



Chief Editor: Elsie Davis

July - August 2016



RD's Corner

Recently in Chattanooga, Tennessee (July 25-29), more than 160 project leaders and other leaders

from across the Southeast Region came together with our Regional Directorate Team for a training we intentionally titled, *One Service: Fit for the Future of Conservation*. By the time we departed Chattanooga, we had greater clarity, are more strongly aligned and better positioned to implement a new vision for the Southeast Region:

"Together, we will connect lands and waters to sustain fish, wildlife and plants by being visionary leaders, bold innovators and trusted partners, working with and for people."

We explored every word of that vision in our training and geographic and programmatic breakout sessions that followed. We shared what the vision meant to us as individuals and to our Service programs. We considered what we would need to stop, start, do differently, and continue to do in our daily work to turn that vision into a reality. And we made commitments, individually and collectively, to move the vision forward in the days, months, and years ahead with the support and ideas of all of our employees. We believe we are more fit and better situated to address the conservation opportunities and challenges facing our Region between now and 2060.

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Cecil, Campbell, and the Region's vision

By Jeffrey Fleming, External Affairs

A day after the *Fit for the Future of Conservation* training workshop wrapped up, Ricky Campbell headed northeast from Chattanooga to just outside Brookford, North Carolina, where he and a team of Service employees would begin to take down the Shuford Mills Dam.

The Aquatic Habitat Restoration Team was getting ready to put this new vision to work. During the four-hour drive to Brookford, Ricky couldn't quit thinking about the discussions triggered by the training around the vision, aligning our work for the future, and setting ourselves up to execute the work needed to make the vision real. *(For more about the Fit for the Future of Conservation training see the Regional Director's column.)*

"I was sitting on a big machine tearing up huge things and you have a lot of time to think," Ricky said. "For every stone we removed I thought about how we were getting one step closer to connecting populations of critters and opening aquatic corridors." Then, Ricky had a conversation with Cecil, an elderly gentleman who lives within walking distance of the dam. He visited Ricky and the team every morning and every afternoon. Cecil grew up on property within walking distance of the dam. He and his family had lived there longer than the dam had been there.

"He wanted to see it removed," Ricky said, "not so much from a liability or safety standpoint, but from a standpoint of the health of the river. His life experience told him the same thing we as biologists knew."

"Cecil understood the value of a healthy river and he talked about it with unmistakable simplicity and a connection to the land," Ricky added. "He talked about how he had hunted squirrels and rabbits up and down the river as a child and how he fished and swam in the river all of his life. He valued the river and the lands joining the river and he had a great appreciation for the clean water that would occur once the dam and upstream trash and sediment was removed. But Cecil's appreciation went much deeper than that."

The visits wouldn't last long – maybe 15 or 20 minutes. During the last conversation he told me something that stuck with me. "If we could take care of the rivers and creeks, the fish and wildlife would always have a home too."

Cecil understood the impact of connecting lands and waters to sustain fish, wildlife and plants with great clarity.

"The conversations reminded me of the importance of investing in trusted partnerships big and small," Ricky said. "Sometimes it's just a 15-minute conversation over two or three days. Other times, it takes many conversations and lots of give and take. In both cases, the value is huge."

We talked about why this vision matters:

First, the fish, wildlife and plant resources in the Southeast Region are extraordinary in their diversity and number.

- We are one of eight Service Regions, yet more than half the nation's birds, mussels, fish, reptiles and mammals and nearly half of the amphibians occur in the Southeast Region. At the same time, we also have outsized threats to those resources.
- We have experienced explosive population growth in the Region (roughly 40 percent faster than any other region over the past 60 years), and all indications are the trend will continue. We are likely to lose 23 million acres of forest by 2060 - an area equal in size to the State of South Carolina. Talk about competition for lands, water and other critical ecosystem services.

And finally, the only way we can successfully accomplish our conservation mission in the face of such challenges is to work with and for people across the Region to define a connected landscape that will sustain fish, wildlife, plants and all of us.

- If we fail to do this, the landscape will be defined for us by accelerating climate change, unsustainable development, and all other manner of outside forces.

We recognize this vision for our desired future state may sound familiar to some - as there are examples across the Region where we have building blocks and a foundation in place to pursue it. For example, over the past 20 years, we've realized a net gain of more than one million acres in the Lower Mississippi Valley. The result has been increasing populations of migratory birds and the delisting earlier this year of the Louisiana black bear - exactly the outcome we can expect when we connect lands and waters to sustain wildlife. We want to be more focused in a way that aligns our daily actions with achieving this larger vision.

We agreed that pursuing our vision is not about working harder - we are already working all out. It is about being proactive, strategic and smart together

as One Service. It is about determining what skills and capabilities we will need now and in the future to realize our vision. It is about creating win/win relationships with partners that keep working lands working, while we also conserve our nation's fish, wildlife and plant resources and their habitats - for ourselves, our children, and their children.

We wrapped up the week with an expressed desire to be proactive in our conservation approach, playing to win rather than to not lose; to continue to move from pockets of excellence to an "all hands on deck" commitment to the vision. The tractor driver, the contracting officer, the biotech, the wildlife manager, the public affairs specialist, the project leader - all of us must understand and act on this shared vision.

We agreed that we must do so because we need to. It is our job, the mission of the Service, and others are counting on us.

We agreed that we must do so because we have to. Landscape-level thinking coupled with on-the-ground action is our best hope for a sustainable future for wildlife and people.

We agreed that we must do so because we can. I know we can!

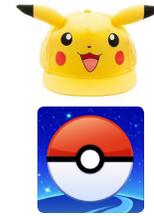
Our vision is a shared understanding of where we want to be in the future for the sake of the wildlife resources we steward and the nation we serve. The task before us now is to make the vision a reality on the ground. How we do that is something that we will decide together, acting locally while building toward connected lands and waters that sustain fish, wildlife, plants and people. In the next E-Grits message, we will share some of the dialogue that all of your leaders engaged in during our cross-program and our programmatic breakout sessions.

We will pursue making this vision a reality in our everyday work. I know that with your support, we cannot fail, but without the support of each of you, we may not achieve this desired future state. I am honored to be on this great and exciting journey with you as we continue to pursue our shared passion for conservation. ❖

- *Cindy*

What's Trending

By Katherine Taylor, External Affairs



Apps: Pokemon Go. In case you've been living under a rock, Pokemon Go is an augmented reality app that allows users to track and "catch" Pokemon that pop up in the real world when looking through their phone. Wildlife Refuges, Hatcheries, and National Parks have all seen an increase of young folks visiting to catch Pokemon. This is a great opportunity to make an impression on future conservationists. Oh, the game is free!

