University of Florida Conservation Area Land Management Plan

McCarty Woods

Introduction

McCarty Woods is a 2.9-acre Conservation Area located on the northwest corner of Museum Road and Newell Drive. This site contains a disturbed upland hardwood dominated forest, bisected with paths for pedestrians. The primary use of the property has been by academic departments such as Botany Department for plant identification, due to its close proximity to academic buildings, and as a respite for residents of the buildings on the northeast portion of campus, since this is the closest natural area to the older parts of campus.

According to the 2000-2010 Campus Master Plan, McCarty Woods (Preservation Area 18) should be preserved because of its use as a teaching laboratory and research material resource. Additionally, the Master Plan states that these areas would greatly benefit from a restoration program that would remove invasive non-native species, primarily cat-claw vine and cherry laurel, that dominate the understory and replant with native species.

Natural Areas Inventory

Water Resources

McCarty Woods does not contain any permanent water features, but does provide some water resource protection, through recharge to the surficial aquifer and stormwater abatement. These woods are in the Lake Alice watershed, where stormwater is an important issue. The University is interested in exploring ways to incorporate new technologies into sites that will retain and percolate water. In this light, portions on the northern side, adjacent to parking areas should be looked at for potential retention area to treat water coming off the parking lots and streets.

Natural Communities

McCarty Woods is comprised primarily of a mesic / upland-mixed hardwood forest. Generally, 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.

The canopy of McCarty Woods is comprised of laurel and basket oaks, ash, sweet gum, pignut hickory, redbay, basswood and hornbeam. The understory is highly disturbed due to being maintained as lawn until approximately twenty years ago. The current understory is dominated by saplings of cherry laurel with vines of catbriar and skunkvine. Despite the disturbed condition of the understory, several unusual plant species are present, such as guinea-hen weed (*Petiveria alliacea L.*) and baby rouge plant (*Rivina humilis L.*). While neither the Federal Department of Agriculture nor the United States Fish and Wildlife Service lists these plants as endangered or threatened, they are considered rare and unusual by university botanists. McCarty Woods is also the location of several champion trees. According to Dr. Daniel Ward, a National Champion (a national registry, americanforests.org, the largest known specimens of every native and naturalized tree in the United States) one-flowered haw (*Crataegus uniflora Muench.*) is located along the southern edge of the woods. Also found within the woods is a Florida Champion white *ash (Fraxinus americana L.*)(the largest recorded specimen in Florida).

Plant Species

Common canopy trees include *Carya glabra* (Pignut Hickory), *Celtis laevigata* (Sugarberry), *Fraxinus americana* (White Ash), *Liquidambar styraciflua* (Sweetgum), *Prunus caroliniana* (Carolina Laurel Cherry), *Quercus michauxii* (Basket Oak) and *Ulmus alata* (Winged Elm). Also present are *Cercis canadensis* (Eastern Redbud), *Osmanthus americanus* (Wild Olive), *Ostrya virginiana* (Eastern Hophornbeam), *Persea borbonia* (Red Bay), *Prunus umbellata* (Flatwoods Plum), *Quercus hemisphaerica* (Upland Laurel Oak), *Sabal palmetto* (Cabbage Palm) and *Tilia americana* var. *caroliniana* (Carolina Basswood).

The understory is for the most part lacking in diversity, and characterized by a mix of non-native plants and exotics. Native shrubs, vines and herbaceous plants documented include *Bignonia capreolata* (Crossvine), *Callicarpa americana* (American Beautyberry), *Campsis radicans* (Trumpet Creeper), *Clematis catesbyana* (Satincurls), *Cnidoscolus stimulosus* (Tread Softly), *Cynanchum scoparium* (Leafless Swallowwort), *Dioscorea floridana* (Florida Yam), *Erythrina herbacea* (Coralbean), *Ilex vomitoria* (Yaupon), *Ipomoea cordatotriloba* (Tievine), *Oplismenus hirtellus* (Woodsgrass), *Parthenocissus quinquefolia* (Virginia Creeper), *Passiflora lutea* (Yellow Passionflower), *Petiveria alliacea* (Guinea Hen Weed), *Phytolacca americana* var. *rigida* (American Beautyberry), *Ruellia carolinense* (Carolina Wild Petunia), *Sideroxylon languinosum* (Gum Bully), several *Smilax* (Greenbriar) species, *Toxicodendron radicans* (Poison Ivy), *Vernonia gigantea* (Giant Ironweed), *Viola sororia* (Common Blue Violet) and *Vitis rotundifolia* (Muscadine Grape).

