



U.S. Fish & Wildlife Service

# Southeast Region

## Southeastern Currents

APRIL 2010 NEWSLETTER

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### Climate change activities in eastern North Carolina

Certainly, the buzz in the environmental community all over the country is about climate change these days. A big indicator as to the national, state, and local interest level for us is how many invitations Project Leader Mike Bryant, Refuge Biologist Dennis Stewart, and Climate Change Adaptation Project Director Brian Boutin receive and how far-reaching are the locations and diverse are the groups from which the invitations come. Bryant explained, "I've just started having to say no to many of the requests. If I spoke to every group that invited me, it would be a full-time job."

So, why all the interest in these North Carolina-based individuals? Most likely, it's because everybody's been talking about climate change.... Sort of like Chicken Little... but very few folks are actually trying to do something on the ground to address climate change. In eastern North Carolina, we're not simply running around yelling "The sky is falling." We're trying to measure how quickly it's falling and figure ways to keep life going on in the mist of all the heavenly drop-ins.



A May 4 field trip is planned for several dignitaries to visit the project site. This trip will include the unveiling of an interpretive sign that will explain the project and will be the official unveiling of the Point Peter Road demonstration project. Pictured above, Duke Energy CEO Jim Rogers and The Nature Conservancy's Board of Directors Chair Alex Bommhardt with sign that will be erected at refuge study site. Photo courtesy of The Nature Conservancy - Debbie Crane.



A hearty tree-planting crew began work in what many would consider "less than desirable" working conditions. Photo courtesy of The Nature Conservancy - Debbie Crane.

Because, indeed, the sky is falling!

How to manage wildlife habitat in the face of climate change is brand new ground for all of us. The reality is that sea levels are going to rise and low-lying land is going to disappear under water in eastern North Carolina. And, it's going to happen sooner, as opposed to later. Realizing that a vast majority of the acreage comprising Alligator River National Wildlife Refuge will be under water in the next 100 to 150 years made this refuge a prime candidate for study. An area adjacent to Point Peter Road on the east side of the refuge was selected as a great place to start. The Nature Conservancy and refuge jointly planned a project to move forward and actually try some management actions in an effort "buy some time" for wildlife and their habitats to adapt to the rapidly changing environments. An initial one-million-dollar grant from Duke Energy started the project. Since then, Boutin has coordinated other grants and partnerships to grow the project and its impact.

During the week of March 15, 2010, Carolina Silvics, Inc., planted 11,500 bald cypress, 2,000 black gum, and 6,750 pond pine over 40 acres. Boutin said, "We are finalizing the contract with Total Marine Services, Inc., for the Point Peter oyster reef and hope to begin construction the first week or two in April."

Some of the planted trees will be more salt-tolerant than the existing trees, hopefully slowing the transition of forested wetlands to salt marsh. The oyster reef is expected to slow erosion of the

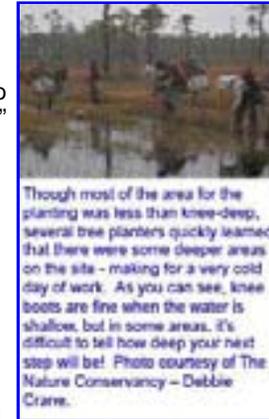
shoreline, improve near-shore aquatic habitat for fish, and sequester carbon. Monitoring hydrology, water quality, and plant community parameters for response to management actions is an important component of the overall project. Knowledge gained from this initial project will be used to develop adaptive management strategies elsewhere on the refuge and, if applicable, other locations in the region or nation.

Stewart and Boutin are working with the U.S. Army Corps of Engineers, the North Carolina Division of Water Quality, and the North Carolina Division of Coastal Management to get the required permits to install water control structures that would prevent the jetting of salt water up the canals and into these freshwater systems during high tide events. Refuge staff people will install the water control structures and associated culverts.

Boutin continued, "In addition to these activities, I have applied for funding from the Albemarle-Pamlico National Estuary Program, part of EPA, to restore marsh functionality to the abandoned waterfowl impoundment at the end of Point Peter Road. This would entail installing a small ditch plug, eradicating the Phragmites using chemical treatment, and constructing a 100-foot shell bag oyster reef. We will also continue collecting baseline data including water quality, estuarine faunal composition, water flows, etc."

Several interns will be joining the project soon, providing additional help and learning about one of the hottest issues among conservationists today. The Service has funded a 24-week intern through the Student Conservation Association. In addition, Boutin has two interns confirmed so far. One is coming from Duke University as part of the Stanback internship program and the other is from Warren-Wilson College in Asheville, North Carolina.

So, where has this project information been shared? Bryant said, "The outreach efforts thus far include presentations to a Conservation Leadership Forum at the National Conservation Training Center (NCTC), to the North American Wetlands Conservation Act Board at NCTC, at the Refuge Chiefs Meeting in Charleston, South Carolina, at The Wildlife Society Conference in Monterrey, California, and at the Southeast Association of Fish and Wildlife Agencies' meeting in Atlanta, Georgia. The interest in the project is high, and we are reminded each time we present it that it's one of the few examples of anyone trying to put on-the-ground the adaptation strategies that are being suggested in various forums."



Through most of the area for the planting was less than knee-deep, several tree planters quickly learned that there were some deeper areas on the site - making for a very cold day of work. As you can see, knee boots are fine when the water is shallow, but in some areas, it's difficult to tell how deep your next step will be! Photo courtesy of The Nature Conservancy - Debbie Crane.

"The real value will come from what we learn through monitoring the results," continued Bryant. "How many of which species of trees survive and grow? Did the oyster reef slow erosion, increase biodiversity, and sequester carbon? Does the water control structure slow the intrusion of salt water into the interior landscape, help restore the sheet flow hydrology, and improve water quality? These questions and others will likely get answered in a science-based way which will allow us to make better decisions in future - a future that will be dominated by change."

To follow the progress of this project, visit <http://www.nature.org/wherewework/northamerica/states/northcarolina/>

*Submitted by Bonnie Strawser, Alligator River National Wildlife Refuge Complex, Manteo, North Carolina*

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## ***Behind the Scenes--***

**Spring Break - refuge style**

Tom MacKenzie at three sisters springs, crystal river, 8 Mar 9 2010 with his wife Charmaine MacKenzie taken by USFWS volunteer Joe MacKenzie

It was one of those Spring Breaks that will live in our family for years to come.