#MostShared Story: July 16th was World Snake Day, and our post featuring an Eastern king snake reached 62,665 Facebook users!

Social Media: Facebook now has a built in livestreaming feature that allows users to live broadcast from their account. USFWS's social media coordinators are looking into using this for our official accounts.

Employees of the Month

Welcome two new employees to Wolf Creek NFH

By James Gray, Wolf Creek NFH



Ashley assists an Eastern Box Turtle with its journey across a road, photo: USFWS

Ashley Buffington Environmental Education/Outreach Specialist, began working at Wolf Creek in Jamestown, Kentucky, on May 16, 2016. Among many duties she schedules group tours, provides Environmental Education programs, and oversees the care of the education animals. Ashley loves to share her passion for our natural world with visitors of all ages and has recently received her certification in Project Wild and Project Wild Aquatic. Her extensive knowledge will be an asset to the Wolf Creek outreach team. Prior to her employment at Wolf Creek, Ashley attended graduate

school at the College of Charleston in Charleston, South Carolina, earning dual master's degrees in Environmental Studies and Public Administration.



Makenzie holds an orphaned raccoon kit as they await the arrival of the wildlife rehabilitator, photo: USFWS

Makenzie Back began as a volunteer at Wolf Creek Kentucky, on March 22, 2016. She was hired as a Biological Science Aid on May 30, 2016. Makenzie splits her time at the hatchery between Environmental Education in the Visitor Center and Fish Production outside. She will be attending Eastern Kentucky University in August to continue her education in animal studies. During the school year, Makenzie will be assisting with Fish Production duties part time. ❖

Secretary Jewell gets firsthand look at coastal Louisiana restoration projects

Project to benefit Southeast Region wildlife

By Nanciann Regalado, NRDA



Dusty Pate, NPS, shows Secretary Jewell and others a successful canal filling project. Also shown is Justin Ehrenwerth, Gulf Coast Ecosystem Restoration Council Executive Director (back), and Julie Whitbeck, NPS ecologist, who is showing a map of the area, photo: Tami Heilemann, DOI

On June 20 and 21, Interior Secretary Sally Jewell traveled to coastal Louisiana to visit the sites of two restoration projects recently approved by the Gulf Coast Ecosystem Restoration Council. Secretary Jewell is a member of the 10-member federal and state group that was created after the 2010 Deepwater Horizon oil spill to help restore the Gulf of Mexico by using penalties paid by the companies that caused the spill.

After Lance Hatten, superintendent of Jean Lafitte National Historical Park and Preserve, extended a warm welcome to Secretary Jewell, park employees Dusty Pate and Julie Whitbeck briefed Secretary Jewell about the RESTORE project that will fill 16.5 miles of canals in the park's Barataria Unit. Filling the canals, which were dug decades earlier by oil and gas companies, will restore the land's natural hydrology and encourage the regrowth of native marsh vegetation.

At the site of the future project, Pate said, "We just push the spoil mounds into the adjacent canal and the native vegetation establishes itself; we don't even have to do plantings. It's as easy as that." Pate then led Secretary Jewell to a previously filled

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canal. Pointing to what looked much more like a crooked canoe trail than a straight and wide canal, Dusty indicated where the old spoil mounds used to be and described how over time, native plants have marched from each side to the center of the canal. “Good results aren’t immediately apparent,” Pate explained. “It takes a little time, but, they are well worth the wait.”

On the second day of her visit, Secretary Jewell travelled to the Chitimacha Tribe reservation in St. Mary’s Parish and announced the award of \$100,000 to each of the five federally recognized tribes located along the Gulf Coast – the Chitimacha Tribe of Louisiana, Miccosukee Tribe of Indians of Florida, Seminole Tribe of Florida, Mississippi Band of Choctaw Indians and Poarch Band of Creek Indians of Alabama. The award money will support tribal youth conservation corps environmental cleanup and restoration activities.

“These funds came from penalties paid by those responsible for the oil spill, and I’m very pleased to announce that these funds will be used to invest in the next generation of tribal leaders,” Jewell said. “These young tribal members will ensure that not just the Gulf Coast, but tribal homelands around the coast are preserved for generations to come.” ❖

Service employees lead studies on toxic and physical effects of oil on birds

By Nanciann Regalado, NRDA

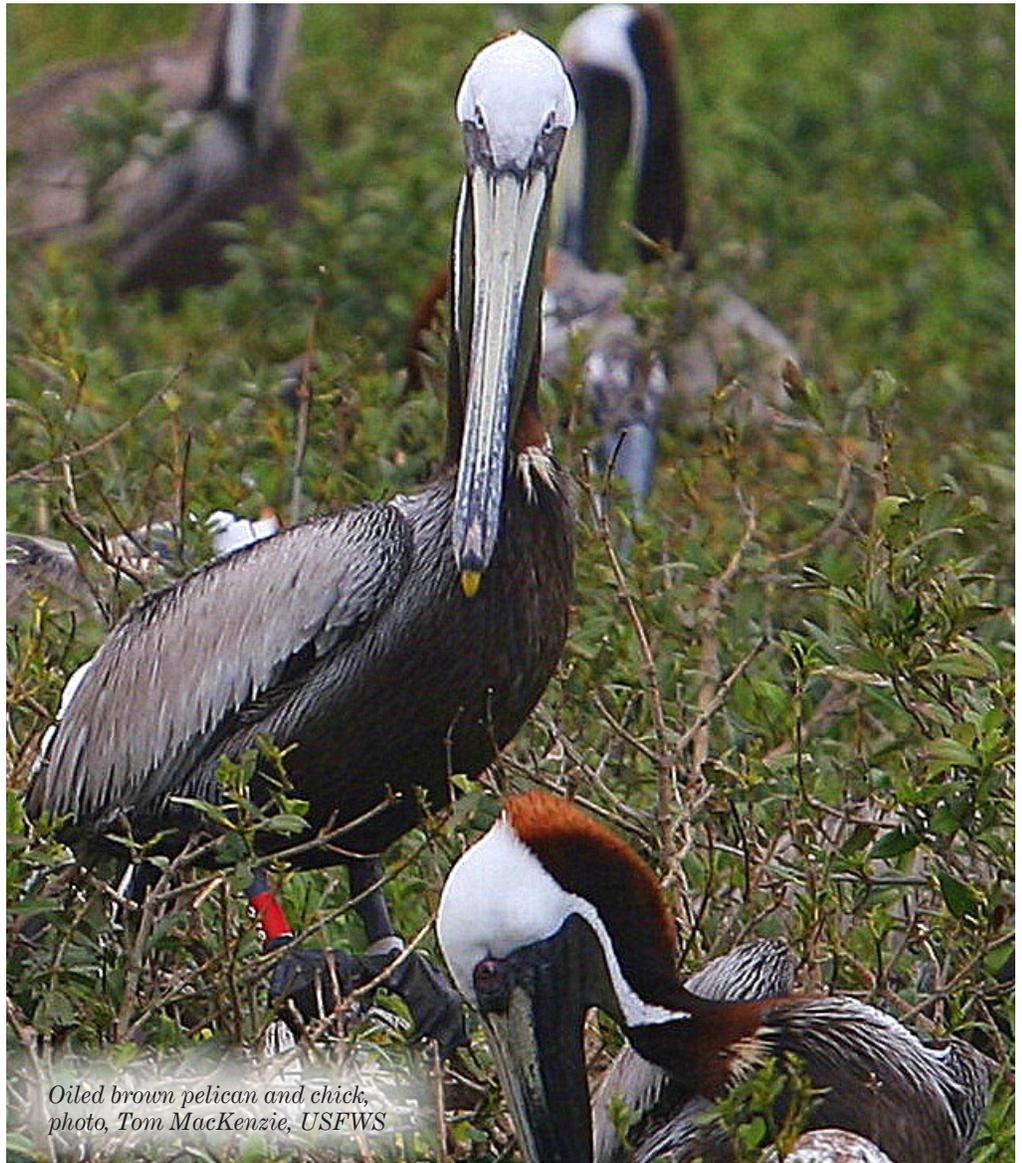
Kate Healy, a Southeast Region biologist working at the Service’s Fairhope, Alabama field office sighs deeply when asked to describe her role in assessing the devastating effects of the Deepwater Horizon oil spill on birds. “Well, that was tough work... not physically, but emotionally,” she said after a brief pause. “Much of my work involved exposing birds in the lab to the same toxic substance we knew had already killed thousands of birds in the field. But we had to do it. Our job was to estimate the injury the Deepwater Horizon oil spill inflicted on birds across the Gulf of Mexico.”