A few noteworthy native species were documented in McCarty Woods. These include *Arisaema dracontium* (Greendragon, an uncommon species), *Clematis catesbyana* (Satincurls, an uncommon species), *Dioscorea floridana* (Florida Yam, an uncommon species) and *Rivinia humilis* (Rougeplant).

Invasive Non-Native Plant Species

Current management of the site will need to address the cats-claw vine that dominate the under story of this Conservation Area. Dominate invasive species include *Macfadyena unguis-cati* (Cats-Claw Vine) and *Tradescatia fluminensis* (Wandering Jew). *Ligustrum lucidum* (Glossy Privet) and *Cinnamomum camphora* (Camphortree) were also very common. Also encountered, but in lesser amounts, were the following non-native species: *Ardisia crenata* (Scratchthroat), *Citrus x aurantium* (Sour Orange), *Ehretia acuminata* (Koda wood), *Lantana camara* (Lantana), L*eucaena leucocephala* (White Leadtree), *Melia azedarach* (Chinaberry Tree), and L*everinia buxifolia* (Chinese Boxorange).

Animal Species

McCarty Woods is 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, Black and White Warbler, Brown-headed Cowbird, Blue Jay, Brown Thrasher, Carolina Chickadee, Carolina Wren, Cedar Waxwing, Downy Woodpecker, Eastern Tufted Titmouse, Fish Crow, Great Crested Flycatcher, Gray Catbird, Hermit Thrush, House Finch, Mourning Dove, Northern Cardinal, Northern Mockingbird, Prothonotary Warbler, Red-bellied Woodpecker, Ruby-crowned Kinglet, Red-eyed Vireo, Yellow-bellied Sapsucker, Yellow-rumped Warbler, Brown Anole, Squirrel Tree Frog, Gray Squirrel, and Raccoon.


Paths through McCarty Woods.

Soils Inventory

In general, mesic upland mixed / hardwood forests occur on rolling hills that 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. The topography and clayey soils increase surface water runoff, although this is counterbalanced by the moisture retention properties of clays and by the often thick layer of leaf mulch which helps conserve soil moisture and create decidedly mesic conditions (FNAI).

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

Millhopper 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 Recreational Resources

As stated previously, these woods are important areas for academic departments, due to its close proximity to the academic buildings. However, the understory is heavily disturbed by cat-claw vine that is overtaking the natural diversity of the understory and must be dealt with if these woods are to maintain their usefulness as an outdoor teaching lab for the University. Two basic improvements in the form of a kiosk and picnic tables are present in the woods. There are no known archeological or historic sites within the Park.

Future Improvements

McCarty Woods, due to its small size, upland habitat and central location, is considered foremost as a Nature Park, however it is recognized that the area is also used for plant identification by the

Forestry and Botany Departments. The recommended management approach divides the woods into part Nature Park and part Academic Preserve. Under this scenario the portion of the property adjacent to Newell Drive would be cleared of some understory plants, primarily invasive plants (exotic and native), and turned into a more park-like or an arboretum setting. Meanwhile, the western half of the woods would be partitioned off (block trails, create barriers, off limits signage) for research by various departments. Additional planned land management activities for the Nature Park portion of the site include creating designated footpaths, controlling cat-claw vine, improving understory diversity, preventing vehicular encroachment and identifying University departments willing to participate in regular upkeep and management. Additionally, habitat enhancements like bird and bat boxes and wildlife friendly plantings are recommended.

Actions Since 2005

The 2005 management plan for McCarty 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 and the blocking off of redundant ones. 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, 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 the University's Capital Improvements Trust Fund (CITF) and Tree Mitigation).

- 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.
- Informational Kiosk.
- Native tree planting in the woods and flowering natives around the perimeter.

In 2007, the Natural Areas Subcommittee awarded $5,000 dollars to the Agronomy and Soils Club to undertake restoration effort in the woods. The Club's plan included planting native trees, removing invasive and over abundant native species, and adding an informational kiosk that would address activities related to the clubs goals and classes related to these fields of study. The tree planting called for using small trees and watering them in, until established. The club did a yeoman's job of clearing cherry laurels, blocking off redundant trails, planting of numerous native species and watering during the spring semester of 2008. Once the semester was finished and club members left for the summer, all watering ended. Unfortunately, the months of May and June turned out to be very dry and most, if not all, of the tree seedlings did not survive. The lesson learned from this project is that in these types of restoration efforts, follow through commitments must be firmed up before granting or releasing money. While using a contractor or paid OPS workers would have cost significantly more, the follow-up efforts would have been assured or at least created some accountability.

Benches in McCarty Woods

Maps on the following pages:

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