It started out as a recon mission (as in exploratory road trip). We needed to check out our daughter Jesse's internship this summer at the Clinic for the Rehabilitation of Wildlife (CROW) in Sanibel, Florida. But, we decided to yank our son Joe out of high school to join us for a little road trip that would include doing some great birding at J.N. "Ding" Darling National Wildlife Refuge (NWR), and swimming with manatees at Three Sisters Springs -- near Crystal River NWR, Florida.

"Ding" was so wonderful! About 120 miles south of Tampa, it is truly a jewel of the South. To really take time along its wildlife drive and talk with the many other birders was a real experience to be savored. Our family of four checked off about 25 species in a few hours, not counting fish! Listening in to the organized bird tour at one of the stops taught me more than a thing or two. I will probably vote for that on our next visit once my daughter starts the internship this summer in her quest to become a veterinarian.

We also visited CROW's visitor center, right across the street from the school by "Ding" Darling NWR. It was a very nice new facility with tons of information on the 4,000 wildlife patients they treat each year. They don't allow the patients visitors, however, in respect of their privacy. The staff is really a great group of folks.

Then, northward, about an hour and a half north of Tampa!

Three Sisters Springs was fantastic!

As a candidate to be a National Wildlife Refuge, these stunningly beautiful springs were chocked full 20 to 30 magnificent manatees, sleeping, resting, and doing whatever manatees do during spring break. Undeterred by the plethora of snorkelers and kayakers, the manatees glided through the shallow, clear water without ripple.

The people there were extremely respectful and followed the etiquette rules quite well. I only had to ask one novice snorkeler to stop slapping his fins on the surface, which could bother these gentle giants.

So is that all I could think of doing on my annual leave time -- going to more refuges? Well why not? This time, I didn't have to run around setting up media for the Secretary, and could just enjoy the splendor of our fantastic refuges. What a treat! Hope you all can make the most of your Spring Break in similar fashion at our other great refuges!

Special thanks to Toni Westland at Ding, and Ivan Vicente at Chassahowitzka NWR. More photos in [Photo Album](#).



Manatees and snorkelers at three sisters springs, crystal river, 8 Mar 9 2010 taken by USFWS Tom MacKenzie

*Submitted by Tom MacKenzie, External Affairs, Atlanta, Georgia*

## Bragging Rights --



Wolf Creek National Fish Hatchery team member Alan Kimbler braves the chilly raceway waters to help prepare a load of trout for transfer to the Cherokee Tribal Hatchery. Photo by Amanda Patrick, FWS.

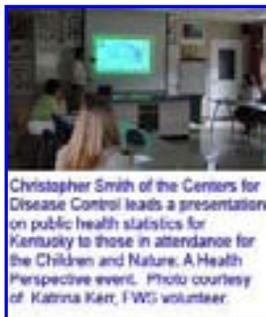
### Wolf Creek National Fish Hatchery supports Eastern Band of Cherokees in North Carolina

To help fulfill the Service's obligations to the Eastern Band of Cherokees, Wolf Creek National Fish Hatchery provided 8,025 brown trout to support recreational fishing programs on Cherokee tribal lands in North Carolina. Each fish was about seven inches in length. Wolf Creek typically provides fish to the tribe a couple of times a year and assists the Tribe with outreach activities by participating in its annual kids fishing derby/festival.

*Submitted by Amanda Patrick, Wolf Creek National Fish Hatchery, Jamestown, Kentucky*



To follow the disease classification policy and prevent the spread of fish pathogens from one hatchery to another, the transfer of fish must be done offsite. Photo by Amanda Patrick, FWS.



Christopher Smith of the Centers for Disease Control leads a presentation on public health statistics for Kentucky to those in attendance for the Children and Nature: A Health Perspective event. Photo courtesy of Katrina Kerr, FWS volunteer.

### Wolf Creek National Fish Hatchery hosts Children and the Environment Conference

In February, Wolf Creek National Fish Hatchery hosted a half-day conference, geared specifically toward healthcare professionals, to discuss the movement and importance of reconnecting children with nature, particularly in regards to health benefits. Focusing on empowering healthcare professionals in the local surrounding area, the event drew a variety of attendees, including physicians and nurse practitioners. The meeting consisted of several different presentations followed by a panel question and answer session. During the panel, participants enjoyed a catered luncheon, provided by the Friends of Wolf Creek National Fish Hatchery, Inc. Participants also received packets of information. Materials included fact sheets, a suggested reading list, and "Let's Go Outside" Rx pads.

Featured speakers during the conference included the following: Christopher Smith, Centers for Disease Control; Tracy Aaron, Cumberland District Health Department; Jenny Howard, Division for Water, Kentucky Department for Environmental Protection; Roberta Burnes, Division for Air Quality, Kentucky Department for Environmental Protection; Dr. Christine Weyman, Lake Cumberland District Health Department; and Amanda Patrick, Wolf Creek National Fish Hatchery. More than 15 individuals attended the forum, and as Wolf Creek continues to play a role in planning such meetings, new momentum was generated to help continue encouraging and spreading the effort across the state.

*Submitted by Amanda Patrick, Wolf Creek National Fish Hatchery, Jamestown, Kentucky*

### Celebrating Black History Month

On March 4, several employees participated in the Black History Month celebration in the Regional Office. Refugees sponsored the event and invited motivational speaker and author of six best-selling books, Ola Joseph.

Before introducing the special guest, Kary Allen, Diversity and Civil Rights Chief, kicked off the event by reflecting upon the 2010 theme, "The History of Black Economic Empowerment." Ola Joseph opened his presentation by sharing his personal experience of relocating from Africa to the United States with less than \$100 in his pocket and how education helped him overcome the personal challenges he faced in becoming empowered. Joseph then gave a very compelling presentation about diversity and how important it is for individuals to embrace one another's uniqueness.

Through personal examples and interactive exercises, he helped participants understand the components of diversity and how important it is for an organization to utilize each employee to his or her full potential. One of the examples he used to describe diversity was that "We are like a salad. Each ingredient, such as the lettuce, tomatoes, carrots and chicken enhance the look and taste of the salad. Each component loses what makes it unique if it were blended together." To learn more about speaker, Ola Joseph visit: <http://www.olayinka.com/>.



In addition to our guest speaker, employees were able to enjoy the display of black history memorabilia, provided by Stanley Marion from the Human Capital office. The display included books and magazines he has collected, including Life magazine issues from the 1950s and 1960s and a book signed by the some of the Tuskegee Airmen.

Thanks to Rick Huffines and Ruth Benson of Refugees for providing employees with an inspiring and memorable Black History Month Celebration.

