

# Land Management Journal

What's happening on Volusia County Conservation Lands

Fall 2013

## Land Management Activities — Caring for the Lands

### Timeline of Deep Creek Preserve Prescribed Burn

On August 15, 14 acres were prescribe burned by Land Management staff for site preparation in cooperation with Volusia County Fire Services. This will promote healthy ground cover before reforestation of pine seedlings.



Each prescribed fire has a detailed plan called a prescription, authorized by the Florida Forestry Service. This prescription includes the parameters of weather conditions under which the burn can take place, including: surface winds, transport winds, minimum mixing height, dispersion index, temperature range, minimum relative humidity, rate of spread and burn technique. Each burn has a burn manager who supervises the crew and equipment and monitors the fire. If the fire gets out of prescription parameters he/she shuts down the fire. **Before ignition, there is a briefing with the fire crew.** "One of the most important reasons for the pre-burn briefing is to make sure everybody stays safe," says Ernie McLaughlin, burn manager for this burn.



A test fire is done before the burn to test the weather parameters and fire behavior. If conditions are favorable the burn boss gives the okay to continue ignition.



Fire lines are pulled for ignition using a drip torch. Ignition patterns and timing are selected in regard to ongoing weather conditions and ecological objectives. Due to intense summer heat, the fire crew alternated ignition. Volusia Co. Firefighters assisted on the burn.



Advanced by the wind, the fire moves from the fire line (where fire is applied) into unburned vegetation (fuel). It burns to a blackened area. Then another fire line is pulled. This sequence is continue until the entire plot has been burned.



Proper equipment is vital to have on site during a burn. The tractor plow unit is strategically placed in case of spot over fires.



Staff monitors the burn site **in the days afterward.** "The burn was a success, the objectives were met," said Stuart Jones, Land Manager.



"Public education about the practice and benefits of prescribed fire is important in keeping this land management tool available for our **natural lands,**" said Danielle Ivey, Environmental Specialist, as she discussed the fire with Deep Creek Preserve Eco-buggy Tour participants.

## Flatwoods Restoration

200,000 longleaf pine seedlings were planted on approximately 271 acres on Lake George Management Area and Deep Creek Preserve. Some of this acreage was burned in the 1998 fires and the trees were not replanted, other areas were planted in slash pine by previous owners, which did not match the native soil type. Before this area was used for timber production, the natural canopy was longleaf pine. One of the goals of Land Management flatwoods restoration is to match the species of pine that grew naturally on the soil type. **"These planted trees will re-establish longleaf as the dominant overstory species on these sites,"** said Nick Dunnam, Land Management Forester.



Planting areas were prepared by roller chopping and burning. Year old longleaf pine seedlings were planted using a tractor-pulled machine which is calibrated for proper tree depth and spacing. The machine parts the soil, then a worker riding onboard places seedlings in turning cradle wheel which deposits the seedling in the trench. Two angled wheels then pack the soil around the seedling roots.



Seedlings stay close to the ground in a "grass stage" for 1-5 years then bolt up several feet and branch out. Young longleaf pines store nutrients and are protected from fire during this grass stage by the thick tuft of needles shielding the growing bud.

## Doris Leeper Spruce Creek Preserve Scrub Restoration

As part of the ongoing scrub restoration project at Doris Leeper Spruce Creek Preserve— Martin's Dairy Road and Turnbull Bay Estates sites, 20 acres were burned by prescription by Land Management staff. The two sites were previously chopped to reduce the vegetative fuel so that it could be burned safely. These treatments will help restore scrub habitat for scrub specific flora and fauna. Two scrub jays have been observed in the Martin's Dairy area. **"Due to development, Florida scrub is an imperiled natural community. Without restoration efforts it won't be here for future generations,"** said Richard Harris, Environmental Specialist.



## BioBlitz

The Amateur Entomologists' Society defines a BioBlitz as an intense period of biological surveying in an attempt to record all the living species within a designated area. Groups of scientists, naturalists and volunteers conduct an intensive field study over a short period, usually 24 hours.



The first BioBlitz was conducted in 1996 at the Kenilworth Aquatic Gardens in Washington D.C. The concept was rapidly accepted and has spread across the globe. Often these events incorporate a large volunteer base to collect the species and are used to educate the general public in the importance of biodiversity.

Volusia County Land Management began "mini" BioBlitzes in April. They are held once a month at one of the many conservation areas the County manages. Along with Land Management, Environmental Management staff and private citizens, other local experts from various groups, including the Florida Native Plant Society, Stetson University, the Florida Extension Service, and the Florida Division of Plant Industry have supported Volusia County in these endeavors. Expert participants are loosely assigned different areas of a given property for a 4-hour time frame where they identify and record species or take samples for identification. To date, 552 plants and 311 animals have been identified including 29 listed plants and 22 listed animals.

While most of staff and volunteer efforts have concentrated on plants, we are expanding into frogs, and insects. We hope that this program will expand into other groups of species as new experts donate their time and knowledge.



## Battling Invasive Non-native Plants

The battle against invasive, non-native plants on the conservation lands is ongoing. Removal by hand or machine and herbicide treatments are the weapons. Cogongrass, *Imperata cylindrica*, is listed as a Class I invasive plant from Southeast Asia by the Florida Exotic Plant Pest Council. Land Management treats cogon areas as they are discovered. It spreads rapidly by underground rhizomes and seed and crowds out native flora, taking over the habitat. Cogongrass is also highly flammable and can change the effects of prescribed fire by making it advance faster than it would normally. Unfortunately, burning stimulates its growth which complicates the battle.



