



U.S. Fish & Wildlife Service

Southeast Region

Southeastern Currents

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Interagency cooperation monitors possible effects of proposed CERP project on the northern crested caracara



Lisa Kreiger of the South Florida Water Management District holds a caracara after placement of a satellite transmitter. Photo by Steve Schubert, FWS.

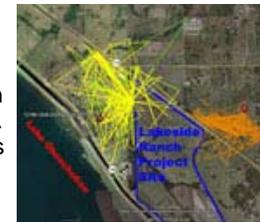
Since the beginning of the Comprehensive Everglades Restoration Plan (CERP) in 2000, the Service's South Florida Ecological Services Office in Vero Beach has been aware of the need to construct deep above-ground water storage and shallower treatment marshes throughout south Florida. While the field office supports the overall restoration goals of the CERP, many of these facilities would be located in the range of the threatened northern crested caracara. Florida has a distinct population of the crested caracara, which was originally placed on the list of threatened and endangered species as Audubon's crested caracara. The caracara is a large, boldly patterned hawk with a crest. It has a naked face, heavy bill, elongated neck and unusually long legs.

Initial efforts focused on guiding the Service's planning partners, the U.S. Army Corps of Engineers and the South Florida Water Management District (SFWMD) to locate facilities in areas that would minimize effects on the caracara, other listed species, and habitats of high value to fish and wildlife. Yet, all recognized impacts on the caracara would be unavoidable. The planned projects would include impacts on the vast areas of pasture in the heart of the species' range, which covers five counties, primarily north and west of Lake Okeechobee in south central Florida.

We used the best available science to address the impacts of early stages of the overall project, proposed by the SFWMD. However, we did not know enough about the particular territories of nesting pairs or their reactions to construction and operation of water storage or treatment marshes within their territories. We have progressed from simple observation of birds through spotting scopes and binoculars, to radio-telemetry, and now to satellite tracking of birds. With satellite tracking, we can determine the extent to which pairs nesting close to the proposed projects currently use habitat that will be altered by the project, and begin to assess the reaction of the birds during and following construction.

Steve Schubert of our Service's Vero Beach field office and Lisa Kreiger of the SFWMD have shown ingenuity and dedication, using existing resources, coordinating with researchers to capture the birds and affix the transmitters, and follow up when issues arise in the field. This is a shining example of interagency cooperation following the terms of a biological opinion, and the principles of strategic habitat conservation. Our office has traditionally provided comprehensive planning guidance, and this further demonstrates the need to follow the outcome of our consultations, learn from them, and improve our findings and recommendations.

To date, solar-powered transmitters were placed on birds in three territories that either overlap or are near a proposed 2,100-acre



Sample of the satellite tracking data from three caracaras, May to July, 2009. Graphic by Steve Schubert, FWS.

constructed treatment wetland on the former Lakeside Ranch in Okeechobee County, near the northeastern shore of Lake Okeechobee. One of the transmitters provided six weeks of data, and although the bird is still alive, the transmitter was shed and never recovered. A second transmitter has continued to track the bird since May 18, of this year. The third was shed by another bird within about a week of deployment, but fortunately continued to face enough sun to keep it transmitting. It was found alongside a ditch by Lisa, Steve, and Jane Tutton, also from our Vero Beach office. The importance of finding this transmitter involved more than its \$4,000 cost; the manufacturer has a waiting list to configure the units, and its recovery will allow it to be redeployed sooner, providing valuable baseline data before construction begins. Even though we knew the general area, locating it was a challenge; Steve was thrilled when he found the “needle in a haystack.” We will try to capture another bird to place this small but valuable tool back in the field, this time attaching it with an improved formulation of epoxy.

We were proud to attend a ceremony where the SFWMD honored Lisa with an Employee of the Month award. This served as a fine example of interagency cooperation. More photos in [Photo Album](#).

Submitted by Robert Pace, South Florida Ecological Services Field Office, Vero Beach, Florida

Behind the Scenes--



Mark Cantrell, far left, of the Service's Asheville, North Carolina, Ecological Services Field Office shows students how to herd fish toward a fishing weir. Photo courtesy of Smoky Mountain News.

Cherokee youth re-enact ancient fishing practice

As 10-year-old Dayini Lossie stood on the shore eyeing the wide shallow waters of the Tuckasegee River last week listening to the marching orders for the exercise about to unfold, one word came to mind: awesome.

Lossie had never heard of a fish weir before, but now he was about to walk in his ancestors' footsteps, using the same stone wall his people built centuries ago to once again — hopefully — trap some fish.

“The objective is to herd the fish, stomping and screaming and basically scaring them downstream,” explained Mark Cantrell, a biologist with U.S. Fish and Wildlife.

Lossie, along with two dozen other Cherokee students, couldn't wait. They'd been in and out of the river all day, their shoes, shirts and shorts soaked through many times over as they swam, splashed and explored aquatic biology along the way.

But as they waded into the river this time, stringing themselves out in a long line and facing the ancient weir downstream, they realized they were part of something big.

“We're learning about our history and how our ancestors used the river,” Lossie said.

As the students began moving downstream, flushing the fish toward a trap at the mouth of the weir, it didn't exactly go off without a hitch. One student would fall, then another, then suddenly the chain would disintegrate leaving big gaps for the fish to sneak through. Some started splashing each other instead of the water in front of them. Others took intermittent breaks to float on their backs.

But eventually, the line closed in on the weir and two modest-sized fish were ushered into the trap.

"We all would have starved if this was dinner tonight," Cantrell declared.

It became apparent just how much cooperation a fish weir entailed.

"I learned so much myself," said Roger Clapp, director of the Watershed Association of the Tuckasegee River, which coordinated the event. "Though it is obvious, you could really see how Cherokee fishing at a weir is a community experience, not just one, two or three people."

