

# Life in the Wild

*News from Cape Romain, Ernest F. Hollings ACE Basin, Santee and Waccamaw National Wildlife Refuges*

## Bulls Bay Nature Festival Celebrates Nature and Community

*The annual Bulls Bay Nature Festival – From the Forest to the Sea, brings the people of the Sewee to Santee area together for a day to celebrate and connect with nature and community. On May 17, 2014, federal, state, local agencies and organizations, town municipalities, schools, businesses, and local musicians and artists joined forces for a second year to encourage people of all ages to get outside and enjoy nature-based activities in this festive one-day event. A diverse array of activities took place at Cape Romain National Wildlife Refuge, Francis Marion National Forest, Camp Sewee Marine Science Center, Hampton Plantation State Park, Bishop Jerdan Conference Center, and the Sewee Visitor and Environmental Education Center.*



*Lincoln Middle-High School kicks off the festival with the steel drums, credit Olga Caballero.*

The community festival offers something for everyone. This year, there were kayak trips into the salt marsh estuary and black water creeks of Cape Romain and Francis Marion wilderness areas, and paddle boarding in the freshwater ponds at Bishop Jerdan.

With binoculars and field guides in hand, people accompanied their guides onto the refuge and into the forest to spot birds, butterflies and discover spring wildflowers.

The “zing” of fishing lines was heard throughout the day as kids and their families dropped their bait into the Sewee Pond to catch catfish and, there was the “virtual” casting for blue marlin in the SC Department of Natural Resources simulator van.

Live raptor, reptile and red wolf presentations captivated the festival goers throughout the day at the Sewee Center.

Other activities highlighting the cultural heritage of the community included a sweet grass basketry workshop, and

tours to the ancient Sewee Native American shell ring and the antebellum Hampton Plantation mansion.

Especially for the kids, there were fishing workshops, salt marsh and pond explorations, archery and nature art. Toddlers with parents sported brightly painted faces and creatively crafted turtle hats and red wolf masks.

Each year, National Honor art students from Lincoln Middle-High School showcase their artwork in the festival’s wildlife art exposition and students in grades 4-12 from the community schools show their creativity and talents in the annual wildlife art contest. Winners of the contest will see their work displayed in a 2015 wildlife art calendar which will be for purchase in the Bulls Bay community. All proceeds from the sale of the calendars benefit the art programs in the schools.

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## Bulls Bay Nature Festival Celebrates Nature and Community

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Musical entertainment was provided throughout the day by local musicians. The Lincoln Middle-High School Steel Band opened the venue with their incredible percussions. Rut Leland and Friends played foot-tapping bluegrass on stringed instruments, the crowd “pop-rocked” with the Graham Crolley Band and, the Awendaw Community Singers brought spirits alive with southern gospel.

Rudy Mancke, South Carolina’s Celebrated Naturalist, closed the festival with his keynote program “It’s All About Connections”, his intriguing presentation fitting for the mission of the festival. This year, approximately 500 people came out to enjoy nature and each other. Sixty-five volunteers freely gave their time, making significant contributions to the festival’s success.

The Bulls Bay Nature Festival is an event free of charge, this year made possible by the generous support of 15 festival partners and 23 sponsors. Festival partners included the Avian Conservation Center, Awendaw Green, Bishop Jerdan Conference Center, Camp Sewee Marine Science Center, Cape Romain National Wildlife Refuge, Coastal Expeditions, Clemson Cooperative Extension, Francis Marion National Forest, Hampton Plantation State Historic Site, Nature Adventures Outfitters, SC Department of



*Catching catfish in Sewee Pond, credit Kathy Greider.*

Natural Resources, SEWEE Association, Sewee Outpost, Town of Awendaw and the Town of McClellanville.

The 3<sup>rd</sup> annual Bulls Bay Nature Festival – *From the Forest to the Sea* will be held on Saturday, May 16, 2015. Activities slated for 2015 will include zip-lining in the Francis Marion NF and a photography workshop held at the Sewee Center. Dr. Richard Porcher will deliver the festival Keynote. Dr. Porcher is a noted field biologist and former professor of biology at The Citadel and, an adjunct professor of biology at Clemson University. He is the founder

of the Citadel Herbarium and established the Wade T. Batson Endowment in Field Botany at Clemson University to assist students in studies of South Carolina’s plant ecology. He authored *Wildflowers of the Carolina Lowcountry and the Lower Pee Dee* and co-authored *Lowcountry: The Natural Landscape*,