*Submitted by Shari Brewer, Diversity and Civil Rights, Atlanta, Georgia*

### Careers Come Naturally for Sewee Earth Stewards

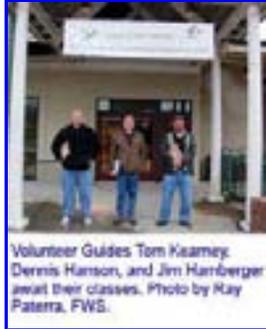
On Tuesday March 2, through Thursday March 4, the Sewee Visitor and Environmental Education Center played host to the annual Careers Come Naturally event. Careers Come Naturally is the culmination of a nine-week conservation education program for fifth grade students known as the Sewee Earth Stewards Program. The Careers event introduces the students to possible career opportunities available in the areas of forestry, wildlife, and other environmental sciences.

Over the three days, 261 fifth graders and 15 teachers and chaperones from the following elementary schools were able to be a part of this unique program: Belle Hall, McDonald, St. James Santee, Stono Park, and Sullivan's Island. Throughout the event, the students heard exciting, hands-on presentations from the following agencies: U.S. Forest Service, U. S. Fish and Wildlife Service, South Carolina State Parks, National Oceanic and Atmospheric Administration, and the City of Charleston Environmental Education Department.

Students learned about various tools of the trade as presenters offered simulated activities depicting a day on the job for a forester, interpretive park ranger, environmental educator, and biologist. Using binoculars, students conducted a waterfowl survey; identified phytoplankton under an electron microscope; donned forester gear and learned how to measure and care for trees; and learned



how live reptiles and even animal skulls and other parts are used to teach others about animals and their habitats.



Volunteer Guides Tom Kearney, Dennis Hanson, and Jim Hamberger await their classes. Photo by Kay Paterra, FWS.

Classes also participated in the Careers Quiz Bowl and each student left with a gift bag filled with materials generously provided by each of the participating agencies. Also, each class was given a Butterfly Pavilion which will allow students to watch the metamorphosis of the insect in the classroom.

A special thank you goes to the Berkley Electric Cooperative for their continued support of Careers Come Naturally by providing tables and chairs for the event. Also, the Center's staff thanks the Sewee Center and Cape Romain Refuge volunteers who served as guides for the different classes throughout their day at the Visitor Center.

*Submitted by Tom Kearney, Volunteer, Sewee Visitor and Environmental Education Center, Awendaw, South Carolina*

### **An Everglades adventure: Tracking the Florida panther**

I remember studying a map of Florida as a child and being intrigued by the Everglades. Fast forward a few decades to February 2010: I'm on a swamp buggy stuck in a deep slough in the heart of Big Cypress National Preserve. Luckily, a cabbage palm was within cable distance of the winch, and soon we were on our way.

We'd traveled about one hour by truck and another by buggy to reach a male panther treed by the renowned animal tracker Roy McBride, two of his grandsons, and half a dozen hounds. As the buggy drew closer we heard the hounds.

Soon, thick vegetation closed in on us and we continued on foot. We went slowly and stayed back so as not to spook the cat. He was in a live oak tree. It was hard to see him through the foliage. A tranquilizer dart was fired and hit its mark. The vet started the countdown.

I was awed by the huge, golden-haired panther with a red-ended dart in his haunches looking down at us and the dogs. After about six minutes he tumbled into the capture net. He was not entirely asleep, and I was caught in a mash of arms, legs and stomping feet as people scrambled to hold him in place. After an injection in his flank, he was still. Everyone else on the team was a seasoned professional and quickly started the work up.

I removed ticks for analyses and took his temperature. The vet drew blood, tested for feline leukemia virus, etc. Florida Fish and Wildlife Conservation Commission staff scanned for tags. They also checked for a cowlick, kinked tail, and undescended testicles— inbreeding characteristics. This panther had been tagged as a kitten. He was about 2.5 years old and weighed 122 pounds. Both ears were tattooed and he was fitted with a dual VHS/GPS radio collar. The vet stayed with the cat to watch him recover.

The next morning, Roy called. They'd treed a female. In 20 minutes, we were in Big Cypress... 150 yards from the tree. She was high in a dead pine, artfully balanced, watching the dogs—her long, black-tipped tail swinging softly in the breeze. We filled the crash bag with air and prepared for darting.

Once she was darted, we moved closer and waited below with the net and crash bag. She succumbed to the drug and slipped down the tree a bit before falling safely onto the net and crash bag.



Chris Beiden and Dana Hartley of the South Florida Ecological Services Office strike a careful pose with a sedated Florida panther. Photo courtesy of Mark Lotz, Florida Fish and Wildlife Conservation Commission.

The crew began the work up. This cat hadn't been previously tagged. She weighed 84 pounds and was about two years old. There was an abscess on her right cheek, which the vet attended to. Afterwards, she was carried deeper into the bush to recover. I watched as she slowly came to, attempting to stand. The vet gave the signal that all was OK, and we tiptoed away.

I was lucky to witness two captures in two days. Apparently that has never happened in the history of bringing guests along.

Where I used to live, in Massachusetts, mountain lions disappeared in the mid-1800s. I'm fortunate to be one of the few who have seen majestic Florida panthers in the remote lands they need to survive. I'm thrilled to work where there are still wild areas to explore and wild animals to protect.

I'd like to thank our Florida Panther Coordinator Chris Belden and the capture team, and our Field Supervisor Paul Souza, who had to back out at the last minute—allowing me the opportunity to go on this once-in-a-lifetime adventure.

*Submitted by Dana Hartley, South Florida Ecological Services Office, Vero Beach, Florida*



New "green" entrance signs for Pea Island National Wildlife Refuge are designed to withstand hurricane-force winds and to handle the corrosive barrier island environment. Photo by Bonnie Strawser, FWS.

#### **Pea Island gets "green" entrance signs**

Last year, Pea Island received Visitor Facilities Enhancement funds to replace the refuge entrance signs. Usually, replacing refuge entrance signs is no big deal. But, when the refuge is a barrier island with typical barrier island dynamics, the issues grow. This time, we decided to make the extra effort to get signs that would be visible, effective, durable, attractive, and "green!"

The refuge contracted through GSA with Wilderness Graphics, Inc., to design, engineer, and install the new entrance signs. The scope of work made the task a bit out-of-the-ordinary for a refuge entrance sign contract. We required signs that are engineered for hurricane-force winds, would withstand the corrosive elements of the barrier island environment, and were made primarily from recycled materials.