The re-enactment was orchestrated by WATR, an environmental group whose central focus is water quality. Funding came from the Cherokee Preservation Foundation, World Wildlife Fund, the Royal Bank of Canada and WATR. To help pull off the re-enactment, biologists with the Cherokee Fish and Wildlife, U.S. Fish and Wildlife, and several volunteers with WATR pitched in.

The field trip brought kids not only in touch with their heritage, but the ecosystem, Clapp said.

Armed with nets and buckets, kids took to the river upturning rocks and sifting through sediment in search of crawdads, bugs and fish lurking below the surface. A science station allowed them to examine their finds under microscopes.

"The creek bottom underneath them is actually teeming with life," said Clapp. "It is a living ecological unit."

The students also got to hear a program from Russ Townsend, a historic preservation officer for the Cherokee, who quizzed them on the role rivers played for their ancestors, which included everything from transportation to the gathering of mussel shells that were ground up and mixed with clay for pottery.

"The Cherokee were very smart. They knew how to use the environment. They loved living here because they could get everything they needed and the rivers were a major source of that," said Townsend

Written by Becky Johnson, Smoky Mountain News, Waynesboro, North Carolina

This article appeared in the Smoky Mountain News during the week of July 8, 2009. It is reprinted with the permission of Becky Johnson of the Smoky Mountain News.

Bragging Rights --



L to R: Avery Doninger, Eddie Brown, Team Leader Mike Hennessey, Ruthie Cleary, Chelsea Wood, Sara-Jane Petescia, Joe Roman, Sarah Simons. Photo by Henry Sansing.

Noxubee hosts an AmeriCorps team for the summer

This year Noxubee National Wildlife Refuge hosted an AmeriCorps team. AmeriCorps is a group of young people who dedicate 10 months of their life doing community service through the Corporation for National and Community Service. After completing the program, Corps members get an education award that can be used for school tuition or to apply to existing college debts.

Noxubee National Wildlife Refuge was this team's last project. Previously, the team had worked with FEMA in Texas helping in the Hurricane Ike relief effort and with Denver Public Schools tutoring elementary school students in an attempt to improve their standardized test scores.

During the team's summer at Noxubee, the volunteers worked on boundary lines with Officer Bobby Gentry. They also helped with habitat restoration, made new signs, cut out bluebird boxes, and painted fences. They re-roofed three buildings, removed carpeting and replaced ceiling tiles in the old conference room. They helped construct the Bluff Lake 300-foot fishing pier and boardwalk, scrubbed and water sealed all the existing boardwalks, and restored over 24 acres of land for new hardwood forest. They assisted in several of the "Saturdays' on the Refuge" including canoe day on the 4th of July, and with three different fishing derbies. They also learned about the environment and history of the area.

They did seem to enjoy themselves. Even during their time off, they walked the trails, with bird books in their hands, trying to identify the birds.

"This is an amazing place," said Avery Doninger from Connecticut. "The refuge is so beautiful, and it's a really great project to cap my year with AmeriCorps. Thank you."

We were very lucky to have them; they were hard workers and had very few complaints – mostly the heat and bugs. But then, what do you expect for a summer in Mississippi?

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

Summer help gives Dale Hollow National Fish Hatchery a hand

Clay County, Tennessee, residents Paige Rich, Jasmine Smith, Jordan Melton, and Ryan Blakley spent this summer working at the Dale Hollow National Fish Hatchery as Youth Conservation Corps (YCC) enrollees. Paige, Jasmine, Jordan, and Ryan helped the hatchery staff with feeding fish, collecting and counting dead fish, cleaning tanks and raceways, moving fish around the hatchery, distributing fish to local waters, performing janitorial work, and maintaining the public fishing area and the grounds. The enrollees helped fish biologists from the Fish Health Center in Warm Springs, Georgia, perform the annual fish health inspection. They also enjoyed a tour of the Wolf Creek National Fish Hatchery Visitor and Environmental Education Center in Jamestown, Kentucky.

The three objectives of the YCC program are to accomplish needed conservation work on public lands, provide gainful summer employment to youth for approximately eight weeks, and develop an understanding and appreciation in participating youth of the nation's natural environment and heritage.

The hatchery also benefited from volunteer Aaron Johnson's service this summer. Aaron is a student at Hocking College in Nelsonville, Ohio, and he is enrolled in an associate degree program in fish management and aquaculture science. The curriculum requires him to perform 80 hours of volunteer service at a hatchery or aquaculture facility. Aaron was introduced to the intricacies involved in rearing salmonids on a Service hatchery. He also got the chance to work with Fish Biologist Brian Hickson and student trainee Gary Lee from the Warm Springs Fish Health Center to perform the annual fish health inspection.

The hatchery staff really appreciated the extra help this summer. YCC and volunteer labor enabled the staff to catch up on special maintenance projects that had been put on the back burner because of the huge amount of time normally taken up with routine fish culture and grounds maintenance work. More photos in [Photo Album](#).

Submitted by Andy Currie, Dale Hollow National Fish Hatchery, Celina, Tennessee



Ryan Blakley, Aaron Johnson, and Brian Hickson do an annual fish health inspection at Warm Springs Fish Health Center. Photo by Andy Currie.



The freshwater mussel tanks before the renovation. Photo by Jaclyn Zelko.

A new look for the freshwater mussel building at Warm Springs Hatchery

The freshwater mussel building at Warm Springs Hatchery was recently renovated. Captive refugia mussels were previously held in 16 tanks set on cinder blocks. The growing mussel program needed more tank capacity to handle the expanding workload of conducting research with several mussel species. Chad Shirey, hatchery electrician, built three wooden frames that hold six tanks each. He also built walkways between each frame to allow staff to reach the upper rows. Carlos Echevarria, hatchery manager, set up the tanks with new water and air supply lines. The hatchery now has a total of 26 tanks that will be used for holding captive refugia and mussel specimens for research. More photos in [Photo Album](#).