*Kids discover some of the small creatures in the pond, credit Jean Sullivan.*

## Highs Across the Low

*A “Shout-Out” to Complex Refuges Volunteers! Over a 12-month period, 437 volunteers contributed 31,135 hours of service in support of our refuge missions. Volunteers assisted in wildlife and habitat projects and programs; staffed visitor centers; constructed and cleared habitat gardens, trails and boardwalks; maintained refuge facilities and equipment; and lead interpretive and education activities for all ages. In sum, volunteers worked in all areas of refuge operations. The work that volunteers so generously gave equates to 15 full-time employees. We couldn’t do it without you!*



*DOI Secretary Sally Jewell visits Cape Romain NWR in November, credit USFWS.*

*Secretary Sally Jewell visited Cape Romain NWR, the Sewee Visitor Center, and Bulls Island on November 20th. This was her first trip to a South Carolina wildlife refuge since becoming Interior Secretary.*

She toured the refuge and also met with the public at a community meeting. Secretary Jewell’s visit was to heighten awareness about the significance of funding for outstanding natural areas across the country, and she promoted full funding for the Land and Water Conservation Fund (LCWF).

*For 2014, both Cape and Waccamaw refuges received over four million dollars combined for land acquisitions through the collaborative LWCF.*

Following threatened and endangered species research on the Santee Refuge, biologists found that one of the South Carolina populations of Canby’s dropwort (*Oxypholis canbyi*), a federally endangered plant, is on a site very close to the refuge. Biologists are studying the distribution and ecology of the plant

with the possibility of looking into the acquisition and protection of the property.

Fort Watson Road, the primary public entrance road and gateway to the Santee NWR, received much needed improvements, particularly in enhancement and safety. Renovations included new paving of the Wright’s Bluff Nature Trail parking area and entrance security gate. With the improved road, clean area, security, and new parking, refuge visitors can experience a greater sense of safety while enjoying the refuge.

*Waccamaw NWR was awarded a \$50,000 grant from the South Carolina Department of Parks, Recreation, & Tourism.*

Funding is being used to construct a new parking area and trailhead, replace a boardwalk and fishing pier, and clear a new one-mile trail loop around a lake on a 260-acre addition known as the Long Tract at Cox Ferry Lake Recreation Area (CFRA). Several partnerships including Keep Horry County Beautiful, Waste Management, and clubs and organizations from Coastal Carolina University are working with refuge staff on the project.

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*Dr. Richard Porcher holds flower of carnivorous Hooded pitcher-plant, credit Kathy Greider.*

*A Guide to the Wildflowers of South Carolina and The Story of Sea Island Cotton.* A native of Berkeley County, SC, Dr. Porcher received his MS and PhD in biology from the University of South Carolina.

The mission of the Bulls Bay Nature Festival - *From the Forest to the Sea* is to increase awareness, promote engagement and foster lasting connections with our unique natural places and wildlife in the Bulls Bay community

To keep abreast of the upcoming 2015 nature festival, visit [www.bullsbaynaturefestival.org](http://www.bullsbaynaturefestival.org) or [www.facebook.com/bullsbaynaturefestival](http://www.facebook.com/bullsbaynaturefestival).



*Huger McClellan, SCDNR officer, helps this young archer draw a bead on the bull’s-eye at the Nature Festival, credit Olga Caballero.*



Tree branches bowed under the weight of ice along Fort Watson Road at Santee NWR, credit USFWS/Marc Epstein.

## Highs Across the Low

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Located in Conway and adjacent to Coastal Carolina University, annual visitation at the recreation area has reached over 75,000 and is used by hikers, bikers, students and college faculty.

*The winter storm that impacted the southeast in February hit the Waccamaw and Santee refuges extremely hard.*

Power at the facilities was lost for days. There was no damage to buildings and facilities; however, at Waccamaw, three recreational vehicles owned by volunteers were severely damaged. There were numerous downed trees and branches on roads and trails, and cleanup continued into late March.



Volunteers pile up litter taken from the Long Tract at Cox Ferry Recreation Area, credit USFWS/ Jason Hunnicutt.