The Deepwater Horizon Natural Resource Damage Assessment Trustees had the daunting task of assessing injury to the wildlife that live all or part of their lives in the Gulf of Mexico region. The Service led efforts to complete the assessment for avian species.

The Trustees relied on two approaches to assess injuries to migratory birds. The first, the Shoreline Deposition Model was described in the last issue of E-Grits. That approach used data on the deposition of impaired and dead birds on shorelines, such as the chances dead oiled carcasses would make it to shore and the likelihood of them being found by searchers, and other data to estimate mortality across the Gulf. The second approach used was the Live Oiled Bird Model, which estimated injury to birds that were oiled, but did not immediately die from the exposure. This second

approach relied on four kinds of dosing studies. One used direct oral doses and another involved application of oil to birds’ feathers. The toxicological effects of these kinds of exposure were analyzed and used to estimate the fate of the thousands of bird in the field that were observed with oil on their feathers. Another study looked at the impact of oiled feathers on a bird’s metabolism, thermal regulation, and ability to fly. The final approach was a field-based look at the effects of oiling on flight.

Healy sums up what Service employees found through investigations they either managed or conducted with one word: “Significant.” “The study results, when taken together, indicated that even light oiling, which we had thought some bird could survive quite well, may be far more detrimental than we ever expected.”



Oiled brown pelican and chick, photo, Tom MacKenzie, USFWS

RDT in the Field

Leo Miranda gets to work in the Florida Keys

By Jennifer Strickland, External Affairs

When members of the Regional Directorate Team began the RDT in the Field project, their goals were to better connect with regional staff and to facilitate connections across agency programs. The initiative has resulted in numerous leaders visiting field stations outside of their traditional program boundaries and innovative opportunities for cross-program collaboration.

Last July, Christian Eggleston, deputy refuge manager at the Florida Keys National Wildlife Refuges Complex, requested an RDT member join his team for sea turtle or butterfly surveys at Key West National Wildlife Refuge.

Leo Miranda, Assistant Regional Director for Ecological Services, was up to the task. "If the Florida Keys are not a priority in terms of Endangered Species Act issues, I don't know what is," he says. His only caveat: "I told them to put me to work!"

The staff obliged, and the first day on the job was a messy one. "We were working around heron and egret nests," Leo said. "The refuge's staff built platforms for solar panels in a remote mangrove area. Then we installed the solar panels that will charge batteries to power cameras that monitor the bird nests."

His next project was for the butterflies. Leaders in Ecological Service, including Leo, have identified an opportunity for the program to support habitat restoration projects on refuges. "A limiting factor common to restoration projects is the amount of native plant material available," Leo notes. "We're looking to collect the seeds of native plants on a refuge, then use the seeds to do a germination test with the eventual goal of reproducing plants to restore habitats."

Leo observed the fruits of a native plant project at National Key Deer designed to provide habitat for the endangered Bartram's scrub-hairstreak butterfly. "There are a bunch of rare and endangered plants coming up all over the project area. It's cool stuff!"

On the final day, Refuge Manager Daniel Clark took Leo to the island to install a new educational sign on the Upper



Setting up the solar panels, photo: courtesy of Leo Miranda

Sugarloaf Trail. While working, local residents stopped by to observe their handiwork. Leo remembers one woman in particular whose first reaction to the sign was, "I love that you use the word, 'Welcome.'"

Leo found the trip to be professionally and personally rewarding on many levels. "It took me back to my research days in the mangrove swamps of the Caribbean," he says. "There were two interns there from

Florida Atlantic University doing wading bird research. That's what I did for my Masters. When I saw them, I saw myself... except with hair!"

Not only that, but Leo was in for another pleasant surprise. "Years ago, I published a paper on a modification to the Throw-Trap, a sampling device. I was thrilled to see that the interns knew the paper and were using the exact design I had proposed."

Bragging Rights

U.S. Fish and Wildlife Service recognized as Federal Government - Conservation Partner of the Year.

By Lilibeth Serrano, Raleigh, North Carolina, Ecological Services

Our conservation efforts in North Carolina have clearly aligned with those of local land trusts. The Conservation Trust for North Carolina, an organization comprised of 24 local land trusts, gathered in May for their annual Land Trust Assembly and awards ceremony. During the event, Service representatives from multiple offices received the 2016 Government Partner of the Year Award. The North Carolina Coastal Land Trust nominated the Service for this award, thus acknowledging the fruitful collaboration with biologists John Ann Shearer, Mike Wicker, Sara Ward, and Field Supervisor Pete Benjamin, all of the Raleigh, North Carolina, Ecological Services Office; Kendall Smith of the



L to R: Mike Wicker, USFWS Raleigh; Cynthia Bohn, USFWS, Atlanta Sara Ward, USFWS, Raleigh; Rebekah Robinson, Co-Chair of NC Land Trust Council; Matt Covington, Co-Chair of NC Land Trust Council; John Ann Shearer, USFWS, Raleigh; Janice Allen, NCCLT, photo: Conservation Trust for North Carolina

Columbia Migratory Bird Office; Craig Watson, Charleston, South Carolina, Field Office; and Cynthia Bohn of the Atlanta, Georgia, Southeast Regional Office.