Submitted by Jaclyn Zelko, Warm Springs National Fish Hatchery, Warm Springs, Georgia

Not just trout at Wolf Creek National Fish Hatchery – Sneaky snakes too!

Are you one of the many individuals who are afraid of snakes? Whether friend or foe, snakes are truly one of nature's most fascinating creatures, and this case was proven by the large turn-out of visitors for a Snakes of Kentucky program recently held at Wolf Creek National Fish Hatchery. Thanks to South Kentucky Rural Electric Co-op Marketing Director and Friends of Wolf Creek National Fish Hatchery Member Alan Coffey, the hatchery served as hosts to Biologists Josh Young and Joe Settles, who work for East Kentucky Power Co-op. Through their use of humor and fact, the program proved to be a resounding success as each audience member was treated to a hands-on, engaging adventure into the life and world of snakes. The importance of snakes to our ecosystem also was explained as were such topics as what to do when you come upon a snake, and respect for their environment. Plus, from a corn snake to a king snake to newts, turtles, salamanders and lizards, each audience member got a chance to learn more and overcome many misconceptions and fears. The program was a resounding success and was one of the best yet for the hatchery.



Wolf Creek National Fish Hatchery volunteers Kerry Layton and Sharon Smith get up close and personal with some of the featured guests of the evening. Photo by Amanda Patrick.

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



A young potter's hands mold a spotted lizard from river clay. Photo by Pam Darty.

Lower Suwannee keeps learning alive in the summer

During summer vacation kids found there is so much to learn about the national wildlife refuge in their backyard. The Lower Suwannee National Wildlife Refuge hosted a variety of day camps to keep learning alive while the kids were while out of school. The camps highlighted wildlife and the cultural sites of the refuge.

Again this summer, the refuge invited kids out to explore nature with a camera. New this year, were ten digital cameras that allowed flexibility in the field with kids able to delete unwanted pictures and alter their technique. A new portable printer allowed freedom from a computer and more time for creating nature journals and adding their photos.



Hannah Brinkman and big brother Nathaniel Brinkman show off their effigy pots of a frog and a lizard. Photo by Pam Darty.

Discover Shell Mound was a great success due to the partnership with Cedar Key Pottery, which provided real river clay mixed in the way of ancient potters who would have lived at Shell Mound. After hearing about the food and medicine plants the early Indian cultures used, kids were given a scenario, and had to solve a problem related to cooking methods used before pottery. Later, they learned ancient coil-method, and were encouraged to create effigy pots to honor their favorite native wildlife from the Refuge.

No books, no grades, just the fun of learning outside.

Submitted by Pam Darty, Lower Suwannee National Wildlife Refuge, Chiefland, Florida



Julie Rose, workshops coordinator and certified trainer, DIMENSIONS Educational Research Foundation, leads Nature Explore Classroom participants through a mock outdoor classroom. FWS Photo.

Summer Environmental Education Workshop Series at Wolf Creek National Fish Hatchery

From working with special education programs and seeking avenues for integrating environmental education to designing outdoor classroom spaces, Wolf Creek National Fish Hatchery continues to move forward with a myriad of fun, engaging, hands on learning opportunities during the hatchery's summer outreach program series.

With a focus on seeking out ways to integrate environmental education into the classroom, particularly for those who work with special education students, the hatchery served as host to a special education and environmental workshop on June 29, 2009. The workshop, which was a great success, was led by Lauren Dowell, a special education teacher in the Warren County, Kentucky School District. Dowell, an avid participant at many Wolf Creek workshops herself, was excited to help design this new training and to be able to volunteer to lead the event.

After much planning and preparation, Wolf Creek National Fish Hatchery also hosted a Nature Explore Classroom Workshop on June 30. Facilitated by DIMENSIONS Educational Research Foundation, the event was a true success for the hatchery, the State of Kentucky, and others from around the Southeast Region. DIMENSIONS staff members Julie Rose and Jim Wike led a day-long lesson on the benefits of connecting children with the outdoors, while also presenting the model and design for the Nature Explore Classroom. In addition to the workshop, attendees and Wolf Creek staff took part in an actual site design consultation as the hatchery hopes to add to their existing outdoor classroom area by constructing a Nature Explore Classroom. A shelter, an amphitheater, and four wetlands are being planned. This was the first time a Nature Explore Workshop was hosted in Kentucky. Wolf Creek National Fish Hatchery also will be the site of the first ever Nature Explore Classroom in Kentucky, due to the site consultation with DIMENSIONS. The event drew a strong crowd, totaling over 25 participants from six states. More photos in [Photo Album](#).

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

Sewee Center brings real-life resources into the science classroom

Lowcountry middle and high school teachers delved deeply into the Francis Marion National Forest and Cape Romain National Wildlife Refuge recovery projects underway for some of our most threatened and endangered species. They met at the Sewee Visitor and Environmental Education Center on August 13, 2009.

Tricia Lynch, refuge ranger, talked with the teachers about the recovery program for the endangered red



Lowcountry teachers at the workshop. Photo by Tricia Lynch.

wolf and the vital role Cape Romain continues to play in recovery efforts. The Center, a captive breeding facility for the recovery project, also supports the wolves for public education and teachers were able to view the male and female wolves in the front enclosure.

Teachers went into the forest with Sewee educator, Julie Binz, to see an artificial red-cockaded woodpecker cavity and, with binoculars in hand, observed banded birds to determine which endangered woodpecker could be translocated. Tori Wilson also dug up a loggerhead sea turtle nest found on Cape Island's beach. She relocated the nest safely above the high tide line before caging it to prevent predator predation. Well....not really. But these activities simulate practices undertaken daily by resource staff and volunteers in their efforts to protect, monitor and manage our threatened and endangered animals and their habitats.

What was real is the real-life data from the recovery projects that was given to teachers. Back in the Sewee classroom, teachers completed charting and graphing activities created by project data and discussed ways that the resource information can be incorporated into classroom lesson plans. Teachers also discussed the possibilities of bringing students to the Sewee Center, where they can see first-hand endangered species and learn about the ecosystems for which these animals depend upon for their survival.