The results are simply outstanding! The new signs, erected last week, are made from 100 percent recycled plastics (mostly soda bottles). Because the plank material (tongue and groove two-inch by six-inch planks) will not hold paint or glue of any sort, lettering became a challenge. Individual letters on the sign are stainless steel, each attached to the "wood" with stainless steel bolts. The sign base is constructed of 12-foot salt-treated pilings, each sunk into the ground 12 to 14 feet. The FWS emblems are 24-inch porcelain enamel.

The signs are 6-feet by 12-feet and, for the first time in recent history, provide a visible, attractive welcome to Pea Island National Wildlife Refuge.

*Submitted by Bonnie Strawser, Alligator River National Wildlife Refuge Complex, Manteo, North Carolina*

### Savannah National Wildlife Refuge celebrates Visitor Center opening

Staff and volunteers welcomed more than 260 guests to the grand opening of Savannah's Visitor Center and Headquarters on Saturday, March 6, 2010. The center, which features an information desk, exhibit hall, auditorium for viewing an 11-minute refuge video, and a friends group-operated nature store, was officially opened to the public on Monday, March 8.

The grand opening event kicked off with a ribbon-cutting ceremony featuring several guest speakers, including Peter Stangel of the National Fish and Wildlife Foundation, Deputy Regional Director Mark Musaus, Helen Tapp of the Trust for Public Land, and Jane Lyder, deputy assistant secretary for Fish and Wildlife and Parks within the Department of Interior. Congressman Joe Wilson of South Carolina also sent an aide to read a leader from the Congressman in his absence. Recently retired Supervisory Ranger Patricia Metz, who poured her heart and soul into the development of the Visitor Center, performed the official ribbon-cutting. Afterward, guests were free to tour the Visitor Center and participate in a number of special activities, such as nature walks around the visitor center and trolley tours of the wildlife drive.



Ribbon-cutting. Photo by Garry Tucker, FWS.

The Visitor Center is located on U.S. Hwy 17, Jasper County, South Carolina, approximately six miles north of the city of Savannah, Georgia, and seven miles south of Hardeeville, South Carolina. It is open to the public Monday through Saturday, 9:00 a.m. until 4:30 p.m. More photos in [Photo Album](#).

*Submitted by Amy Ochoa, Savannah Coastal Refuges Complex, Hardeeville, South Carolina*



Steve Glass at his computer. Photo by Ken Warren, FWS.

### GIS technology helps nab lobster poachers

Steve Glass never spent a moment in court, but he used geographic information system (GIS) technology to develop products that emerged as evidence in joint law enforcement campaigns dubbed Operations Frost Bite and Freezer Burn that helped bring down two illegal lobster harvesting rings in south Florida.

From late 2008 through late 2009, Steve -- a Fish and Wildlife GIS specialist in the South Florida Ecological Services Office -- used Global Positioning System (GPS) data to provide maps to investigators from the Service, National Oceanographic and Atmospheric Administration, and others that helped them pinpoint over 800 sites in the waters of the White Heron National Wildlife Refuge and Florida Keys National Marine Sanctuary (FKNMS) where these poachers had placed illegal artificial habitats that attracted spiny lobsters.

According to the U.S. Attorney, Southern District of Florida, FKNMS regulations prohibit any alterations of, or construction on the seabed of the sanctuary. Also, the Florida Administrative Code prohibits anyone from harvesting spiny lobsters from artificial habitats.

GPS is a space-based satellite constellation that broadcasts signals GPS receivers use to provide three-dimensional location (latitude, longitude and altitude), plus precise time. Steve was asked to help after the investigators seized GPS receivers from the poachers' vessels.

"They didn't have any GIS support whatsoever and were preparing to go in front of judges. They needed someone to plot the data and make the displays needed to show exactly when and where the poachers had been and how fast they got there," Steve said.

In addition to confiscating GPS receivers from these boats, the investigators had also covertly placed GPS tracking devices on

other boats. Steve used the GPS data to determine and analyze when, where and how fast the poachers traveled with the precision only provided by GPS systems. Next, he produced maps showing the routes they took and where the artificial habitats likely were. "I'd never worked with GPS data in this context before. I thought it was very exciting," Steve said.

In Operation Frost Bite, Steve's support led to the convictions of two poachers involved in the illegal harvest of more than 8,500 spiny lobsters over a six-month period beginning in the summer of 2008.

In Operation Freezer Burn, Steve's efforts contributed to the convictions of six poachers who harvested 922 whole lobsters as part of a ring that illegally took 1,197 lobsters on the opening day of Florida's commercial lobster season in August 2008 and stockpiled about 1,700 pounds of wrung lobster tail harvested during the closed season.

David Pharo, a special agent with the Service involved in the operations said, "These multi-layer and multi-graphic displays were critical for determining where underwater evidence was probably located, so our dive operations could be conducted in an effective and efficient manner to recover and document the evidence."

Steve usually draws up maps to help his colleagues plot wildlife habitats and/or study the movements of imperiled species. "I enjoy what I do, but I often create maps using GIS technology and don't see such dramatic, tangible results. This was different. This time, there were convictions and the stoppage of activities that were negatively impacting wildlife and their habitat," said Steve, who worked with investigators through the inquiry providing updated information, as needed.

"If not for Steve's efforts, the evidence needed to bring eight poachers to justice wouldn't have been possible," said Special Agent Pharo.

*Submitted by Ken Warren, South Florida Ecological Services Field Office, Vero Beach, Florida*

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### **Boy Scout troop clears Warm Springs nature Trail**

On February 27, the White Oak Pack 50 of the Flint River Boy Scout Council participated in a clean-up of Warm Springs National Fish Hatchery's nature trail. The one-mile nature trail was canvassed by the group to clear the trail of limbs and debris, while some members installed directional markers outlining the trail. The excited and energetic group enjoyed the crisp, cool weather and observed many wildlife species along the way. Possible future projects for the Scouts were noted, such as putting larger rocks or foot bridges over streams or drainage wetland areas. Pack leaders expressed interest in a long-term partnership with the Friends of the Warm Springs National Fish Hatchery to participate in upcoming projects or special events.



White Oak Pack 50 of the Boy Scouts. Photo by Rosla Plant, FWS.

*Submitted by Rosla Plant, Warm Springs National Fish Hatchery, Georgia*

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### **South Florida students and scientists explore ways to save the planet**



Looking for apple snails. Photo by David Underwood, FWS.

On Tuesday, March 23, students from Forest Hill High School in Palm Beach County, together with scientists from Arthur R. Marshall Loxahatchee National Wildlife Refuge (NWR), joined 350 students and other scientists at 29 locations throughout South Florida for the eighth annual Environmental Immersion Day (EID) event. Teams of students worked hands-on with environmentalists, biologists, ecologist/GIS, and researchers in laboratories and natural areas exploring ways to save the planet. The event is considered one of Fairchild Tropical Botanic Garden's (FTBG) top annual events.