“The U.S. Fish and Wildlife Service has been a solid partner to the North Carolina Coastal Land Trust and other North Carolina land trusts for many years,” said Janice Allen, Deputy Director of the North Carolina Coastal Land Trust. “The federal biologists we have had the pleasure to work with are positive, energetic, helpful and well-respected. They have contributed a tremendous amount of time and resources to so many of our successful wildlife and wetland conservation projects.” ❖

19th annual Kids' Fishing Rodeo a tremendous success

By Andrew Currie, Dale Hollow NFH



A family enjoys fishing, photo: USFWS

On the morning of June 11, a total of 2,000 nine-inch rainbow and 14 large display rainbow trout were released in the creek below the Dale Hollow National Fish Hatchery for the 19th annual Kids' Fishing Rodeo. Held in celebration of National Fishing and Boating Week, the

Rodeo is open to kids aged 15 and under. This event is co-sponsored by the U.S. Fish and Wildlife Service, Tennessee Wildlife Resources Agency, U.S. Army Corps of Engineers, Friends of Dale Hollow National Fish Hatchery, Friends of Dale Hollow Lake, and the citizens of Clay County, Tennessee, and presents a unique opportunity for families to spend quality time together and to connect children with nature.

The Friends of Dale Hollow National Fish Hatchery distributed free hot dogs. The role of master of ceremonies was shared by Clay County Wildlife Officer (Tennessee Wildlife Resources Agency) Bill Moulton and Corps Ranger Bobby Bartlett. The Clay County Emergency Medical Service and Clay County Sheriff's Office also assisted with the event. Participants registered for random prize drawings which took place throughout the morning. The highlight of this year's event was the use of a Kiddie Pool so that the younger anglers

could take part. Thirteen staff members from participating agencies and seven Friends Group members worked together to make this event a huge success. This year's event drew a large crowd. Overall attendance was 230 children and approximately 150 adults. People from as far away as West Virginia and Ohio traveled to Celina for a chance to catch a rainbow trout.

Chattahoochee Forest National Fish Hatchery hosts Family Fishing Festival

By Crystal Thomas, Chattahoochee NFH



Families fish along one of the stretches of Rock Creek, photo: Crystal Thomas, USFWS

On Saturday, June 4, Chattahoochee Forest National Fish Hatchery near Suches, Georgia, held its annual Family Fishing Festival. About 900 people attended the educational outreach event. Three thousand rainbow and brook trout were stocked into Rock Creek where youth ages 16 and under fished from 9 a.m. until noon. Throughout the morning, youths also participated in a scavenger hunt where they visited exhibit booths for answers to environmental/safety and fishing/hunting questions that led them to a free prize. Exhibitors included Georgia Department of Natural Resources, Georgia Forestry Commission, Old Rod and Reel Collectors Association, Trout Unlimited, North Georgia Taxidermy, Friends of the Hatchery, and U.S. Fish and Wildlife Service. Families were treated to a hot dog lunch courtesy of Friends of the Hatchery and Trout Unlimited. More than 30 hard-working and dedicated volunteers assisted with making this event possible. ❖

Seniors catch rainbows and brooks at Chattahoochee National Fish Hatchery

By Crystal Thomas, Chattahoochee NFH

On June 3, Chattahoochee Forest National Fish Hatchery held its annual Seniors Fishing Rodeo. More than 250 people attended the free event. About 3,000 beautiful rainbow and brook trout were stocked into Rock Creek for the event, including a number of fish each averaging



Linda Cox with Crystal Thomas as Linda shows the large rainbow trout she caught, photo: Terry Callihan, USFWS

three or more pounds. Friends of the Hatchery, Trout Unlimited, and Fannin County EMS assisted with the event. Seniors were treated to a hot dog lunch and rod and reel prize give-a-ways. ❖

Youths create habitat at Cape Romain National Wildlife Refuge

By Patricia Midgett, Cape Romain NWR



Kids plant pollinators, Photo: Jim Hamberger, USFWS volunteer

Young Hands on the Land! This summer, Cape Romain partnered with the South Carolina Department of Natural Resources' Oyster Restoration and

Enhancement Program (SCORE), Coastal Expeditions, Windwood Farm Home for Children, Inc., and Sullivan's Island Elementary School to get kids onto the refuge and introduce them to stewardship conservation. Children ages 9 to 14 participated in three hands-on projects over three days: planting a pollinator garden, doing a litter beach sweep, and building an oyster reef in the salt marsh estuary.

The first day of protecting and enhancing habitat was spent on Bulls Island. The kids were introduced to the building blocks of the salt marsh estuary and its significance to wildlife and people, while being ferried to the island by Coastal Expeditions. At the garden plot, an excited group of children began the business of planting plants, such as passion vine, dune camphorweed, seaside golden rod, seabeach primrose and other native species that would attract butterflies, bees, and other insects. Older students, with bags in hand, walked the beach picking up litter harmful to sea turtles and sea birds. They collected such trash as plastic bags, balloons, bottles, ropes, lumber, foam, and even a large sonar buoy. The day culminated with a tour around the north end of the island, traveling through maritime forest, around water impoundments, and walking on a section of beach known as the Boneyard.

For two days, children arrived at Garris Landing to build an oyster reef on one of the marsh flats in the estuary. Each day 300 bags of oyster shells were moved to the flat. The kids and refuge, SCORE, and Coastal Expeditions employees formed zipper lines to pass the bags, weighing 10-30 pounds each, to the boat and then to the flat. Standing in water and pluff mud, it was no small feat; but, everyone found their footing and built the foundation of an oyster reef that will be significant habitat for oysters and other marine life in the years to come. The kids found out that oysters are ecologically significant for fostering biodiversity in the marine habitat, as well as a being a filtration system for estuary waters, playing an important role in the clean water found in the refuge. They built a reef that will support thousands of oysters and other animals.