This professional development day was coordinated in partnership with the SEWEE Association (the Friends Group for the forest and refuge) and Murray Eicher, science learning specialist for the Charleston County School District. Schools represented included Wando High School and Cario, C.E. Williams, Fort Johnson, and James Island Middle Schools.

Submitted by Tricia Lynch, Cape Romain National Wildlife Refuge, Awendaw, South Carolina



Andy suits up to spend the morning collecting fish using a backpack shocker to stun the fish to the surface. FWS Photo.

Student workers attend freshwater mussel identification workshop

Andy Hartzog and Jeremy Haulk are two graduate students from Columbus State University working on freshwater mussel research at Warm Springs National Fish Hatchery. They recently attended the Apalachicola, Chattahoochee and Flint Rivers Freshwater Mussel Identification Workshop held the first week in August at the Joseph Jones Ecological Research Center in Newton, Georgia. The workshop consisted of classroom and field components. Both Jeremy and Andy gained valuable knowledge on mussel identification, as well as networking with other mussel biologists. They both had a great time swimming the rivers and creeks and using the backpack shockers. More photos in [Photo Album](#).

Submitted by: Jaci Zelko, Warm Springs National Fish Hatchery, Warm Springs, Georgia

Dam removed from western North Carolina river

A decrepit dam on North Carolina's North Toe River has been removed, opening up habitat to aquatic life and improving safety for river users. The removal was the result of months of effort by the Fish and Wildlife Service, the Blue Ridge Resource Conservation and Development Council, Toe River Valley Watch, and the State of North Carolina.

Constructed for power generation in 1918, the dam was abandoned by the late 1940s or early 1950s, then partially dynamited in 1960. Removing the dam provides aquatic organisms access to 44 miles of river upstream of the dam site. Two rare fish, the olive darter and sharphead darter were historically found above the dam, but today are only found below the dam. It is hoped the removal will allow these fish access to the upper portion of the river. Removing the dam may also help the endangered Appalachian elktoe mussel, also found downstream of the dam. The mussel may colonize the area around the dam site, while dam removal should open up additional habitat for the mussel's fish hosts.

Taking out the decrepit dam removes a significant safety hazard for boaters and other river users. In addition to the massive slabs of concrete, remnant pieces of the dam's metal inner workings were scattered in the river. Boaters that portaged around the structure had to follow a path that is close to an active railroad.



Toe River Valley Watch President Starli McDowell watches the removal of a dam on the North Toe River. FWS Photo.

Submitted by Gary Peeples, Asheville, North Carolina, Ecological Services Field Office



Girl Scouts enjoy Roan Mountain. FWS Photo.

Girl Scouts experience some of nation's rarest natural communities

Roan Mountain, one of the highest mountains in the Eastern United States, is home to a concentration of some of the South's rarest natural communities, including grassy balds, spruce-fir forests, and high rocky outcrops and cliffs. The Service recently partnered with the Southern Appalachians Highlands Conservancy to introduce a group of Girl Scouts to this natural treasure. A guided hike along the Appalachian Trail, which crosses the mountain, took the scouts through spruce-fir forests and over grassy balds; let them see first hand an experiment using goats to control woody vegetation encroachment, a major conservation issue at the site; and gave them an opportunity to see Gray's lily, a federal species of concern, blooming in its native habitat.

Submitted by Gary Peeples, Asheville, North Carolina, Ecological Services Field Office

Puerto Rico participates in the Earth Partnership for Schools program

U.S. Fish and Wildlife Service and Department of Natural and Environmental Resources employees and teachers from Puerto Rico participated for 10 days in the Restoration, Education, Science, Training, and Outreach for Regional Educators program (RESTORE) at the University of Wisconsin of Wisconsin. More than 40 teachers from all over the United States participated in the program held July 13 - 22, 2009. The experience was unforgettable.



Attendees from Puerto Rico. FWS Photo.

This program engaged the participants in field exercises to restore native habitats on schoolyards and/or nearby natural areas integrating science, math, language, arts and social studies, student-led inquiry, service-learning, and unstructured nature play.

Not only did the program serve to teach us about the types of soils and, plants, it also served to strengthen our commitment to the earth and to our children's future.

For more information about the Earth Partnership program or how you can participate, please visit www.uwarboretum.org/eps/. More photos in [Photo Album](#).

Submitted by Gisella Burgos, Caribbean Island National Wildlife Refuge Complex, Boqueron, Puerto Rico



Designing a fish t-shirt. Credit: JRC Camp, FWS.

Junior Ranger Camp in Warm Springs, Georgia

Nicole Rankin, Rosla Plant, Jaci Zelko, and Frida Powers, along with staff from Franklin D. Roosevelt State Park and Roosevelt's Little White House Historic Site, offered three-day Junior Ranger Camps on July 7-9, and July 21-23, 2009. Children from across the Southeast came to Warm Springs and Pine Mountain, Georgia, to participate in this program. The junior rangers experienced historical recreation at Roosevelt's Little White House, scientific education at the Warm Springs Regional Fisheries Center, and environmental recreation at FDR State Park. Eleven rangers participated in the first session, and eighteen participated in the second session. While at the Regional Fisheries Center, junior rangers learned about fish identification, aquatic food webs, and stream and pond habitats. Other camp activities included a geology walk, stamp camp, aquatic life in streams and ponds, nature walks, fire truck shower, t-shirt painting, and sailboat racing. Junior rangers received patches and certificates during a ceremony held at the FDR State Park on the last day. More photos in [Photo Album](#).