The students from 33 public and private high schools joined researchers at nature centers, labs, parks, botanical gardens, and marine science centers.

In addition to watching the pros at work, the students at Loxahatchee National Wildlife Refuge participated by taking water samples, evaluating the chemical composition of the samples, and studying native apple snail habits, all of which are indicators of the water quality within the refuge.

"This is a great opportunity for students to work with professionals in the natural resource field. The experience will bolster their connection with nature which may lead to a lifelong biological career," Refuge Manager Sylvia Pelizza said.

Currently in its eighth year of existence, the Fairchild Challenge is quickly growing to become one of the world's most comprehensive and influential youth environmental education programs.

Arthur R. Marshall Loxahatchee National Wildlife refuge and Fairchild Tropical Botanic Garden, both seek to reconnect America's youths with nature and instill life-long environmental awareness and stewardship in students.



Placing a net into the impoundment. Photo by David Underwood, FWS.

*Submitted by David Underwood, Loxahatchee National Wildlife Refuge, Boynton Beach Florida*



A young firefighter tries out the hose. FWS Photo.

### **Alligators, bears and fire: Oh my - It's Swamp Safari 2010**

Upon first glance, alligators, fire trucks, karaoke, boat rides and children don't have much in common. That is, they don't have much in common until you experience a Louisiana Swamp Safari! The Bayou Lacombe Centre, headquarters of the Southeast Louisiana Wildlife Refuges Complex (SELA), recently hosted its annual Swamp Safari for physically and mentally challenged students. The goal of the Safari is to get students outside while learning about the local ecosystem and wildlife. At this year's event, more than 300 students participated over four days.

Students rotated through six stations focused on various swamp-related activities. The Swamp Bear Maze gave students a chance to act like a bear by foraging for food, dodging "cars" while crossing a roadway, and denning down for a long winter's sleep. Students had a chance to view some swamp animals up close at the Gator Man and Swamp Critters stations. SELA Park Ranger Jody DeMeyere gave the kids firefighter gear at the Swamp Fire station before leading them on an obstacle course designed to muscles on these future firefighter's bodies. The students really got a kick out of spraying a real fire hose at a pretend fire. Karaoke added to the fun level when high school and middle school students ate their lunches on the last two days of the event.

*Submitted by Jody DeMeyere, Southeast Louisiana Wildlife Refuges, Lacombe, Louisiana*

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### Clarks River hosts second annual Kentucky FWS meeting

On March 2, Clarks River National Wildlife Refuge in Benton, Kentucky, hosted the second annual Kentucky FWS meeting. Representatives from all of Kentucky's FWS stations attended including Ecological Services from Frankfort; Wolf Creek National Fish Hatchery from Jamestown; and the Office of Law Enforcement from Louisville. In total, 27 FWS staff members came together to share their current projects, as well as to discuss Landscape Conservation Initiatives. Also discussed was the current status of White-nose Syndrome in Kentucky, the progress of Kentucky's Junior Duck Stamp Contest (which is also being done as a group effort with all stations), and ways to better educate the public about FWS' mission. The group went on a short tour of the refuge and its facilities after lunch, which was provided by the Friends of Clarks River.



Kentucky's FWS staff takes a break from their second annual meeting to pose for a photo. Photo by Kent Orment, Clarks River National Wildlife Refuge.

Participants agreed this meeting was as much a success as the first, which was held at Wolf Creek in 2009. The plan is to continue rotating the location of this annual meeting so that all stations have the opportunity to be featured, and to continue the FWS' "one family" approach towards the conservation of fish and wildlife.

*Submitted by Stacey Hayden, Clarks River National Wildlife Refuge, Benton, Kentucky*

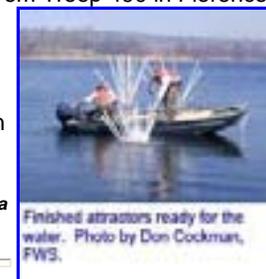
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Refuge employees Greg Hising and Doug Mason adding the attractors to the lake. Photo by Don Cockman, FWS.

### Carolina Sandhills partners with local Scouts to create fish habitat

Three lakes at Carolina Sandhills National Wildlife Refuge recently received some habitat improvement through the construction and placement of PVC fish attractors. Boy Scouts from Troop 490 in Florence, South Carolina and Cub Scouts from Pack 523 in Hartsville, South Carolina, enjoyed completing their conservation projects by constructing 22 attractors. Utilizing refuge provided material, the scouts quickly learned that a five-gallon bucket, PVC pipe, and concrete make a nifty, inexpensive, but permanent, fish attractor. Refuge staff members later placed the attractors in the lakes to complete the habitat improvement project.



Finished attractors ready for the water. Photo by Don Cockman, FWS.

*Submitted by Don Cockman, Carolina Sandhills National Wildlife Refuge, McBee, South Carolina*

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Participants enjoy a presentation and demonstration on how to make Malaleuca Walking Sticks. Photo by Tiffany Trent, FWS.

### Successful Everglades Day Festival at A.R.M. Loxahatchee Refuge

Arts in the Everglades, the theme of Loxahatchee's eleventh Annual Everglades Day Festival, took place on Saturday, February 6, 2010. The 4,400 visitors that attended this free event were invited to learn how some about how several different art mediums portrayed the Everglades. The Everglades has inspired artists who have used a variety of art mediums, including watercolor, oil, photography, sculpture, dance, plein air (act of painting outdoors), and music.

Clyde Butcher, Florida's own renowned black and white photographer, and Kenn Kaufman, originator of the Kaufman Field Guide series, were featured speakers. The festival offered a live animal presentation by numerous wildlife sanctuaries such as the Busch Wildlife Sanctuary, the Treasure Coast Wildlife

Sanctuary, and the Palm Beach Zoo. Presentations were given about raptors and snakes. Visitors also enjoyed presentations, demonstrations and participatory sessions showcasing tai chi as an art form.

More than 30 exhibitors from various environmental agencies and organizations were featured in two exhibit tents. Food vendors were available as well as guided canoe tours, nature walks, and a children's animal olympics trail. The two most popular guided tours were offered again this year. An hour bus tour to the pristine Strazzulla Marsh and a golf cart tour to the Loxahatchee Impoundment Landscape Assessment (LILA) were filled to capacity.

The festival planning committee is already planning the 2011 event. It will be held on Saturday, February 12, 2011, and the theme will be Foreverglades.