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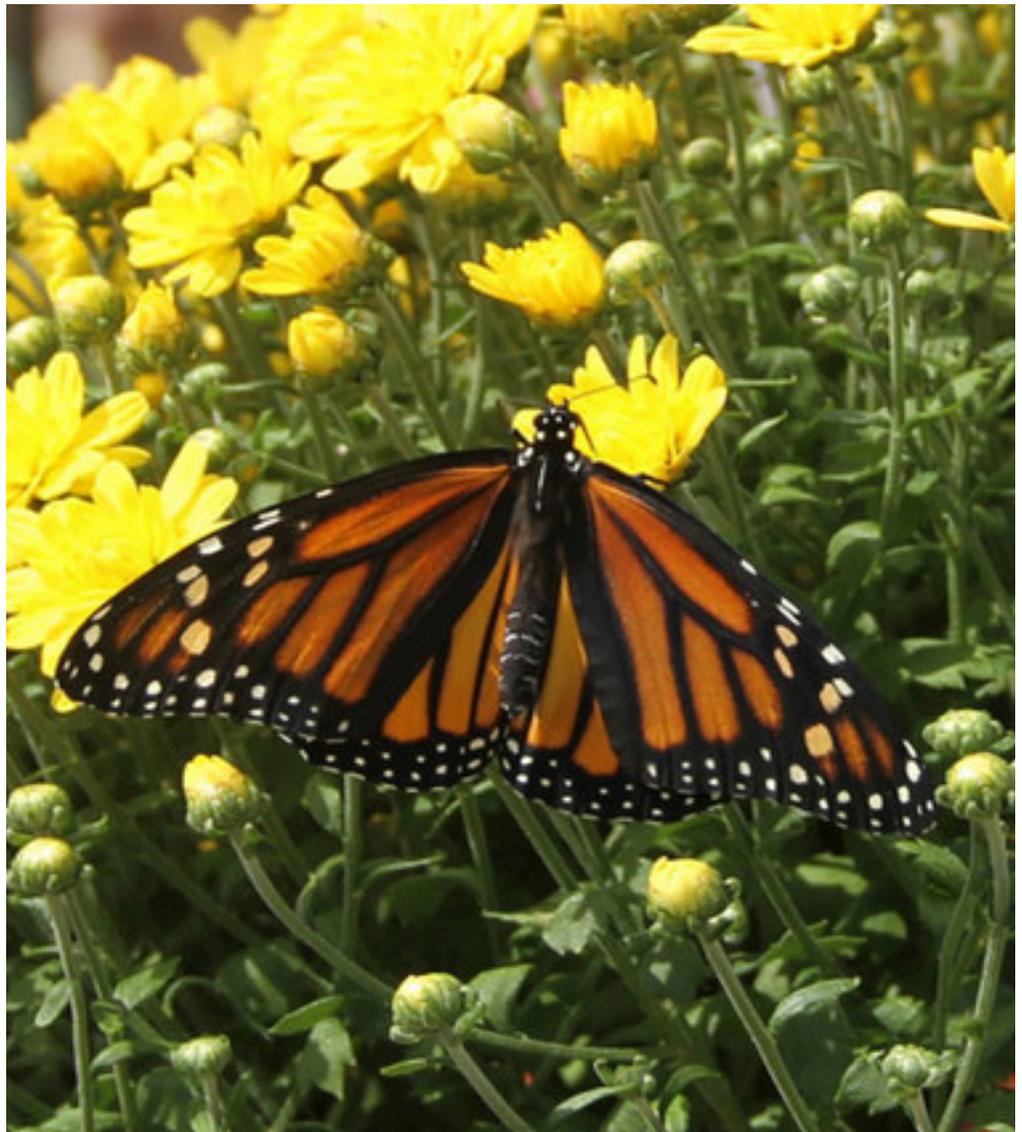
The youth stewardship projects at Cape Romain were made possible by a Hands on the Land grant awarded to the refuge by the National Environmental Education Foundation and with the partnership of South Carolina Department of Natural Resources and Coastal Expeditions. ❖

Making a schoolyard pollinator garden

By Lilibeth Serrano, Raleigh, North Carolina, Ecological Services

The Fish and Wildlife Service is committed to conserving pollinators and their habitat. During the 2015-2016 academic year, the Raleigh Ecological Services Field Office supported several organizations to plant and propagate milkweed. One of those partners, The Epiphany School of Global Studies in New Bern, eastern North Carolina, planted a pollinator-friendly garden. Teacher Lisa Whittaker was motivated to establish a Monarch Way Station that would enrich the Life Stages Lesson Unit for her second-grade students. The Service provided financial assistance through the Partners for Fish and Wildlife Program to contribute with the purchase of some of the materials the school needed for the project.

Overall, the school raised monarchs and planted more than 50 host milkweed plants, and nectar producing perennials, annuals, and butterfly bushes. The students observed the monarch's amazing transformation and learned about the butterfly's interaction with other organisms. The project's climatic finish included all students from Kindergarten through fifth grade, who sent off the captive-reared butterflies to Mexico with



A monarch fuels before resuming its migration, photo: Lilibeth Serrano, USFWS

a big "You can do it" shout-out. Second graders and their parents celebrated their monarch release party where they let loose the remaining of the butterflies they raised. The Epiphany School's garden is part of the Rosalynn Carter Butterfly Trail and certified by Monarchwatch.org as a Monarch Waystation. ❖

St Marys River Atlantic sturgeon population assessment

By John Galvez and Cindy Williams, Fisheries

This spring, between May and July 2016, was the second year Project Leader John Galvez, Peninsular Florida Peninsular Florida Fisheries Office, worked in a collaborative study with researchers from the University of Georgia to assess the population of Atlantic sturgeon, a federally endangered fish, in the St Marys River (Georgia and Florida). The Service is assisting the University of Georgia

as part of a larger study between the university and the Navy to determine habitat use by Atlantic sturgeon in a number of Georgia rivers.

Staff members and volunteers from a number of Southeast Region stations and programs, helped with this assessment, including the Fish and Aquatic Conservation Program, Wildlife and Sport Fish Restoration Program, Okefenokee National Wildlife Refuge, Loxahatchee National Wildlife Refuge, Bears Bluff National Fish Hatchery, Welaka National Fish Hatchery, North Florida Ecological Services, South Florida Ecological Services, and Georgia Ecological Services.

Biologists from Georgia Department of Natural Resources and Florida Forestry Service also helped during sampling. Students from three universities the University of Georgia, Georgia Southern, and College of Coastal Georgia gained valuable experience in fisheries while assisting with the gill netting operations. This work could not have been accomplished without the support of our valuable volunteers and partners, especially the Okefenokee National Wildlife Refuge which provided housing for Service employees and volunteers during the study.