Submitted by Nicole Rankin, Warm Springs Fish Technology Center, Georgia

Successful mangrove restoration workshop

A mangrove restoration workshop was held at the South Florida Ecological Services Office in Vero Beach August 18-20. Hosted by the Service's South Florida Coastal Program, the Indian River Lagoon National Estuary Program, and the Florida Department of Environmental Protection Coastal and Aquatic Managed Areas, this three-day workshop focused on basic mangrove ecology, lessons learned from past mangrove restoration projects, and considerations for project design and implementation of future projects in the Indian River Lagoon and south Florida. The twenty-five workshop participants included the Service's Conservation Planning staff, as well as many county environmental land planners and state agency biologists.



Some of the participants in the mangrove restoration workshop. Photo by Debbie DeVore, South FL Coastal Program Coordinator.

Submitted by Debbie DeVore, South Florida Ecological Services Office, Vero Beach, Florida



Adult male red wolf on the refuge.
Photo by Amy Allen.

People, wolves, bears, and alligators

People, wolves, bears and alligators . . . plus snakes, birds, frogs, deer, bugs, and jets all make for an interesting howling safari evening on the Alligator River National Wildlife Refuge. As we near the end of summer, nearly 700 participants have heard red wolves howl in the night, as well as frogs croaking and jets flying. Bears are seen nearly every week as cars caravan slowly through the refuge to the howling site. Visitors often come back the next day for another look. Every now and then, an alligator has been spotted in a canal alongside Highway 64, or a paddler has seen one on a refuge water trail. Great egrets and many other species of wildlife call the refuge home and are quite willing to share the space with their neighbors – even their human visitors.



A refuge bear. Photo by Ryan Nordsven.

Submitted by Diane Hendry, Alligator River NWR, Manteo, NC



Local children learn about leatherback sea turtles. FWS Photo.

Nesting turtles help foster conservation ethics in St. Croix community

Sandy Point National Wildlife Refuge is home to the largest nesting population of leatherback sea turtles in the United States and the northern Caribbean. A comprehensive leatherback sea turtle research and management program has been ongoing since 1981. The U.S. Fish and Wildlife Service provides unique educational opportunities for the St. Croix (U.S. Virgin Islands) community through this project. Every nesting season since 1997, hundreds of local students and adults visit the refuge to witness leatherback sea turtle nesting and hatchling emergence. Because St. Croix has no zoos or natural history museums, the education program shows participants, especially local young people, a world they may have never seen before. For many of these children, this is their first opportunity to interact closely with local wildlife. The Sandy Point Sea Turtle Education Program involves the community in the protection of sea turtles and their habitats. In doing so, it fosters a conservation ethic which extends to other aspects of the natural community.

This season the U.S. Fish and Wildlife Service escorted over 1,600 people to Sandy Point National Wildlife Refuge to see nesting leatherback sea turtles and emerging hatchlings. Well over half of these participants were local children! Participants had the opportunity to learn more about the Service and the refuge system, as well as Sandy Point National Wildlife Refuge and sea turtle biology. Some of the participating organizations included Cub Scouts, many local summer camps, Boys and Girls Clubs, CRABBS Dive Club, Virgin Islands Sustainable Farm Institute, various school groups, St. Croix Environmental Association, St. Croix Ultimate Frisbee Association, HOVENSA Oil Refinery Environmental Department, St. Croix Hiking Association, and Project REEF AWARE.

Submitted by Claudia Lombard and Amy Mackay, Sandy Point National Wildlife Refuge, St. Croix, Virgin Islands

Ten-year partnership to recover pallid sturgeon

Since 1999, staff members from the Warm Springs Fish Technology Center, Georgia, have traveled yearly to Garrison Dam National Fish Hatchery in Riverdale, North Dakota, to conduct studies with the federally endangered pallid sturgeon. One tool being used to preserve and recover this species is the collection and cryopreservation of sperm. Sperm cryopreservation allows preservation of the current genetic diversity, transfer of genes from wild populations to hatchery broodstock, spawning of asynchronous populations, and better control of selective breeding. During this year's trip, studies were conducted to begin optimizing the effectiveness of a production scale cryopreservation technique for pallid sturgeon sperm. To date, sperm from over 100 males have been cryopreserved and stored in a repository for future use. Additionally, cryopreserved sperm has been used in the production of more than 150,000 fry for restocking of the Missouri River. Long-term partnerships and cryopreservation are two tools that the Fish Technology Center uses to assist resource managers in the recovery of these endangered fish.



A Fish Technology Center biologist extracts sturgeon milt for cryopreservation. FWS Photo.

Submitted by Bill Bouthillier, Warm Springs Fish Technology Center, Georgia



American alligator suns along the creek bank. FWS photo.

Fish passage and alligators

Staff people from the Warm Springs Fish Technology Center and the Bears Bluff National Fish Hatchery discovered uninvited guests during recent field surveys. Several alligators were encountered during the surveys of 35 sites or more than 145 river miles in the Kinchafoonee Creek watershed in southwest Georgia. Typically, alligators occur below the fall line in Georgia, but some of these reptiles had different plans. Most of the survey sites were easy to access and were capable of being assessed from above, but a few needed to be assessed at the water's edge. At five sites, alligators were observed lurking around the crossings. No biologists or alligators were harmed during these surveys because they gave each other a wide berth. Based on criteria from the National Inventory and Assessment Procedures, none of the crossings are barriers to small stream fish or other aquatic organisms. Besides alligators, several potential hazards to listed species were discovered and reported to Ecological Services staff members at Fort Benning or Brunswick, Georgia.

Submitted by Bill Bouthillier, Warm Springs Fish Technology Center, Georgia

St. Marys Fisheries Restoration Committee

The Executive Committee from the St. Marys Fisheries Restoration Committee recently met at the Service's Bears Bluff Hatchery, Wadmalaw Island, South Carolina. Plans were formulated to assess aquatic habitat and fisheries restoration. The committee is setting goals for priority species populations and making strategic decisions about habitat needs to meet conservation challenges for restoration of highly valued imperiled sturgeon populations. This conservation work is being accomplished through a comprehensive landscape approach involving multiple agencies.