## Taking Control of the Common Reed

*The ACE Basin has been plagued with the exotic invasive grass Common Reed (Phragmites australis) since the mid-1990's. Found on the Ernest F. Hollings ACE Basin NWR as well as on private and state owned properties, more than 30 small patches of phragmites are scattered up and down the river banks of the South Edisto and Combahee Rivers. Phragmites is prevalent inside one 185-acre impoundment/rice field at Bonny Hall on the Combahee, property owned by the EFH ACE Basin NWR. Since its foothold in the area, the refuge and the SC Department of Natural Resources (SCDNR) have increasingly battled this extremely invasive plant.*

Phragmites is a wetland plant that was brought to the U.S. in the 1800's. It was introduced from southern Europe, west Asia, and north Africa as an ornamental. The grass has a fast-spreading rhizome system and competes with native plants that occur along freshwater ponds and marshes. Phragmites will encroach and displace most marsh plants including wild millets, panic grasses, flat sedges, smartweeds, and spike rushes. Migratory waterfowl, endangered species and other migratory birds on the ACE Basin NWR and other adjoining Lowcountry wetlands are dependent upon these plants as significant food sources.

In the past, many methods including burning, mowing, drying, flooding, disking, and a combination of these have been employed on the refuge in efforts to eradicate phragmites. The use of herbicides has been found to be the most efficient means to remove the grass. Refuge staff have utilized the herbicide glyphosate with both ground and aerial applications from backpacks, from boats, from amphibious tracked vehicles and helicopters with some short term success. In recent years, more effective chemicals have come about and were approved for refuge use, such as Habitat (Imazapyr) and Clearcast (Imazamox).



Common reed, non-native grass, invades ACE Basin wetlands, credit Dan Ashworth.

Today, the EFH ACE Basin NWR, SCDNR and Friends of Coastal South Carolina have joined forces to complement the efforts of the ACE Basin Task Force Invasive Species Strike Team to control and eradicate phragmites. The USFWS will provide partial funding to the SCDNR for the ACE Basin Project area affecting the refuge.

SCDNR will administer and conduct control efforts for numerous patches of plants primarily on the South Edisto and Combahee Rivers. The project is three tiered and entails identifying and mapping areas of infestation, planning

and applying approved herbicide treatments, and the post-treatment monitoring of herbicide application sites to determine the effectiveness of the control techniques. The project is expected to be completed by September 30, 2015.

Volunteers for the Friends of Coastal South Carolina will assist the refuge in public outreach and environmental education efforts. Additionally, Friends volunteers will be trained to identify, monitor, and participate in control measures for the invasive species while enhancing wetland habitat on the refuge.

## Partners Take Action Against Sea Level Rise

Wetlands are among the most productive, diverse, and important ecosystems in the world, providing habitat for numerous plants, insects, amphibians, reptiles, birds, fish and mammals. Many national wildlife refuges were established for species that rely heavily on wetlands as forage habitat, nursery zones, spawning grounds, and migratory corridors.

Today, the potential impacts of climate change and sea level rise are an immense challenge and concern for coastal refuges throughout the National Wildlife Refuge System. As sea level rise occurs, coastal wetlands can become inundated, resulting in habitat loss or extensive alterations. In order to gain a greater understanding about the impacts of sea-level rise, the Southeast Region Inventory and Monitoring (I&M) Network has started monitoring coastal wetland elevations at 18 refuges spanning Florida, Georgia, South Carolina, and North Carolina.

*Our National Wildlife Refuges provide critical habitat for a multitude of plants and animals, and it is important to understand the rate and impacts of sea level rise to these species habitats. This project will monitor rates of wetland elevation change and relative sea level rise, and using this information, we can forecast the longevity of these habitats on refuges and actions we need to undertake to sustain natural resources associated with these areas.*

Laurel Barnhill  
Southeast Region I&M Coordinator

In the spring and summer of 2012, Nicole Rankin, coastal ecologist with the Southeast Region I&M Network, worked with refuges and biologists from the engineering consultant firm, Atkins Global, to install rod surface elevation table (RSET) benchmarks into an array of habitats on coastal refuges. The benchmark installation involved driving stainless steel rods through the marsh bottom until encountering impenetrable substrate. The team installed a total of 60 RSET benchmarks (three benchmarks per site) for this project.



Nicole Rankin uses the cryogenic coring method to collect a sediment core from ACE Basin NWR, credit USFWS/Theresa Thom.

Following the installations, Nicole trained refuge staff to begin measuring wetland surface elevation from each RSET benchmark, porewater salinity from salinity plots, and sediment accretion from feldspar plots.