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Alex Dye, Okefenokee NWR, holding a juvenile Atlantic Sturgeon collected from the St Marys River; photo: John Galvez, USFWS

A total of five fish were implanted with Passive Integrated Transponder (PIT) tags. The research will contribute to the monitoring of Atlantic sturgeon recruitment and hopefully tell us when sturgeon of various sizes can be found in which rivers. ❖

Community enjoys diverse summer activities at Loxahatchee

By Joseph Whelan, Loxahatchee NWR

Summer is the off-season in Florida. It's hot and buggy. However, for Arthur R. Marshall Loxahatchee National Wildlife Refuge's Public Use team, it is an exciting and busy time.

In May, nearly 1,200 fourth graders visited the refuge with the help of an Every Kid in a Park Transportation Grant through the National Park Foundation. Refuge staff used *The Last Egret*, a book which addresses plume hunting in Florida and the creation of the National Audubon Society. By tying refuge activities into the curriculum and securing the EKIP Transportation Grant, the refuge is ensuring that Palm Beach County fourth graders experience the Everglades ecosystem first hand.

In June, 300 Junior Reserve Officer Training Corps campers from Florida Atlantic University visited the refuge for three days



Students learn about Everglades ecology, photo: Patty Palma, Greening Youth Foundation

of canoeing, honing GPS skills and learning about the Everglades, conservation, and the history of Service.

As a designated Urban Wildlife Refuge, Loxahatchee hosted a film crew for a week in June to capture some of the refuge's urban-related activities, including part of the second annual Everglades summer camp, a multi-agency partnership involving the Service, National Park Service, and the YMCA. Refuge staff members visited YMCA Family Centers and connected with about 125 campers who explored the refuge, Everglades National Park, and Biscayne National Park. South Florida's urban youth enjoyed such activities as snorkeling, fishing, and archery.

Also during June, the refuge hosted Florida Atlantic University's Pine Jog Environmental Education Center and its H2O to Go Summer Institute. Refuge staff members gave lectures on water quality, Everglades research, and job opportunities in environmental fields for this dual enrollment program that teaches high school students about water-related issues in South Florida for college credits.

Arthur R. Marshall Loxahatchee has truly become a community resource, expanding the boundaries of the Service's mission of working with others. After all, there is no season for learning or limits to the benefit of nature for our urban neighbors. ❖

Chattahoochee Forest's Kelly Taylor participates in youth educational programs

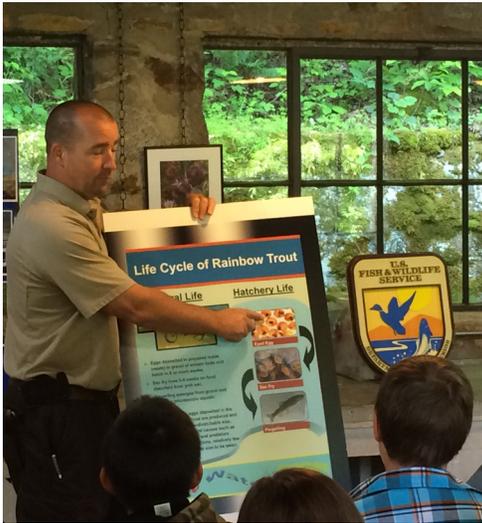
By Crystal Thomas, Chattahoochee Forest NFH

Chattahoochee Forest National Fish Hatchery Project Leader Kelly Taylor spoke with students at the University of Georgia's Agriculture Education Day. This event is held twice each year and is geared toward teaching hundreds of area youths about agriculture, wildlife, natural

resources, environmental awareness, good stewardship, and conservation. Kelly spoke about the life cycle of a rainbow trout.

Kelly also attended the Union County, Georgia, Middle School's Trout in the Classroom release. Eighty four-inch rainbow trout, produced from the 100 eggs originally provided by Chattahoochee Forest hatchery, were placed in coolers for transport from the school to Wolf Creek National Fish Hatchery in Kentucky.

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Kelly Taylor speaks to University of Georgia students about the life Cycle of a rainbow trout, photo: USFWS

Chattahoochee Forest National Fish Hatchery was happy to partner with the Chattahoochee/Nantahala Chapter of Trout Unlimited to get this school program off to a great start by providing eggs, information, and guidance. ❖

Connecting people with nature today by looking back at our history

By Steve Reagan, Sam D. Hamilton, Noxubee NWR

The effort to Connecting People with Nature is described as an effort to increase the public's level of interaction and understanding with our natural world. It is about enjoying the peaceful moments by sitting in the grass, listening to the birds, and feeling a soothing breeze on your skin. It is an opportunity to disconnect from our busy lifestyles and stressful days. It is about taking time to introduce our children to nature and the wonders of the world. We may be missing one additional reason to Connect People with Nature especially when it comes to most of our national wildlife refuges. It is about conserving our American heritage and long standing human connection to the land and nature itself.

The Sam D. Hamilton Noxubee National Wildlife Refuge currently consists of 48,240 acres of wildlife habitat in the form of lakes and forests. Work continues toward restoring the habitat in the direction of its historic 1830's conditions when these lands began to be settled by



More than 150 members of the Gillespie Family help install the new historic tract plaque on Tract 1985d, Sam D. Hamilton Noxubee National Wildlife Refuge (June 2016).

some of Mississippi's earliest settlers. Prior to them the area was home for Native Americans including members of the Choctaw Tribe. A total of 406 land tracts, individual properties, were acquired to form this unit of the National Wildlife Refuge System, and each tract contains a rich history both connected to nature and the people the previously occupied the land.

Tract 1895d, the Gillespie Tract, was once a 500-acre farm owned by Robert and Senora Gillespie. On the land was a

steam-powered saw mill, general store and family home. Today, the land supports mixed pine-hardwood habitat for a variety of wildlife. In an effort to encourage exploration by the public of the refuge, a historic tract plaque has been placed within this land tract. The research, plaque design and installation were completed over a two-year period with the leadership of Greening Youth Foundation interns.



Campers show their eyeball drawings, photo: Terri Jacobsen

Boardbook series guides camp agenda

By Terri Jacobsen, Red River NWR

Red River National Wildlife Refuge, located in Louisiana, uses books for storytelling, sources of information, and ideas for creative lessons and presentations. This summer, we used three of Stan Tekiela's Adventure Boardbooks to guide theme development in our three-day Naturalist Camp for children aged six and seven. Campers learned about their five senses and compared their own senses to animals.