The Executive Committee members are wearing their blue shirts for the St. Marys Fisheries Restoration Committee. Left to Right: Chip Campbell, St Marys River Management Committee; Joel Fleming, Georgia DNR; Jason Kahn, National Marine Fisheries Service.

Submitted by Rosla Plant, Warm Springs Regional Fisheries Center, Georgia

Friends Group --



Education pavilion at the Cary Property. Photo by Shirley Knudsen.

Friends of Chassahowitzka National Wildlife Refuge development project

The Friends of Chassahowitzka National Wildlife Refuge, Crystal River, Florida, are very pleased to share a major accomplishment in the Friends' mission.

We are, through the generosity of a St. Petersburg, Florida, Family Foundation, able to pursue the development of a part of Chassahowitzka National Wildlife Refuge property known as the Cary Property. This property consists of approximately 10 acres located in old Homosassa surrounded by other refuge property. This project came to the attention of two of the principles of this Family Foundation who incidentally are members of the Friends. The Family Foundation is a supporter of environmental, nature, and wildlife projects.

The Cary Property is the only refuge land accessible by road within the Chassahowitzka National Wildlife Refuge Complex. Interpretive trails provide various user groups including, birding groups, local schools, etc., an opportunity to learn about the ecology and environmental issues. An Education Pavilion was built to accommodate these groups. The project is designed to be a minimal use project with nature trails of a rustic nature utilizing either wood mulch or pine needle mulch to cover the trails. Kiosks will be installed with educational messages regarding the nature trails, trees, birds and wildlife on the property.

As part of the trail, an observation platform has been built overlooking the salt marsh. A low level platform with handicap accessibility has been provided. A second level platform approximately 15 feet in height overlooks the salt marsh system. There also will be a kiosk added to show the importance of the salt marsh to the ecosystem. There will be a small launching area for kayaks and canoes in conjunction with the platform.

This project has been enthusiastically received and supported by the local refuge staff who will participate in its successful completion. Much of the work on this project is being done through the efforts of many willing and dedicated volunteers. The Friends were able to contract the major construction projects (tower and pavilion) to local contractors and offer a boost to our local economy.

Completion of this Friends' project will provide the non-boating community and visitors an opportunity to visit refuge lands and learn about the refuge system.

The Friends are very proud to be able to offer this memorable accomplishment to the community, our visitors and especially to future generations.



Observation tower at the Cary Property. Photo by Shirley Knudsen.

Submitted by Ross and Shirley Knudsen, Friends of Chassahowitzka, Crystal River, Florida

Hats Off -



Alabama Governor Bob Riley speaks with Denise Rowell and Rob Tawes about sea turtle lighting. Photo courtesy of the City of Orange Beach, AL.

Alabama Governor attends grand opening of Gulf State Park's saltwater fishing pier Historic pier features sea turtle friendly lighting

Summer thunderstorms overtook the Alabama gulf coast on Wednesday morning, July 20, 2009, but a little rain wasn't going to stop the grand opening of an historic landmark on the beaches of Gulf Shores. Gulf State Park's saltwater fishing pier, located just east of Gulf Shores, was destroyed by Hurricane Ivan in September of 2004. Now, nearly five years later, the fishing pier is back, and it comes with improvements that will help save the lives of a threatened and endangered species.

The new pier is entirely lit by sea turtle friendly lighting. The lighting effort was spear-headed by the U.S. Fish and Wildlife Service Alabama Ecological Services Field Office (AFO), with assistance from the Panama City, Florida, Ecological Services Field Office.

"Each lighting fixture visible from the water, beach and parking lot was selected for its conformity to three rules," explains AFO biologist Dianne Ingram. "Keep it low, keep it shielded, keep it long wavelength."

At first, adhering to these three rules was met with skepticism from planners. But, after numerous meetings and negotiations with state, city and county leaders, the idea was embraced. The fixtures had to be specially designed to direct the light downward, not out or up. The light source needed to be low intensity, with an amber or red color. These features are less disturbing to nesting sea turtles, which are often confused by bright lights surrounding the beach.

At 1,540 feet long, the new pier is now the largest on the gulf coast. With such a large entity on the beach, bright lights could have been down-right deadly to nesting sea turtles, possibly leading them to peril. The reptiles often mistake bright lights for moonlight, and instead of returning to the gulf after nesting, they stray into a street or parking lot. They often become road kill, die from dehydration, or become a victim of predation.



Rob Tawes (back left) joins Alabama Governor Bob Riley for the official ribbon-cutting of the pier. Photo courtesy of the City of Orange Beach, AL.



Dianne Ingram checks out the sea turtle friendly light on the new Gulf State Park Pier. Photo by Darren LeBlanc.

"Bright lights are one of the major threats to nesting sea turtles along the northern Gulf Coast," said Ingram. "Research and practical experience shows that light deters females from nesting and causes disorientation of hatchlings."

The creation of the new pier was a massive effort, which reflected the crowd that gathered at the grand opening. State, federal, and local dignitaries congregated on the pier for the official ribbon-cutting. The most distinguished guest was Alabama Governor Bob Riley, who stopped to speak with AFO Deputy Rob Tawes before the ceremony. Upon shaking the governor's hand, Tawes explained the relevance of the pier's new lighting. An intrigued governor listened intently as he received an impromptu lesson on the enigma of sea turtle nesting. Tawes then invited Governor Riley to come back to the gulf coast and ride on sea turtle patrols.....an invitation Riley couldn't refuse. "Don't say it if you don't mean it," warned the governor with a smile.

"We would love to have the governor join us on one of our patrols, or to see a nest hatch. I hope he takes us up on the offer," said Tawes.