This fall, the elevation monitoring project enters its third year. For RSET measurements, monitoring involves taking height measurements (in millimeters) of pins lowered to the marsh surface. Over time, these height measurements are used to calculate the vertical changes of the wetland surface over time. For porewater salinity, water



Sediment deposit on feldspar layer at Waccamaw NWR is measured from a cryo-core, credit USFWS/Theresa Thorn.

is extracted 10 cm and 30 cm below the soil surface, and salinity and temperature measurements are collected. Collecting this information will help determine how salinity within the soil profile changes over time. Accretion cores are collected in order to determine rates of vertical accretion over time. This involves taking a sediment core and measuring the sediment that has accreted on top of a marker horizon.

In the future, each RSET benchmark will also be surveyed using National Geodetic Survey guidelines so wetland surface elevation can be linked to local sea level. The data from this project will help refuge managers identify critical areas where rates of loss are exceeding the ability of the habitat to respond to changes. Having this information will help managers understand what is happening to wetlands on refuges and, adjust management techniques towards forecasted future conditions.

*The Southeast I&M Network has been fortunate to partner with refuges, the U.S. Geological Survey, the Nature Conservancy, the National Park Service, the South Atlantic Landscape Conservation Cooperative, the National Estuarine Research Reserve System, the National Geodetic Survey, and Atkins Global to accomplish many aspects of this project.*

Furthermore, the data collected from this project will be used in conjunction with similar data collected from RSET benchmarks maintained by the National Park Service, the National Estuarine Research Reserve System, and U.S. Geological Service to better examine landscape scale changes brought on by sea level rise. This project highlights the importance of within agency and interagency cooperation and data sharing. The combined-data collected from refuges and other agency lands will provide a more robust and meaningful picture of habitat change and sea level rise across the South Atlantic coastal landscape.

## Memories Made at Santee's Family Friendly Hunt

The brisk October wind brings a welcomed change after a long hot sweltering summer. The refreshing cooler fall air is filled with excitement as the dedicated group of sons and daughters have gathered at the Santee NWR Visitor Center for the Bluff Unit's Family, Friends and Kids Hunt. Refuge volunteer and hunter education instructor, Larry Shontere, explains the final steps of safety and the rules of the hunt to the kids and adults. It's a special time for the adventurous young boys and girls to join their moms and dads or another adult leader for a special hunt on the refuge's Bluff Unit.



Trevor Turcottle proudly displays his large buck taken on the Family Friendly Hunt, credit USFWS/Marc Epstein.

Adding to the growing excitement is a smoking-hot grill full of yummy hot dogs cooking, and a cooler full of chips and soft drinks for a great snack before the hunt. Partnering with the Refuge to support this quality hunting program and safety, the South Carolina Chapter of the Rocky Mountain Elk Foundation has been offering snacks and safety gear for the kids for many years. The refuge's focus is to bring kids and adults together for a great hunting and outdoor experience. For some lucky few, they will remember this hunt for the rest of their lives because there are some very large deer on the Bluff Unit.

This special "Family Friendly" hunt is a little different from a traditional "Youth Hunt." With the Youth Hunt, only kids that are between the ages of 10 -17 with hunter education can hunt accompanied by an adult. There are two main differences with the Family Friendly hunt. First, kids that qualify for age and hunter education can hunt but the adults can too. Secondly, with the Family Friendly hunt, any kid can join with an adult and participate in the hunt. However, if they do not meet the age or hunter education requirement, they can still go along on the hunt with an adult, and still have a great hunting/outdoor experience. Here's how it works.

To be considered for this hunt, hunters can apply on-line with an application to be randomly selected for this very popular event or send the application to refuge headquarters. The lucky hunters are notified by mail for the dates they were selected. To make the hunt more interesting and for safety reasons, hunters are only allowed to use muzzle loading (black powder) rifles or shotguns with slugs. In cooperation with SC DNR, the refuge also offers Hunter Education classes during late summer.

The good news about the hunt is that it's not uncommon for several hunters to be successful in their first hunt. The secret about this hunt is out and it is becoming very popular. However, to learn more and how to apply, please visit the Santee NWR at: <http://www.fws.gov/santee/Hunting&Fishing.html> or call the refuge headquarters at 803/478 2217.

Marc Epstein, Refuge Manager, Santee NWR

## Waccamaw Youth Blazing Trails for Conservation

This summer, Waccamaw NWR proudly hosted its first Youth Conservation Corps (YCC). YCC is a summer employment program enabling high school students to work full time on federally managed lands. The program lasted eight weeks and was funded through the U.S. Fish and Wildlife Service. Additional funding from the Frances P. Bunnelle Foundation allowed the Refuge to hire a crew leader. Sam Buzuleciu, current graduate student at Coastal Carolina University and former intern and employee of the SEWEE Association, was hired as supervisor. Six students were recruited from both Horry and Georgetown counties with the help of recommendations from teachers and advisors and included two long-term residents of Tara Hall, a local home for boys.