*Submitted by Serena Rinker, Loxahatchee National Wildlife Refuge, Boynton Beach, Florida*



Guest Speaker Clyde Butcher, Everglades photographer. Photo by Tiffany Trent, FWS.



Larry Richardson takes participants on a swamp walk, as part of his photography workshop. Photo courtesy of Art Rengers, volunteer at the Florida Panther Refuge

#### **Florida Panther Refuge dedicates month of March to the panther**

The Florida Panther National Wildlife Refuge and the Friends of the Florida Panther Refuge organized outreach events for "Save the Florida Panther Month to celebrate the Florida panther and its habitat. On March 6, the Naples Zoo invited the refuge's staff members and non-profit organizations to exhibit. Approximately 5,200 visitors enjoyed a day at the zoo and learned about recovery efforts for the panther.

On March 13, Biologist Larry Richardson of the Florida Panther Refuge held a photography workshop. On that day, about 80 participants enjoyed the refuge, and learned about panther conservation needs. On March 15, Mike Owen, a biologist with the Fakahatchee Strand Preserve State Park, led a swamp walk with 17 visitors to explore the Preserve's panther habitat. Lisa Hamilton, a STEP student at the refuge, gave a panther presentation to roughly 15 guests at the Naples Preserve on March 16. On March 17, Art and Rosemary Rengers, refuge volunteers, created a Panther Activity Day for 11 children at the Naples Preserve. Rangers from Big Cypress National Preserve explored popular panther habitat on a nature trail by biking Bear Island with a total of 24 participants on March 18, and March 28.

*Submitted by Lisa Hamilton, STEP student at the Florida Panther Refuge, Naples, Florida*

**Walk where the wildlife walk**

On March 13, Black Bayou Lake National Wildlife Refuge celebrated the 107th Anniversary of the National Wildlife Refuge System with Walk Where the Wildlife Walk. On that breezy, sunny afternoon, approximately 300 people enjoyed guided nature walks; comparing their physical abilities with those of local wildlife on the new Wildlife Challenge Trail; and discovering



Investigating the world around them is helped along with the use of the Let's Go Outside pack. Photo by Brittany Petersen, FWS.

wonders of natural world using our Let's Go Outside packs. On the GeoTrek, created for the event, 40 people found answers to questions at ten way points along various refuge trails using GPS units. The event was so successful that we intend to make it an annual affair to usher in the spring. Then, we had snow (big flakes for several hours) on March 21, and that is climate change for north Louisiana.



The public tests their skills on the Wildlife Challenge Trail. Photo by Brittany Petersen, FWS.

The week following the event was beautiful and spring break for area schools. Black Bayou Lake NWR was flooded with visitors wanting to get the Let's Go Outside packs and walk the trails.

*Submitted by Gay Brantley, North Louisiana Refuges Complex, Monroe, Louisiana*

### Key Deer Refuge hosts climate change meeting

The Southeast Region's climate change team met in the Florida Keys March 9-11, 2010, to discuss climate change and its effects on Florida and the Keys.

It was a perfect opportunity to showcase the South Florida Ecological Services Office's programs and initiatives by various refuges. Debbie Devore gave a presentation on her Living Shorelines program and Steve Traxler did one on the MIT/MUSIC initiative.

A south Florida refuge panel discussion on Big Pine Key was held with discussions on climate change challenges facing our refuges. Presentations were made by Margo Stahl (Hobe Sound), Charlie Pelizza (Archie Carr), Patrick Martin (Ding Darling), Sylvia Pelizza (Loxahatchee) and Layne Hamilton (Merritt Island).



Joshua Albritton, a Student Conservation Association intern, speaks to attendees of the climate change meeting about the monitoring of freshwater solution holes at the Key Deer National Wildlife Refuge. Photo by Debbie DeVore, FWS.

Climate Change presentations addressing direct climate change effects in south Florida were given in Key West. These included technical experts from the National Weather Service, Florida Keys National Marine Sanctuary, the Nature Conservancy, Everglades National Park and U.S. Geological Survey.

The business meeting included team topics and current working issues on land protection strategies, carbon sequestration, climate change language for Service documents, development of a communication tool kit, carbon neutral status, biofuels, invasives, and the eastern water team activities.

An update was given on the status of running species and habitat vulnerability assessments within the Service. Some species vulnerability assessments were performed and the next meeting will hopefully include habitats. Results will be reported to the Service's Directorate on July 31.

Participants went on an afternoon field trip at the Key Deer National Wildlife Refuge. They saw a prescribed burn area in pine rockland; some solution holes (small pockets of slightly acidic rainfall that has eroded the caprock), mosquito channels, and marsh rabbit and key deer habitats.

Anne Morkill, Key Deer NWR manager, hosted the event. She and her staff were very accommodating, threw an enjoyable shrimp barbeque, and did a great job organizing the activities and agenda.

*Submitted by Lori Miller, South Florida Ecological Services Office, Vero Beach, Florida*



Youngsters enjoy a close view of a trumpeter swan. Photo by Theresa Barry, FWS.

### **Trumpeter Swans released at Holla Bend National Wildlife Refuge**

On February 10, 2010, sixteen anxious young trumpeter swans started honking and hissing as Ron Andrews and Dave Hoffman, biologists with the Iowa Department of Natural Resources, began to unload these large birds and hand them to excited visitors who would help release them to their new winter home at Holla Bend National Wildlife Refuge. This was the third release in a three-year experiment to restore the swans migrating instincts.

As trumpeter populations were brought back from near extinction, biologists were faced with a challenge greater than restoring the number of birds. They had the task of teaching the birds to migrate to traditional wintering grounds. Most restored flocks of trumpeters have no migrating experience and remain in the upper Midwest, requiring feeding by state wildlife agencies and volunteers. The young swans released at Holla Bend are part of the effort to restore their migrating instinct. The process behind the release is called reverse migration imprinting. The idea is to bring south young birds that never have migrated and let them use their instincts to return to Iowa.

The effort is a joint venture between the Iowa Department of Natural Resources, U.S. Fish and Wildlife Service, The Trumpeter Swan Society, and the Arkansas Game and Fish Commission.

*Submitted by Carla Mitchell, Holla Bend National Wildlife Refuge, Dardanelle, Arkansas*

## ***Friends Group --***



David Johnson (center), manager of the Wal-Mart Super Center, located in Somerset, Kentucky, presents a check for \$2,000 to Jerry Coleman, President, Friends of Wolf Creek NPH, Inc. Also pictured is Wolf Creek National Fish Hatchery Project Leader James Gray. Photo by Amanda Patrick, FWS.