The original intent of the pier was to attract anglers, and that goal has been successfully met. Old-timers who remember the old pier and newcomers alike are enjoying renewed, easy access and a pleasant experience of saltwater pier fishing in Alabama. But the second goal was to create a pier with state of the art lighting that would serve as a model for coastal Alabama. With a new sea turtle nest a mere yards away from the pier, it looks like biologists are off to a good start.

Submitted by Denise Rowell, Alabama Ecological Services Field Office, Daphne, Alabama

I Gave '8' --



Miles Meyer, kneeling, shows Scouts a set of raccoon tracks. Photo by Angela Meyer.

Miles Meyer's Boy Scout Merit Badge activity

Miles Meyer, a Service biologist who serves as liaison to the U.S. Army Corps of Engineers Office in Jacksonville, Florida, for the Comprehensive Everglades Restoration Program, recently helped Boy Scouts in Troop 578 earn several environmental merit badges. These merit badges included Fish and Wildlife Management, Mammal Study, Reptiles and Amphibians, Insect Study and Nature.

"I'm a merit badge counselor. Certain merit badge topics fit within my area of expertise, in my case oceanography and related areas," Miles said.

During the day-long activity, the Scouts observed several dozen species of mammals, birds, reptiles, amphibians and insects, and identified a variety of native and exotic plants. Miles set up the program and provided all the necessary instruction.

The morning session included walking around a five-acre lot observing all the species within an urban environment. They observed raccoon tracks, a rabbit den, sandhill cranes, ibis, herons and egrets, tree frogs, anoles, and a variety of insects. The plants found onsite included native species such as long leaf pine, wax myrtle, a variety of oaks, saw palmetto and Virginia creeper, as well as exotic species such as the air potato and bamboo.

After the walk, the Scouts went indoors to enjoy the air conditioning and learn more about their environment. Discussions included exotic invasive species such as boa constrictors, tilapia, melaleuca and Brazilian pepper. The Scouts also talked about terrestrial and aquatic food webs, wildlife management practices, career opportunities and the classification of animals.

"It was an intense day of working on completing the requirements for all five merit badges," Miles said.

Miles estimates he has helped about 100 Scouts earn merit badges. "Since my son is a Boy Scout, I deal a lot with scouting activities in the Jacksonville area. You talk to kids today and they don't get that outdoor experience. Working with Scouts lets me promote the great outdoors," he said.

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

YCC crew enjoys educational tour of Cahaba River National Wildlife Refuge

On July 29, Eric Spadgenske, Partners Program biologist with the Alabama Ecological Services Field Office, carved eight hours out of his busy week to spend time with the Youth Conservation Corps (YCC) crew at the Cahaba River National Wildlife Refuge. In cooperation with staff from The Nature Conservancy and the refuge, Eric led an educational field tour for the YCC leader and crew discussing a variety of issues facing the river ecosystem. The crew snorkeled the river finding four federally protected species of freshwater mussels and snails. The teen-agers from the Bibb County, Alabama, area spent their summer doing trail maintenance and invasive species control at Mountain Longleaf, Cahaba River, and Watercress Darter National Wildlife Refuges. More photos in [Photo Album](#).



YCC's learn how to snorkel and experience the Cahaba River's ecosystem and inhabitants first hand. Photo by Eric Spadgenske.

Submitted by Dianne Ingram, Alabama Ecological Services Field Office, Daphne, Alabama

Photo Album --

Summer help gives Dale Hollow National Fish Hatchery a hand -- more photos



Paige Rich buffs the floor in the fingerling tank room of the Dale Hollow National Fish Hatchery. Photo by Andy Currie.



Dale Hollow's Deputy Project Leader Terry Campbell accompanied the YCC enrollees on a tour of the Wolf Creek National Fish Hatchery Visitor/Environmental Education Center. Photo by Andy Currie.



Ryan Blakley, Aaron Johnson, and Jordan Melton help Wayne Rich load fish on to a distribution truck. Photo by Andy Currie.



Jasmine Smith picks up dead fish. YOC enrollees made the rounds every morning to collect, count, and bury dead fish. Photo by Andy Currie.

A new look for the freshwater mussel building at Warm Springs Hatchery -- more photos



The new set-up in the mussel building shows three rows of two-tiers of mussel tanks for a total of 18 tanks in the space that previously had ten! Photo by Jaclyn Zelko.



Carlos Echevarria is plumbing new holding tanks for the freshwater mussel building. Photo by Jaclyn Zelko.

Summer Environmental Education Workshop Series at Wolf Creek National Fish Hatchery -- more photos



Special Education and environmental workshop attendees listen and share with facilitator Lauren Dowell during an outdoor activity. FWS Photo.



Maurice Mikkens, biologist, Orangeburg National Fish Hatchery, and Judy Toppins, regional outreach coordinator, Fisheries Program, are all smiles as they participate in the Nature, Explore Classroom Workshop. FWS Photo.

Sewee Center brings real-life resources into the science classroom -- more photos



Tori Wilson relocates a turtle nest. Photo by Tricia Lynch.



Julie Binz and teachers return from viewing a red-cockaded woodpecker cavity. Photo by Tricia Lynch.



Teachers look for banded red-cockaded woodpeckers. Photo by Tricia Lynch.

Student workers attend freshwater mussel identification workshop -- more photos



Jeremy conducts water quality testing to assess stream conditions. FWS Photo.



After mussels were collected from the river, the workshop participants sorted and identified the different species. FWS Photo.

Puerto Rico participates in the Earth Partnership for Schools program -- more photos



This was one of the activities, called Phenology. Photo by Brenda Rosa, Vieques teacher.

Junior Ranger Camp in Warm Springs, Georgia -- more photos



Stream collection using nets and a kick seine. Credit: JRC Camp, FWS.



JRC Camp Week Two Group. Credit: JRC Camp, FWS.



JRC Camp Week One Group.
Credit: JRC Camp, FWS.



Nature hike at FDR State Park.
Credit: JRC Camp, FWS.