## Monitoring for Infestations



Foresters intensely monitor pine trees after a wildfire for Bark Beetles, *Ips spp.*, which burrow into the bark of stressed pines to lay their eggs. The larva girdle the tree by chewing tunnels in the tree cambium layer. This cuts off the food and water pathways up and down the tree. The first evidence of bark beetles are pitch tubes. These globules of tree sap are a defense mechanism by the tree to fill the larval tubes and protect itself. Unfortunately, the tree cannot produce enough sap to defend against a large infestation of beetles and the tree dies within a month or two.



## Ongoing Maintenance—Work Behind the Scenes

Mowing roads and trails, adding fire lines, disking permanent fire lines, road repair and maintenance and trail maintenance, fence and gate repairs, boundary-line identification and marking, vandalism repairs and safeguarding wetlands from off road vehicle damage are ongoing tasks on the conservation lands. Many types of heavy equipment are used by Land Management Environmental Technicians to fulfill these needs.



## Bears on the Lands



This bear was photographed at Deep Creek Preserve. The Preserve's 8,000 acres are excellent habitat for Florida black bear. Adult bears and cubs or their signs (tracks and scat) have been observed at Lake George WMA, Deep Creek Preserve, Longleaf Pine Preserve, Wiregrass Prairie Preserve, Scrub Oak Preserve, Lake Beresford Park and the latest sign (tracks) was at Lyonia Preserve.

### COOL CRITTERS

Shoreline Fishing Spider *Dolomedes triton*

Spiders fishing the shoreline of a Longleaf Pine Preserve wetland at night. Darker female is on the left, lighter-colored male on the right (note enlarged palps.)



### WHAT'S BLOOMING

Goldenrod *Solidago spp*

White Peacock butterflies sip nectar from Goldenrod at Deep Creek Preserve. Goldenrod is a sign of fall— Florida calendar fall, not temperature Fall.



## Volunteers in the Woods — Working, Experiencing, Learning

### Cutting Trees for Scrub Jays

Scrub restoration is the goal at Scrub Oak Preserve, DeLand, and a hard-working crew of volunteers assisted by cutting hundreds of sand pine seedlings with pruners. This helps maintain habitat for scrub jays and other scrub specific flora and fauna. Our efforts have been successful, as several scrub jays have been observed on site.



Wells Fargo Bank employees also assisted with scrub maintenance by cutting sand pines at Lyonia Preserve. Hundred of pines were cut to keep habitat low with few tall trees. Scrub jays observed us as we worked.



*Thank you!*

### Jay Watch Citizen Science Program



*Thank you!*

Jay Watch Program Volunteers braved the summer heat to count Florida scrub jays. For the seventh year, groups of trained volunteers went to 75 designated points at Lyonia Preserve, Scrub Oak Preserve and Doris Leeper

Spruce Creek Preserve to count and record the number of adult and juvenile jays. This citizen science program, sponsored by Florida Audubon, yields scrub jay population and reproductive data and family group information which is valuable to Volusia County Land Management in scrub maintenance activities. Thank you, Jay Watchers, for contributing your time, energy and enthusiasm to help this federally threatened species.



### American Heritage Girl Project

Kaylyn Lunquist completed her Stars and Stripes Award American Heritage Girls Project at Deep Creek Preserve. She researched, planned the design, and constructed plant identification signs for the trail head. This is the highest award given by the American Heritage Girls Organization and she is the first local member to achieve it. She organized a crew of 25 girls and boys to help on project day.

*Thank you!*





## Outreach Program — Adventures on the Conservation Lands

Joel Wooster, The Mollusk Man, led an exploratory shoreline hike at Smyrna Dunes Park observing and discussing the critters of the shoreline, the tracks they leave and the beautiful shells they create. Over eleven species were observed, including shark eye, ghost crab, and the shells and remains of many more.



Lake Helen Blake School Summer Campers and their teachers braved the July heat for an eco-buggy field trip at Longleaf Pine Preserve. They experienced some cool critters and plants on the site and observed tracks of the wildlife that had recently traveled through.



In an effort to expand their observation skills on future hikes, home school students explored the natural world using the right side of their brains on an Observation Scavenger Hunt at Lake Beresford Park. After collecting specimens of abstract shapes, textures and colors they created hiking figures using their specimens. Upcoming classes: Dead Log Condos, Venomous Snake Walking Sticks.



On an 11-mile Green Spring-Rails to Trails Bike About, bikers experienced the natural world by pedal power on wheels. Two gopher tortoises feeding along the trail watched them pass.



Naturalists Randy Snyder and Mary Keim enlightened hikers about the wonders of butterfly identification and biology on a Butterfly Hike at Longleaf Pine Preserve. Nine species of butterflies and 4 species of dragonflies were observed on the trip.



The eco-buggy was full of interested visitors on a tour of Longleaf Pine Preserve, including Ben Friday, a 96 year old Florida native. An amazing man, Ben celebrated his 80th birthday by walking across Florida, 145 miles, from N. Peninsula State Park through the Ocala National Forest to Yankee Town on the Gulf of Mexico. Sad news—Ben passed away October 3, 2013.



### Want to join us on an outdoor adventure?

Volusia County is blessed with diverse conservation lands and we encourage you to experience and explore them. The trails are open during daylight hours for hiking, biking and horseback riding. Land Management Outreach Program has a variety of free outdoor events every month to entice you out into natural Florida—the real Florida. These include: guided hikes, eco-buggy tours, Bike Abouts, Outdoor Learning Adventures lead by local guest experts and student field trips and volunteer projects. Email [bcary@volusia.org](mailto:bcary@volusia.org) if you'd like to be added to our email contact list of events.