During some of the warmest weather of the year, the YCC crew worked on various projects around the Refuge. This included cleaning up debris and maintaining trails, going out in boats to collect litter in the rivers, and constructing and improving habitat for wildlife. A main project was the expansion of the Cox Ferry Lake Recreation Area in Conway. The expansion is well underway thanks to the crew which worked to blaze trails, remove fences, and clear brush. With assistance from so many extra hands, Cox Ferry Lake Recreation Area and the Visitor's Center have never looked better.

The YCC crew also assisted in teaching several environmental education classes to local summer camps. Most of the students had never handled snakes or an alligator and, by the end of the summer, they argued over who would hold the reptiles as they had all grown fond of them.

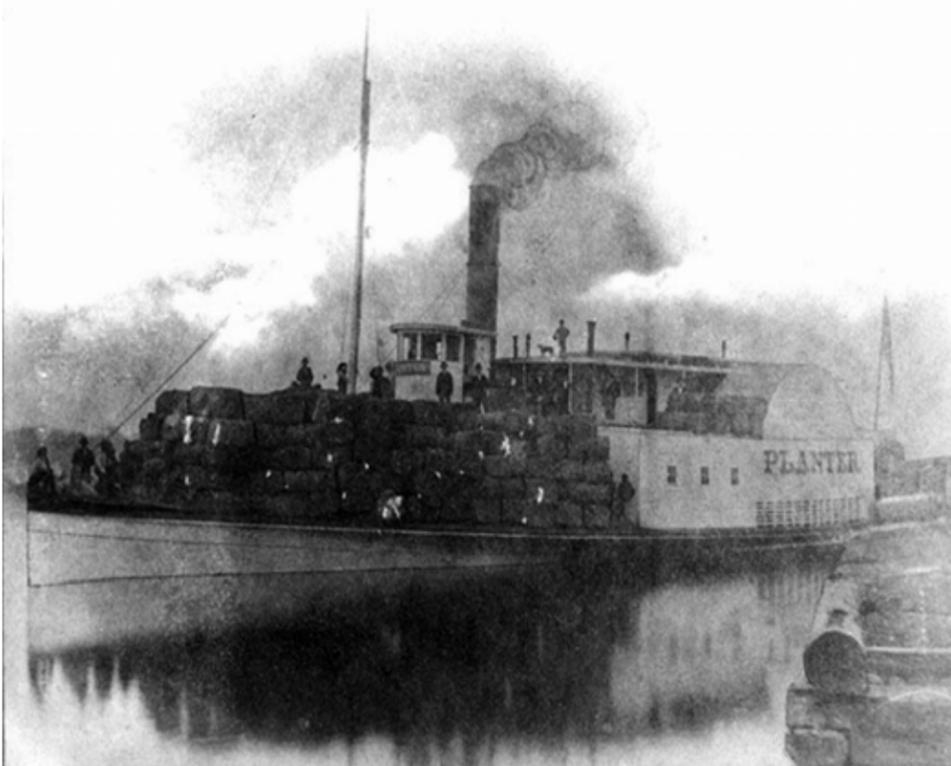
In an effort to conserve Refuge resources, the students started two successful insect farms that eliminated routine trips to pet stores and bait shops, reducing feeding costs for the Visitor Center's reptiles and fish. *continued on page 9*



2014 Waccamaw NWR Youth Conservation Corps crew on Boneyard beach during their visit to Cape Romain NWR; from left: Sam Buzuleciu, Kelsey Graham, Brianna Armstrong, Tiffani Gore, Jamison Pertell, Andrew Destefano and Skylar Wheeler, credit Olga Caballero.

## Planter and Robert Smalls: Destiny and Discovery at Cape Romain

*In early Spring, National Oceanic and Atmospheric Administration (NOAA) representatives contacted Cape Romain NWR staff to share the exhilarating news that NOAA archeologists had most likely located the historic ship “Planter” off of Cape Island. The discovery of “Planter” rekindles the stirring story of enslaved African American Robert Smalls, a man who commandeered the ship to his freedom and ultimate destiny.*



*Planter loaded with cargo at Georgetown, credit Dennis Cannady collection.*

The search for *Planter* was launched by the Voyage to Discovery initiative, a partnership between NOAA's Office of National Marine Sanctuaries Marine Heritage Program, the National Association of Black SCUBA Divers and the Bill Murrain Foundation, in collaboration with the Institute for International Maritime Research. A main focus of Voyage to Discovery is to explore the ocean waters to identify a sunken shipwreck that illustrates the maritime experience and achievements by African Americans. The *Planter* initiative entailed

an extensive research of the vessel's history and the location of its remains.