Student workers attend freshwater mussel identification workshop -- more photos



Hard-working YOC crew snorkels for shells. Photo by Eric Spadgenske.



Native freshwater mussels from the Cahaba River, Alabama. Photo by Eric Spadgenske.



Eric Spadgenske leads an educational field trip for a YOC crew at Cahaba River National Wildlife Refuge. Photo by Eva Kristofik.

Interagency cooperation monitors possible effects of proposed CERP project on the northern crested caracara -- more photos



Lisa Kreiger (center) was honored as Employee of the Month by the Governing Board of the South Florida Water Management District. Bob Pace (left of Lisa) and Steve Schubert (right of Lisa) expressed the Service's gratitude. Photo courtesy of the SFWMD.



Eureka! Steve Schubert found the satellite transmitter (smaller item in his left hand) across a ditch from the area initially searched. Photo by Jane Tutton, FWS.

Visitor Services --

Getting the job done well with no cost to St. Marks



The prison crew helped St. Marks' staff complete a pole shed expansion project in the refuge shop yard. FWS Photo.

The staff at St. Marks National Wildlife Refuge always finds ways the job done. It is even better when they find ways to get the job done for free! Sometimes, this requires trying the unexpected. St Marks has a work crew arrangement with a State of Florida prison located in Wakulla County, Florida. For the past three years, a crew of six to ten prisoners, supervised by a guard, works 6.5 hours per day for the refuge, Monday through Friday. In this win-win partnership, the state benefits from having a steady work program for the work release prison crew, and the refuge receives much needed help. The prisoners get a chance to work alongside our talented refuge staff and to work in a beautiful location. The refuge's natural resources and visiting public are the overall winners here.

One perk of this program is that the State of Florida covers all expenses for the crew including transportation, the provision of a guard, and the prisoners' meals. The crew has completed a variety of work tasks over the past few years including picking up trash, mowing and brush trimming, assisting with construction and building maintenance projects, re-siding and painting of the Office/Visitor Center, re-siding and painting of the refuge shop and oil house, and replacing or constructing a wildlife viewing tower.

The prisoners also did most of the manual labor for removal of more than 10 miles of relic barbed wire fencing on several refuge sites. They performed extensive roadside de-brushing for public use and administrative refuge roads. The crew also keeps the high volume visitor use areas of the refuge maintained more frequently and at a higher standard than would be possible without their

assistance.

This year's crew helped construct a new whooping crane pen, a path and gravel trail to the pen, and an observation blind for viewing the first flock of cranes to come to St. Marks.

The additional cost to the refuge for the work crews has been minimal and includes simply providing equipment and the supplies and materials required for each project. It is estimated that this partnership saves the refuge \$200,000 to \$250,000 per year!

Submitted by Holly Gaboriault, Refuges, Atlanta, Georgia

Marsh Trail opens in October

You are invited to the grand opening ceremony for the Marsh Trail on the Ten Thousand Islands National Wildlife Refuge in Naples, Florida. The opening ceremony will take place at 10:00 a.m., Saturday, October 10, 2009. Additional activities will include a guided bird walk, exhibits, and guided hiking and kayaking tours. Come out and take part in this memorable event!

To RSVP and for more information contact: Joyce Mazourek, refuge manager, e-mail: joyce_mazourek@fws.gov, or telephone 239-353-8442, extension 228.

Submitted by Takako Sato, Florida Panther National Wildlife Refuge, Naples, Florida

Wage Grade Profile --

Is the water safe to drink at Arthur R. Marshall Loxahatchee National Wildlife Refuge?



Allen Hansen. Photo by David Underwood.

If you are one of the thousands of visitors who come to Arthur R. Marshall Loxahatchee National Wildlife Refuge you can be sure the water is safe to drink thanks to Refuge Maintenance Mechanic, Allen Hansen.

A former Department of Defense (DOD) employee for 17 years, Allen transferred from DOD in his hometown of Key West to Loxahatchee National Wildlife Refuge to marry his long-time sweetheart. He has been with the Fish and Wildlife Service at Loxahatchee for six years.

"The Fish and Wildlife Service is large, but it has a small feeling," says Allen. "It's a family, with everyone having only one reason for being in the Service, to be stewards of the land"

Allen received his water and sewer operators licenses six years ago, which allows him to operate both plants on the refuge. As the water plant operator, Allen must maintain guidelines set by the Environmental Protection Agency. To ensure clean and safe drinking water, Allen must check the water every other day for correct levels of chlorine, check every three months for fecal matter, and submit a report to the county health department monthly.

"The water plant has a capacity of 10,000 gallons of water a day," said Allen. "The refuge only uses about 1,800 gallons a day. It is important the water is safe because not only does the public drink our water, there are families with children who live on the

refuge.”

“It is the sewer plant that gives me the most problems,” says Allen.

The sewer plant processes over 5,000 gallons of waste a day. The plant consists of three tanks, a gravity station and a letch field. These three components of the plant need to be checked every three days to ensure proper pH levels so the bugs used in the anaerobic breakdown of the sewage are kept alive.

If that is not enough to fill 40 hours, Allen has taken on many other projects not in his job description as a mechanic. When the refuge’s new Visitor Center opened, Allen was responsible for overseeing the installation of the computer and phone lines. His present project is the planning and construction of four trailer pads for volunteers to live on the refuge.

“When I started working at the refuge, we had five maintenance employees,” says Allen. “We now have two maintenance workers, the pads will help bring in much needed volunteers to work on the refuge, maybe in the maintenance division.”

Deputy Project Leader Rolf Olson said “Before Allen came to the refuge we were paying over \$6,000 a year for a contractor to do compliance monitoring on both of these systems.”

When not working, Allen enjoys fishing, photography, shooting video, anything technical, and farming on his land in Ohio.

If you are in the area, visit the refuge, but leave your bottled water at home, our water is fine, thanks to Allen.



Allen Hansen tests the water.
Photo by David Underwood.

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

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