Leadership Quote:

A leader is a dealer in hope.
— Napoleon Bonaparte

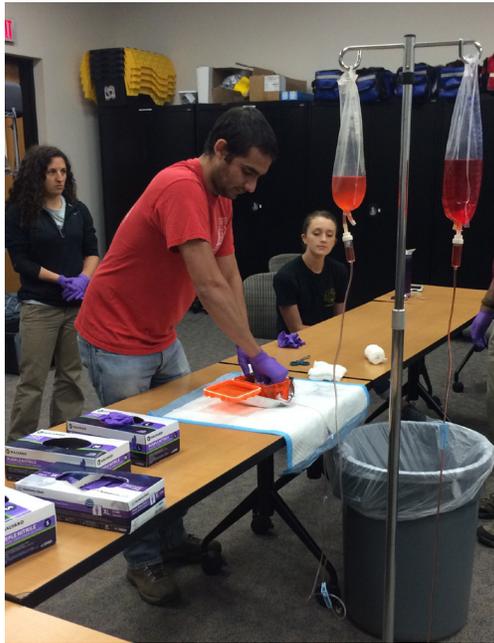
On the first day of camp, we read *Floppers & Loppers*, a boardbook on animal ears and hearing. Then, we went on a sound hike listening for natural and man-made sounds. We cupped our ears to amplify sound, imitating the large ears of deer. Inside, we made sound shakers by filling plastic eggs with different materials like beads, beans, rice, or paper clips.

On the second day, campers read *Snouts & Sniffers* on a story walk. Pages of the book were laminated and posted along a hiking trail. As we walked, we sniffed several different plants, crushing leaves or stems to release aromatic scents, further down the trail the musky skunk odor prevailed and fortunately or unfortunately, depending on your nose, we smelled a decaying animal carcass. Inside we completed the "Where's My Baby?" activity from *The Educator's Activity Book* published by Bat Conservation International, and we learned bats used their sense of smell to find their pups.

Peepers & Peekers was the boardbook for the third day. Did you know that a snake sleeps with their eyes open? From the book and YouTube videos, campers discovered animal eyes can look very different from our human eyes. Outside, campers used keen eyesight to find different colored pipe cleaners in the "Birds and Worms" activity from Project Learning Tree. The Friends of Red River Refuge provided tasty snacks each day and on the last day of camp, campers completed a taste experiment using gummy candies.

Wilderness First-Aid training

By Brent Harrel and Jennifer Garland,
Kentucky Ecological Services



Biologist Santiago Martín learns how to “find the bleed, stop the bleed” during Wilderness First-Aid training, photo: Jennifer Garland, USFWS

As part of June’s National Safety Month, five biologists from the Kentucky Ecological Services Field Office completed CPR training and a 16-hour Wilderness First-Aid course taught by instructors from Eastern Kentucky University’s Emergency Medical Care Program and Red River Adventure Medical, LLC. Employees learned life-saving skills such as how to perform CPR and advanced first-aid associated with wilderness trauma.

Biologists with the Service often conduct field work in remote locations and in situations that are very different than the typical office or home situations covered by standard first-aid classes. The Wilderness First-Aid course provided important safety training customized for people who may not be able to call for help when an injury occurs. Participants received hands-on experience and feedback concerning finding and stopping heavy bleeding, splinting broken bones, and carrying an injured co-worker out over rugged terrain. The class also covered other topics relevant to field work, such as heat exhaustion, hypothermia, envenomation, allergic reactions, and severe weather conditions. ❖

Wolf Creek’s summer YCC program

By Sheila Kirk, Wolf Creek NFH



Daniel Harris releasing Rainbow trout into Kentucky waters, photo: Sheila Kirk, USFWS

Providing youth opportunities in Kentucky is an important part of the Wolf Creek National Fish Hatchery’s mission. This year, Wolf Creek provided this opportunity to four Youth Conservation Corps (YCC) participants: Hunter Gray, Brooke Hachey, Daniel Harris, and Andrew Gayde. Through the YCC program, these four students are employed at the hatchery for the summer gaining hands-on experience. During their employment, these YCC students become valuable members of the staff. They provide assistance with the day-to-day operations of the hatchery including feeding the fish, cleaning the raceways, fish distribution and other fish production duties, grounds-keeping, building and equipment maintenance, as well as special programs, and projects such as trail maintenance and Wolf Creek’s Catch a Rainbow Kid’s Fishing Derby. At the end of the summer, the YCC students usually leave with a greater appreciation for the work required to keep a national fish hatchery operating smoothly. ❖

Friends and Volunteers

Black Bayou Lake thanks Miriam Schrock

By Nova Clarke, Black Bayou Lake NWR

Black Bayou Lake National Wildlife Refuge has benefitted for several years from the dedication, hard work, and passion of volunteer Miriam Schrock, our butterfly lady. Miriam did events for the public like butterfly presentations for groups and butterfly releases at events. She also put a lot of physical labor into developing pollinator gardens at the refuge. We now have three pollinator gardens stocked largely with native plants Miriam donated, and she also did the soil preparation which in one case involved hand-sifting the soil to remove all the mint and rosemary that was growing in the area.



Miriam Schrock does a butterfly release, photo: Nova Clarke, USFWS

Currently she is working on a larger pollinator garden that can be used for school groups next to the Learning Center. Many visitors and children in particular have been able to see all the stages of monarch butterfly metamorphosis through Miriam’s programs and the monarchs she brings. For the second year she has also secured almost 1,000 milkweed plugs that we will be planting this fall in the refuge to provide future habitat for monarchs. We know her passion has sparked interest and appreciation of the importance of monarchs and all pollinators.

Roger Schulz wows people with his ORCA display

By Crystal Thomas, Chattahoochee Forest NFH

A Friend of Chattahoochee Forest National Fish Hatchery, retired Fisheries employee Roger Schulz is a loyal and dedicated volunteer. Roger spends hours assisting with annual fishing events at the hatchery. Last month, his Old Reel Collectors Association (ORCA) display wowed hundreds of kids and adults who attended the Family Fishing Festival! Roger Schulz spent well over 30 years as an employee with the Service. His love for fish hatcheries has not ceased in his retirement as he actively participates and holds office with the Chattahoochee Forest's Friends Group and maintains contact at a national level with Friends across the country. ❖



Friend and volunteer Roger Schulz, photo: Crystal Thomas, USFWS

Catch a Rainbow Kids' Fishing Derby

By Ashley Buffington Wolf Creek NFH

On Saturday, June 4, Wolf Creek National Fish Hatchery hosted the 30th Annual Catch a Rainbow Kids' Fishing Derby. The derby began as a small event in 1986, and is one of the largest events of its kind in the country!