*Planter* was built in Charleston between 1859 and 1860. Made from live oak and cedar, the hull measured 147 feet long by 30 feet wide. The steamer had two boilers with two engines that powered side-paddle wheels. Owned by John Ferguson, the *Planter* transported cotton and passengers between Georgetown and Charleston and communities along the Pee Dee River.

The national fame of *Planter* is inextricably linked to the heroic act of Robert Smalls during the Civil War. In

1861, Smalls was an enslaved deck hand on the steamboat, skilled at navigating the shallow creeks and rivers along the South Carolina coast. After the War began, *Planter* was chartered by the Confederate government and Smalls was conscripted as ship's wheelman.

On May 12, 1862, *Planter* returned to Charleston after picking up four cannons and a gun carriage to be delivered to confederate forces the following day. The white crew members left the ship to attend a gala in the city. Given an opportunity, Smalls had devised a daring

plan for freedom. In the early morning hours on May 13, Smalls, his brother and their families, and black crew members made their courageous escape. Wearing the Captain's hat and sounding the ship's whistles, Smalls commandeered *Planter* past Fort Sumter as day broke. With a white flag raised, Smalls delivered the *Planter* and cargo to the Union warship USS Onward. In the North, Smalls was hailed a hero.

Smalls, recognized for his daring escape and knowledge of the navigation channels, was employed as *Planter's* pilot for the inland waterways. *Planter* was transferred from the Navy to the Army to be used in riverine operations and, in 1863, Smalls was reassigned into Army service. On April 7, 1863, Smalls piloted the iron clad *USS Keokuk* in battle. Barraged by shells, he navigated the ship out of range of confederate guns, where it sank. In the encounter at Seccessionville in December 1863, Smalls guided *Planter* to safety when the captain abandoned his post.

*Smalls was appointed Planter's captain, becoming the first African American to receive such rank in the U.S. military.*

Following the War, Smalls and *Planter* were recognized at the raising of Fort Sumter's flag on April 14, 1865. *Planter* was filled with African American passengers. During the ceremony, one wrote of Smalls, "...self-possessed, prompt and proud, giving his orders to the helmsman in ringing tones of command" (French, Justus Clement, 1865).

*Planter* was turned over to the Freedmen's Bureau and Smalls commandeered the ship to transport freed people to camps at Hilton Head Island until mid-1866. Smalls last assignment with *Planter* was to deliver the ship to Baltimore, MD, where it would be sold.

Smalls pursued a political career. He served in the South Carolina Legislature as both a representative and senator from 1868-1874. He was then elected to the U.S. House of Representatives where he served five terms, from 1875 to 1887. Smalls returned to his home in Beaufort, to the house where he was born into slavery.



*Smalls aboard Planter at Fort Sumter ceremony April 1865, credit Dennis Cannady collection.*

Ferguson regained ownership of *Planter* and the steamer resumed its pre-war commercial operations. On March 24, 1876, in an attempt to rescue the schooner *Carrie Melvin* off the shoals of Cape Island, *Planter* struck a shoal and sprang a leak. Storm conditions arose and, with its bow open to the surf, *Planter* was damaged beyond repair.



*Congressman Robert Smalls, credit Dennis Cannady collection.*

134 years later, NOAA's Maritime Heritage Program conducted extensive historical research using records of *Planter's* design and machinery, historic charts, and newspaper accounts of its sinking. IIMR implemented a remote-sensing survey in 2010. Utilizing a magnetometer and hydraulic probing, researchers identified characteristics of shipwreck remains and made contact with metal approximately 10 feet below the bottom surface. The findings, located about ½ mile off of Cape Island, are believed to be *Planter*. NOAA passed on the data to South Carolina and, any further investigations of *Planter* are to be carried out by the state.