### **Friends of Wolf Creek National Fish Hatchery, Inc. secure funding from Wal-Mart to connect people with fishing**

The Friends of Wolf Creek National Fish Hatchery, Inc. received support for their efforts to connect people of all ages, especially children, with fishing. David Johnson, a long-time supporter of the annual Catch a Rainbow Kids Fishing Derby and manager of the Wal-Mart Super Center located in Somerset, Kentucky, presented a check to the Friends Group for \$2,000. The funds, secured through a Wal-Mart Foundation grant, will help support the Annual Catch A Rainbow Kids Fishing Derby along with the Catch a Smile Senior Fishing Derby and the Reaching for Rainbows Special Kids Fishing Derby. The funds, which will be added to the already pledged \$2,000 support from both the Somerset and Monticello, Kentucky Wal-Mart stores for 2010, brings the total level of support from the company to \$4,000. This total may increase due to Johnson's continuing efforts to secure additional funds for his time involved in helping at these events. Because of his strong belief in these outreach endeavors, Johnson continues to be a champion, up through the corporate level, to help the Friends Group in

securing funds and volunteers for all three derbies.

Submitted by Amanda Patrick, Wolf Creek National Fish Hatchery, Jamestown, Kentucky

## Hats Off -



Officer Bobby Gentry with award.  
Photo courtesy of Lawrence Creek,  
Friends of Noxubee Refuge.

### 2009 Conservation Achievement Award winners

On February 27, 2010, the Mississippi Wildlife Federation hosted the 50th annual Mississippi Conservation Achievement Awards Banquet to recognize and honor those whose achievements in natural resource conservation deserve statewide recognition. The Federation's Conservation Achievement Awards are among the most prestigious for conservation efforts. They are presented annually on behalf of the Federation's members and supporters and its statewide network of affiliated organizations. This year, two of the awards were awarded to people associated with Noxubee National Wildlife Refuge. The Friends of Noxubee Refuge was awarded the Conservation Educator of the Year for the Saturdays on the Refuge programs, and Law Enforcement Officer Bobby Gentry was awarded Conservation Officer of the Year. Congratulations!

Submitted by Andrea Dunstan, Noxubee National Wildlife Refuge, Brooksville Mississippi

### Southeast Louisiana Refuges' volunteers receive "number nine" jerseys

Departing RV volunteers were dressed "to the nines" as they received Drew Brees (number nine) New Orleans Saints jerseys as parting gifts at a dinner recognizing their accomplishments at Southeast Louisiana Refuges during the winter season. Since their stay coincided with the Saints Super Bowl win and celebration, they all got Saints fever.



Volunteers in their jerseys. Photo  
by Byron Forlier, FWS.

The list of completed projects credited to the group was four pages long and illustrated what a terrific asset these folks are to our operations. The tasks included framing and erecting approximately 25 interpretive signs throughout the complex, developing over 20 educational "programs in a box" for visiting youth groups and schools, painting restrooms at Bayou Sauvage, removing eight really heavy altars from the former chapel that now serves as a visitor center, and keeping brochure boxes stocked on three far-flung refuges. That really is the tip of the iceberg. We are truly sorry to see these "Saints" go marching out, but hope they'll all be back next year!



Volunteers are honored with a  
dinner. Photo by Byron Forlier,  
FWS.

Also recognized was outgoing Friends of Louisiana Wildlife Refuges president Jim Schmidt. After five years of hard work to bring the group back after Hurricane Katrina, our Friends group is now "healthier" than ever, and we know they will help us accomplish many great things in the coming years. In addition to a Saints jersey, Jim and his wife Bonnie received a decorative birdbath for their home garden. Even though he's no longer president, Jim still "comes to work" every day!

Everyone enjoyed a wonderful Louisiana gumbo prepared by staff member Neil Lalonde, topped off by bread pudding extraordinaire by Deb Litzenberger, wife of Project Leader Ken Litzenberger.

Submitted by Byron Fortier, Southeast Louisiana Refuges Complex, Lacombe, Louisiana

## I Gave '8' --



A BOW participant tends to dutch ovens while baking pineapple upside down cake and pork loin in marmalade during a Primitive Chef class. Photo by Melody Ray-Culp, FWS.

### Becoming an Outdoor Woman workshops in Florida

Don't let the funky name and potential for pink camo put you off! This is a terrific program that gets women, city and country gals alike, out on the land and into the water. Becoming an Outdoor Woman (BOW) workshops offer a relaxed and supportive outdoor classroom for gentle immersion, allowing women to get comfortable outside and ready to connect with family and friends who love to hike, camp, hunt, fish, canoe, watch birds, and otherwise enjoy Florida's natural resources. Participants arrive for lunch on a Friday afternoon and depart after lunch on Sunday, having taken four classes from a menu of 25 that includes everything from pan, bass, and fly fishing; to archery, handguns, long-guns, and muzzleloaders; to backpacking, wilderness survival, knot tying, and orienteering; to canoeing/kayaking and motor-boating; to the most popular Primitive Chef, which really should be called Primitive Gourmet! There's also plenty to do in the evening with campfires, story-telling, star-gazing, and night hiking. Participants also can obtain Hunter Safety Certification, good for a lifetime and accepted in every state.

The Florida Fish and Wildlife Conservation Commission offers three BOW workshops each year around the state. The cost is \$175 for the "deluxe package" (bed in a rustic, air-conditioned bunkhouse), with a discount to "tenters." The likes of Bass Pro Shops and Cabelas are generous sponsors of BOW, with each graduating class adding more shoppers to their aisles.

Where else can you pick up a camo teddy along with a turkey whistle, cross-bow, and ammo? Of the 101 ladies at last year's spring workshop in Ocala National Forest, about 75 percent were first-timers, though some gals return many times to enjoy the camaraderie and practice their skills. After three workshops as a participant, "I Gave 8" and extended the fun by volunteering as an assistant instructor.



BOW participants in a Map and Compass class learn to navigate under an oak tree. Photo by Melody Ray-Culp, FWS.

Submitted by Melody Ray-Culp, Florida Panhandle Coastal Program, Panama City, FL Ecological Services Field Office

## Photo Album --

Savannah National Wildlife Refuge celebrates Visitor Center opening -- more photos



Jane Lyder, deputy assistant secretary for Fish and Wildlife and Parks, Department of Interior. Photo by Garry Tucker, FWS.



Exhibit Hall Panorama. FWS Photo.



The Gator Hole Sign. FWS Photo.



Gator Interior. FWS Photo.



Gator Interior. FWS Photo.