More than 1,200 children participated in the derby, and the hatchery had about 3,000 visitors that day. This event coincided with the opening day of National Boating and Fishing Week. Each angler enjoyed complimentary hot dogs, soda, bottled water, and popcorn. The derby had booths and activities for participants to enjoy as they eagerly awaited their fishing time slot. Each participant received an outdoor-related prize such as fishing poles, tackle boxes, game calls, outdoor chairs, camping lights, and bug collection kits, after they fished. In addition, there was a biggest fish contest for each age group whereby the winner received a trophy. Several large trout were caught, with two being over five pounds each.



Fishing derby at Wolf Creek, photo: Ashley Buffington, USFWS

The annual derby was made possible through the generous support and contributions of many local, regional and national sponsors and businesses. This year, eight sponsors donated at least \$1,000; six sponsors donated at least \$500 in cash, prizes or services, while countless other organizations gave of their time and/or resources. The event included the

participation of 130 volunteers, making it a true example of community partnering. Through such teamwork, an event with a value of \$15,000 occurred with little or no cost to any one agency due to the generous donations of a myriad of individuals and organizations.

Longest Day of Play celebration

By Jacinda McQueen,
Wolf Creek volunteer

On Saturday, June 18, more than 250 people attended the annual Longest Day of Play event. This free event is hosted by the Wolf Creek National Fish Hatchery and Russell County Health Coalition to celebrate the longest day of the year. The goal of the event is to encourage outdoor activity among children and families within the community. The event provides a great opportunity for community members to volunteer, play, and learn.



Youths enjoy a guided bike ride along the new Hatchery Creek trout stream, photo: Moria Painter

Activities for the Longest Day of Play included a guided bike ride along the Cumberland River, trout fishing at Hatchery Creek, water safety demonstrations, a pollination challenge, live animal encounters and many other activities. One of the most popular of the

day's activities was a sheriff drug/search dog demonstration, which attracted many of the visitors.

There also were a number of booths arranged in front of the visitor center by several local organizations including

the Lake Cumberland Beekeepers, the Russell County Library, Hospice of Lake Cumberland, Russell County Health Coalition, Healthy Kids Clinic, University of Kentucky Extension Service and the U.S. Army Corp of Engineers. ❖

Dale Hollow's Wilderness Day Camp

By Andrew Currie, Dale Hollow NFH

The Friends of Dale Hollow National Fish Hatchery hosted the Fourth Annual Wilderness Day Camp on July 14, 2016. The event was co-sponsored by the Tennessee Wildlife Resources Agency, U.S. Fish and Wildlife Service, Tennessee State Parks, and U.S. Army Corps of Engineers. All activities took place at the nearby Corps' picnic pavilion located at the Dale Hollow Dam Recreation Area. Activities included BB-gun and archery, target shooting, water safety, a live red-tailed hawk and barred owl, snakes and tortoises, a K-9 demonstration, and fly rod casting. Approximately 53 children and 15 adults attended the event.



Archery was a popular attraction, photo: USFWS

Junior Refuge Ranger Camp at St. Marks National Wildlife Refuge

By Lori Nicholson, St Marks NWR

This summer, St Marks National Wildlife Refuge hosted the Junior Refuge Ranger Camp for the fifth year in a row. Former campers who aged out of the system were a great help. They used their past camp experiences to help this year's campers have fun and enjoy camp to the fullest.

Louis West and Tia Nicholson were great help getting things ready, cleaning up and keeping an eye on the kids. We really appreciated their help.

In addition to Louis and Tia, who are now high school students, we had help from another high school student, Skyler Musgrove, and a middle school student, Cayden Bevis. Special thanks also goes out to volunteers Carol Miller and Betsy Sullivan for all their hours of work in the heat making sure camp was a success!

We also had help from our YCC students, Daniel Rohe and Monte Riles. All the help from everyone was greatly appreciated!

Campers enjoyed dip netting in Plum Orchard Pond and the Bay. They learned the basics of archery, went on hikes, set scent stations and got lots of great tracks, experienced Digi-scoping (using tablets and spotting scopes to take photos), fished, tried Hoverball archery, and cooked s'mores and hot dogs. I heard on more than one occasion that it was "the best camp ever!"



Dip Netting in the Pond, photo: Heather Bevis USFWS

In the Garden

In Todd Shaw's Garden

By Todd Shaw, Tennessee Ecological Services Office, Cookeville

My flower beds are my true passion. I moved into my home in Baxter, Tennessee, during the spring of 2009, when I started working for the Tennessee Field Office in Cookeville. My flower beds of perennial and annual flowers were created by amending my soil with peat moss and worm compost. I had to bump the bed in front of my house out this year because my shrubs (against the foundation) have grown considerably in size over the past couple of years. I typically begin planting flowers in late April and am still putting a few plants in the ground throughout July; I am usually outside until well after dark working in my gardens on most evenings.

I have a number of raised flower beds, but this year I decided that I also wanted a regular vegetable garden – like I had as a kid, growing up in east-central Ohio. I have always loved to grow things, and I won numerous contests growing and showing vegetables as a youth in Coshocton County, Ohio. My vegetable garden includes carrots, Glass Gem Popcorn, King-of-the-Garden Pole Lima Beans, Henderson Bush Baby Lima Beans, Georgia Jet and Beauregard Sweet Potatoes, and a variety of heirloom tomato plants.



A mix of perennial and annual flowers in front of Todd Shaw's Tennessee home, photo: Todd Shaw, USFWS



Todd Shaw's front porch with a mix of perennial and annual flowers, photo: Todd Shaw, USFWS



Todd Shaw's vegetable garden

Nadine's Word Search Challenge

By Nadine Siak, External Affairs

Locate the following words in the grid:

CAMP, COASTAL, FESTIVAL, FISHING, PARTNER, RODEO, TOXICITY, TRAINING

Note: Words may be spelled forwards, backwards, up, down or diagonally. Words may also overlap (i.e., share letters).

P	P	L	B	P	E	M	J	I	B	C	G
A	M	U	Y	T	T	W	R	W	O	N	L
R	A	M	V	M	O	R	C	A	I	L	N
T	C	B	M	Q	Z	X	S	N	V	Y	E
N	W	A	F	E	S	T	I	V	A	L	F
E	K	K	A	S	A	A	O	C	N	I	O
R	F	Y	S	L	R	R	J	E	I	C	Q
C	Z	G	M	T	Q	B	W	H	D	T	K
L	G	N	I	H	S	I	F	Y	K	O	Y
L	Q	G	J	P	U	R	W	F	Z	E	R
K	T	D	P	M	O	S	B	W	G	P	C
D	R	M	W	R	V	G	C	M	G	T	S

The solution will be printed in the next edition of E-Grits. Happy hunting!