*“We consider it an honor that the ship's final resting place is on Cape Romain and will long revere these heroes while we enjoy life in a nation where freedom is paramount,” says Raye Nilius, project leader for the South Carolina Lowcountry Refuges Complex.*

NOAA's Office of Marine Sanctuaries, the USFWS Southeast Region, Fort Sumter National Monument NPS, and Cape Romain and Waccamaw Refuges commemorated the discovery of *Planter* and Robert Small's achievements with ceremonies at the Francis Marion Hotel, Charleston on May 12<sup>th</sup> and at the Sewee Visitor and Environmental Education Center, Awendaw on May 13<sup>th</sup>, 152 years after Smalls' heroic escape to freedom. An exhibit which imparts the story of *Planter* and Robert Smalls is in place at Garris Landing, Cape Romain NWR.

## Waccamaw Youth Blazing Trails for Conservation

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As a token of appreciation and, to take a break from the difficult work, Sam took the YCC crew to Bulls Island at Cape Romain NWR. The students explored the island and learned about the natural and human history of our neighboring refuge. Special thanks to Patricia Midgett and Olga Caballero for hosting that fun and educational trip.

For most of the crew, the summer employment was their first job. They now have experience working as a team in difficult conditions - a life skill that should serve them well in any field. They learned that most natural resources professionals wear many hats. These students had days when they taught classes in the morning and blazed a new trail in the afternoon.

Brianna Armstrong, a student at Horry County Early College High School had this to say about the program, “The YCC program provides an opportunity for young adults/students to improve their community and learn new and unique things.” Brianna is one of three crew members that will finish their Associate's degree when they graduate high school in a year or two. With any luck, some of these bright and hardworking students will remember fondly their experiences as a YCC crew member and find their way back to fields related to conservation and natural resource management.

For more information about volunteer or recreational programs offered at Waccamaw NWR, please contact the Refuge Visitor Center at 843/527 8069 or visit [www.fws.gov/waccamaw](http://www.fws.gov/waccamaw).

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## The Long Way Home

On March 11, 2014, a winter storm named “Vulcan” pushed through the West dumping snow followed by high winds. Vulcan skipped over the Central Plains leaving little snow or moisture behind. The following day, Vulcan began wreaking havoc east of the Mississippi. Strong winds, freezing rain and snow all culminated to create a winter storm that impacted far more than the local inhabitants for days to come.

Neotropical migratory birds, including the Swallow-tailed kite, had started their spring migration northward from far reaches such as Brazil, where the kites spend their winters. This mega storm created unanticipated challenges for migrating avian species, many of which may have perished leaving no trace behind.



*Flying to freedom over the Great Pee Dee River, credit John Henry Sasser.*

transport the dying bird to the facility. When the kite was assessed for injuries by Director Katherine Uhler, the kite weighed 378 grams and could not stand. Over the next two weeks, the kite regained weight reaching 426 grams and was eventually transported to the Tri-State Bird Rescue, in Newark, Delaware. Ironically, this facility had received another kite that had been blown into Bucks County, Pennsylvania by the same March storm.

Swallow-tailed kites showing up in the mid-Atlantic region of Delaware, Pennsylvania, and New Jersey, has become an annual trend where a few kites appear in the Spring, usually between the beginning of April and the middle of May. Kites observed in the Spring in these areas are thought to be “overshoots”, meaning that their migration back to their breeding locations went a bit too far north and they sailed along into territories where they aren’t likely to stay very long. These “overshoots” are usually associated with a strong Southerly wind that pushes the birds further and faster than they’d normally fly. It is nothing for a kite to travel a few hundred miles in one day in the right conditions. On occasion, in Cape May, at the tip of the New Jersey peninsula, the kites gather as they head south and try to make it across the Delaware Bay on their way to the Carolinas, which is the northernmost known nesting area for these spectacular birds.

After both kites were reunited at the Tri-State Bird Rescue Center, plans were made to get necessary permits to

transport these birds to warmer climates in South Carolina. The most important factor for their release is that they are released in suitable habitat where there are abundant food resources that will significantly improve the speed and extent of their recovery.

A volunteer at the Tri-State Rescue Center told Derek Stoner, the manager of Middle Run Natural Area in Delaware and who also volunteers for the Center, that there was an abundance of kites at Waccamaw NWR. Derek contacted Refuge Manager Craig Sasser and asked if one of the rehabilitated birds could be released at the refuge. On April 5<sup>th</sup> Derek and friend Hillary Sullivan made a nine hour overnight trip from Delaware to South Carolina to release the kite. The other kite had been released with great success just days before at Francis Marion National Forest, located just a short distance south of the refuge as a kite flies.