Volunteers. Photo by Garry Tucker, FWS.



Trolley Tour. Photo by Garry Tucker, FWS.



Nature Walk. Photo by Garry Tucker, FWS.

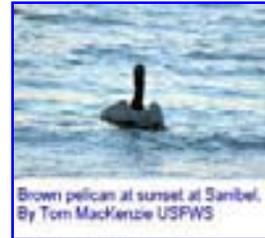
Spring Break - refuge style -- more photos



Great Egret at J.N. "Ding" Darling NWR by USFWS volunteer Joe MacKenzie Mar. 8, 2010



Joe MacKenzie, USFWS volunteer walks backward towards Ivan Vicente, USFWS & Charmaine & Jesse (r) MacKenzie at Three Sisters Springs, Crystal River, FL, Mar 9, 2010 by Tom MacKenzie USFWS



Brown pelican at sunset at Sanibel. By Tom MacKenzie USFWS



Tricolored heron at J.N. "Ding" Darling NWR Mar. 8, 2010 by Tom MacKenzie, USFWS



White pelican at J.N. "Ding" Darling NWR by Tom MacKenzie USFWS Mar 8, 2010



Ring-billed gull at "Ding" Darling NWR by USFWS volunteer Joe MacKenzie



Roseate spoonbill at J.N. "Ding" Darling NWR by Tom MacKenzie USFWS Mar 8 2010



Sunset at Sanibel. By Tom MacKenzie USFWS

## Visitor Services --



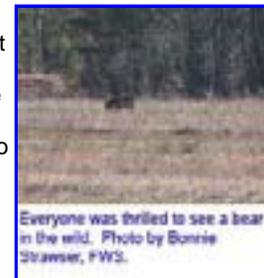
Cindy Heffley introduces a spotted turtle to the participants of the tour. Photo by Bonnie Strawser, FWS.

### Maiden voyage of open-air tram trailer at Alligator River National Wildlife Refuge

The first day of spring brings to mind daffodils and warm sea breezes along Coastal North Carolina. At Alligator River National Wildlife Refuge, the first day of spring this year was the maiden voyage of the new refuge open-air tram trailer! We're sure this brand new addition to the refuge's Visitor Services Program, will add so much to the "refuge experience" for many refuge visitors.

We've equipped the tram with a speaker system, so everyone can hear the interpretive message along the way. The tours will usually begin at Creef Cut Wildlife Trail and follow along the Wildlife Drive, making one of several possible loops. The general interpretive message for the tour includes all the basics (message of the USFWS, message of the NWRS, goals and objectives of the refuge, things to see and do on the refuge, etc), plus an assortment of hands-on activities ranging from using telemetry to track red wolves to hunting for deer, bear, and raccoon tracks, to finding the wet trails where bears crossed the road! We examine water control structures and learn how they work, identify some trees, birds, and turtles, and talk about fire and how we use it on the refuge to make habitats better.

On this maiden voyage, freshwater turtles - mostly yellow-bellied sliders - were plentiful in the ditches along the route. Some actually stayed in place as the tram passed by. One spotted turtle made its way across the road which gave us an opportunity to make introductions "up close and personal." Black Bear are always expected on this refuge. Fortunately, one bear cooperated on this tour! And, a Northern Harrier showed off by grabbing a wiggling dinner from a nearby ditch and perching on the ground to consume it.



Everyone was thrilled to see a bear in the wild. Photo by Bonnie Strawser, FWS.



We plan to get many miles of service, connect many people with nature, and make many refuge friends with our new open air tram trailer! Photo by Bonnie Strawser, FWS.

Until summer, we'll be offering one tram tour each month on Saturdays. During the summer months, we'll offer weekly tram tours on Thursdays from 1:30 p.m. until 3:30 p.m.

Plus, we'll use the tram for the regularly scheduled Bear Necessities programs on Wednesday evenings from 6:00 p.m. until 7:30 p.m. During the other times of the year, at least one monthly Saturday tour will be conducted. We anticipate lots of interest among birders during the winter when waterfowl are concentrated in the farm fields.

During the Wings Over Water Wildlife Festival in November, there will be many special tram tours offered at Alligator River and a couple at Pea Island. As word gets out to local residents, schools, and tourist-related businesses, we're certain the tram will offer many opportunities for visitors to enjoy the refuge in a relaxed, comfortable, and safe manner. While they're our captive audience, we'll make sure they leave knowing much about who we are, what we do, and why we do it! For more information, visit

[www.fws.gov/alligatorriver/spec.html](http://www.fws.gov/alligatorriver/spec.html)

*Submitted by Cindy Heffley, Alligator River National Wildlife Refuge Complex, Manteo, North Carolina*

## Wage Grade Profile --

### Nathan Hill strives for excellence at St. Catherine Creek



Nathan Hill. Photo by Chris Swanson, FWS.

There are many superior and passionate folks working to achieve a common goal within the National Wildlife Refuge System. Each individual plays an integral role within this system to ensure that the Service's mission is upheld to the highest standards. Nathan Hill, a maintenance worker at St. Catherine Creek National Wildlife Refuge in Sibley, Mississippi, is one of the Service's most dedicated employees

"At St. Catherine Creek, I am lucky enough to supervise Nathan who contributes to the success of the refuge in a dynamic number of ways," says Chris Swanson, assistant refuge manager. "He possesses a work ethic that is unrivaled, and his efforts are greatly appreciated by staff members and visitors to the refuge."

Nathan has been with the Service since 1993, and he has worked at Savannah and Harris Neck refuges, both located in Georgia, in addition to St. Catherine Creek.

"Regardless of whether he is mowing a road, performing law enforcement duties, or maintaining refuge property and equipment, I can always count on him to go the extra distance to get the job done," says Chris.

Recently, Nathan was assigned the task of organizing all records of heavy equipment and personal property to streamline the fleet of equipment on the refuge. As the property officer, he contributed by removing excess equipment, creating an updated property management archive, and by getting rid of bone-yard equipment. This was no small task given the long list of property records and equipment that needed revitalization. Nonetheless, Nathan demonstrated his ability to excel for the good of the resource.

"Nathan is one example of the type of employee who makes a difference each and every day. I've heard many people say that 'people are our most valuable asset' within the Service," says Chris. "I have no doubt extraordinary contributions like Nathan's are what make the Service a leader in conservation."

In his free time, Nathan enjoys spending time outdoors, and he has a five-year-old daughter Natalie with whom he loves to spend time.

*Submitted by Chris Swanson, St. Catherine Creek National Wildlife Refuge, Sibley, Mississippi*

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