facilities and other areas of campus. There are a number of trails through the park, two pavilions, numerous picnic tables and an information kiosk. Environmental Health & Safety has a parking area that is partially within the Conservation boundary of these Woods. Since 2002 these woods have been one of the areas that are included in the City of Gainesville's Great Air-Potato Round-up.

There are no known archeological or historic sites within the Park.



Flexi-Pave Recycled Tire Trail and Informational Kiosk

Future Improvements

This Conservation Area has been a primary focus of the Natural Areas Sub-Committee since 2005, due to its important location in the developed part of campus. Therefore, most of the identified needs for this area have been addressed. Long range management planning should still look at replanting riparian vegetation with native species. This replanting should strive to maintain the north side of the creek in a more naturalistic state of floodplain forest, while maintaining the south-side of the creek in a landscaped open shrub-grass state. Additionally, the University should continue to explore funding for ongoing treatment of invasive exotics and the placement of bird and bat houses within the Conservation Area.

Actions Since 2005

The 2005 management plan for Bartram-Carr woods called for a hybrid mixing characteristics of a more traditional park with those of a managed natural area that also lends itself to use as a teaching resource for class observation. This plan called for more formalized trails, including one that would run from north to south for bicycles and pedestrians. Other improvements envisioned in the plan included the planting of native trees and shrubs, treatment of invasive exotic plants, fencing in the park area on the east, planting of native vegetation along Lake Alice Creek, blocking of unneeded paths (particularly the northern one running parallel to the creek), reduction of mowing and the placement of bird and bat house boxes.

Since that plan many of the envisioned activities/improvements have been completed to help realize this concept through both University (Capital Improvements Trust Fund (CITF) and Tree Mitigation) and grant funding.

- In 2006, the University successfully pursued a grant to treat invasive exotic plants throughout the woods. This treatment was followed up with additional funding from the CITF to retreat areas in 2008. While these exotic plants have been reduced only continued vigilance by the University can hope to keep the woods from returning in a few years to prior infested condition.

- The building of Flexi-pave (recycled tire rubber) trails.
- Rebuild and enhancement of two bridges crossing creeks.
- Informational Kiosk.
- Aluminum fencing around park area on the eastern side.
- Tree planting in the woods and along the creek.
- Creek planting of native vegetation.
- Two pavilions.

The primary activities that have not been completed or have changed include eradication of invasive exotics and replanting with natives along Lake Alice Creek, the reduction of the EH&S parking lot and the placement of bird and bat houses in the woods.

Plantings along Lake Alice Creek

In the early summer a small group of engineering students undertook the planting of native plants along a small portion of the creek. The area had been previously cleared treated for invasive exotics. However, the success of the planting was very limited due to the veracity of the nearby invasive exotics. Future endeavors to irradiate and replant with native along this riparian corridor will require a concentrated effort to weed out invasive as they sprout up or colonize will need to be taken. University efforts to date in all wetland/floodplain areas have had very minimal success with the one exception being the consistent effort by wetland students at Energy Park Pond. The main reason for the success at this Conservation Area appears to be the diligence of the student's ongoing effort.

Reduction of the EH&S parking lot

The reason for this area not being reclaimed was due to the inability of EH&S to find other suitable parking in the vicinity. Fortunately, this parking area is available on weekends for people looking to use the park.

Bird and Bat boxes

The plan to install bird and bat boxes in the Conservation Area is still planned once additional funding is found.

Invasive Plants

Invasive plant management will continue to be a maintenance issue in the woods. In order to address this management issue, University staff will continue to seek funding for treatment eradication and facilitate volunteer efforts such as the City's Air-Potato Round Up.

Maps on the following pages:

1. Aerial Photo
2. Water Resources
3. Natural Communities
4. Soils