Derek, Hillary and the newly banded kite arrived at the refuge headquarters around eight o’clock in the morning. In preparation for its release, protective covers on the kite’s tail were removed. Soon after, the kite was released from the Yauhannah Bluff overlooking the Great Pee Dee River. As pictures were being taken, it became obvious to the audience of staff and volunteers that this bird had finally made its way home. The kite soared, swooped, preened and put on an incredible aerial display before following the river upstream as if it had been at Waccamaw before.



*Swallow-tailed kite undergoes rehab at Pocono Wildlife Rehabilitation Center, credit Barbara Miller.*

On the early morning of March 13<sup>th</sup>, while leaving for work and surveying the aftermath of Vulcan, Beth Whitmore of the Whitehall Township, Lehigh County PA, was surprised at her discovery. As Beth was leaving her home for work, she heard a large group of crows cawing from a tree in her backyard. After a few minutes of investigating the source of their distress, Beth noticed a beautiful black and white raptor on the ground near the tree. This beautiful raptor was like none she had ever seen, and it was too weak to move. Beth called Pocono Wildlife Rehabilitation Center, Stroudsburg, PA to report the bird. Within minutes PWRC capture/transport volunteer Barbara Miller arrived to

## Red Wolf Pups Ignite Passion and Innovation

Cape Romain NWR announced exciting news on April 8<sup>th</sup> that the Red wolf female, Lily, had given birth to pups at the Sewee Visitor and Environmental Education Center. Of the six pups born, four of the pups survived. The births were the first successful litter to be born at the Center, one of 44 captive breeding facilities nationwide for the endangered wolf. Two pups were relocated to Alligator River NWR in North Carolina to be fostered by free-ranging wolves, allowing for integration into the wild population. The two male pups remaining at the Center, Jewell and Colbert – named after Interior Secretary Sally Jewell and television comedian Stephen Colbert – are being raised by the parents, with much care provided by wolf caretaker Rob Johnson and refuge staff.

the wolves has been paramount to the success we have seen this year” noted refuge manager Sarah Dawsey. “We are very fortunate to have Rob as our wolf caretaker.”

As part of that care, the pups received vaccinations and deworming from birth to 16 weeks of age. That involved the difficult task of catching the pups for the administration of the vaccines. At the nine-week vaccination, Johnson and staff had a particularly tough time finding them as they hid in an underground den with a network of tunnels in multiple directions. “We typically try to crawl in or dig out part of the den in order to locate the pups” Rob stated. Rob and staff came up with an innovative method. Using a Go Pro camera and headlamp attached to a fabricated pole, a Wi-Fi connection



*Red wolf pups snuggle under the watchful eye of their parents, credit USFWS/Raye Nilius.*

Rob Johnson, fondly known as “Wolfman”, worked closely with Lily and mate Shiloh that produced April’s litter. Rob assisted staff to ensure the pair acclimated to their surroundings and received high-quality enrichment. Rob continues to provide excellent care for the wolves. He also raises awareness for the red wolf recovery program by presenting discussions and feedings twice weekly for Center visitors. “Having an individual as invested as Rob in the husbandry of

and an iPhone, they were able to pinpoint the location of one pup in the den and eventually find the other. This technology will be used to locate the pups over the next year.

Cape Romain NWR has been an integral part of recovery efforts for the Red wolf since 1976. It was on Bulls Island in 1978 that the successful release of two wolves demonstrated the feasibility of re-establishing the wolf back into the wild. Bulls Island became the first island



*Veterinarian Brian King and Rob Johnson prepare to release Colbert following his 16 week vaccinations, credit USFWS/Tricia Midgett.*

breeding site for the recovery of the species. In a span of 18 years (1987-2005), 26 pups were born on the island.

The Red wolf is a critically endangered mammal that historically thrived in the eastern and south-central United States. As a result of predator-control programs and habitat loss or alteration, Red wolf populations declined drastically in the 1900s, which led to endangered species listing in 1967. Today, under the Red Wolf Species Survival Plan, there are 208 Red wolves in captive facilities. Approximately 90 - 110 wolves comprise the only wild population at the Alligator River NWR. This year, 19 pups were born in 4 litters on the refuge.

Red wolves are housed at the Sewee Center where visitors can observe and learn about this rare and beautiful animal. The Center is open Wednesday – Saturday from 9:00 am – 5:00 pm with Red wolf discussions and feedings scheduled on Thursdays and Saturdays. Visitors can contact the Center at 843/928 3368 for more information about the wolves and other educational programs.

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