

Biological Program Update

By Supervisory Wildlife Biologist
Becky Harrison, PhD

Spring and summer are busy waterbird seasons at Pea Island! Refuge staff and interns have been working to actively survey species including piping plovers, American oystercatchers, least terns, and black skimmers.

Beginning each spring, as nesting pairs begin using the variety of habitats at Pea Island, staff and volunteers temporarily close off different sections of the refuge to reduce disturbance and to protect nesting birds. We adaptively manage these areas to respond to different nesting activities, so these areas may change regularly.

The species of waterbirds we monitor face several survival challenges. Predation and disturbance can significantly impact nesting success. There are several ways you can help minimize the effects of human activities on these nesting birds. First, follow all Refuge rules and regulations. Do not trespass through closed protected areas, and give the animals space they need. We try to close only what the birds need on the beach, so please respect the posted areas which allow a buffer from human activities.



Least Terns at Pea Island Refuge, credit USFWS/Harrison

Please look out for eggs and chicks. As chicks become mobile, they will leave the closures to learn how to forage in the swash zone near the water. Keep all dogs on leashes and away from closed areas. Dogs may chase and harass birds, as well as trample nests, killing chicks or crushing eggs.

Leave no trace—be sure to take trash off the beach when you leave. Food (including bait and scraps from fishing) can attract predators like gulls, raccoons, and coyotes. Dispose of fishing line properly as it can entangle and injure a variety of wildlife. We appreciate your help in sharing the shore with the wildlife!

The Least Tern (*Sternula antillarum*) is one of several terns observed on Pea Island and is listed as a species of

Special Concern in North Carolina. It is the smallest tern, measuring only about eight to nine inches tall. Terns usually occur in colonies and often nest in groups on habitats with bare sand and shells with little or no vegetation. Least terns often arrive in April, but typically nest in May or June.

In North Carolina, nest sites are shallow depressions on high, sandy sites and typically contain up to two or three eggs. Adults will actively defend the nest. Both parents will incubate the clutch for about



Least tern chick at Pea Island Refuge, credit USFWS/Harrison

three weeks. Chicks are well camouflaged and hard to see until mobile. Chicks can fly starting around four weeks of age.

We participate in the annual Atlantic Coast Least Tern Window Count, which usually occurs in early June, during which we count adult terns and nests. This year, we observed 530+ nests and 250+ chicks in six different sections of beach habitat on Pea Island.

This research contributes to the working group goals of evaluating the status and viability of North Carolina's least tern population and understanding the relationship of North Carolina's population to other populations along the Atlantic coast of the United States.

This year we also participated in the statewide census of American Oystercatchers (*Haematopus palliatus*) and Wilson's Plovers (*Charadrius wilsonia*). Thank you to everyone who shared observations! We did not receive any reports of Wilson's plovers on the refuge, but many folks have seen the oystercatchers.

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(continued)

At Pea Island Refuge, pairs typically arrive on the refuge beginning in early March. In general, oystercatchers fledge one brood per season with nesting attempts occurring between April and July.

In North Carolina, nest sites are shallow depressions on high, sandy sites and typically contain up to two-four eggs. Both parents will incubate the clutch for 24-28 days, and eggs usually hatch within a day of each other in the order they were laid. Adults defend the brood and chicks remain together or with adults until they fledge at approximately 35 days.



Banded American oystercatcher feeding in swash zone at Pea Island Refuge, credit USFWS/Harrison

Together with partners from Audubon North Carolina, we capture and mark oystercatcher adults and chicks with green colored bands with unique alphanumeric codes. These codes help identify different individuals and track behaviors.

This research contributes to the working group goals of evaluating the status and viability of North Carolina's oystercatcher population and understanding the relationship of North Carolina's population to other populations along the east coast of the United States.



Loggerhead sea turtle returning to the ocean after laying a nest on Pea Island Refuge, credit USFWS/Olsen

It's Sea Turtle Nesting Season on Pea Island Refuge!

Five species of sea turtles occur in North Carolina waters: loggerhead (*Caretta caretta*), green (*Chelonia mydas*), leatherback (*Dermochelys coriacea*), Kemp's Ridley (*Lepidochelys kempii*), and hawksbill (*Eretmochelys imbricata*). The most abundant species in North Carolina is the loggerhead that nests annually on Pea Island beaches. Green turtles are less frequent but regular nesters in North Carolina. All species of marine turtles that occur in North Carolina are protected under the Endangered Species Act of 1973. Loggerhead and green sea turtles are listed as threatened, and the other three species are all listed as endangered under both federal and state law.

Refuge staff, interns, and volunteers have been searching the beaches daily for sea turtle nesting activities. As of June 24, we have documented 30 turtle nesting activities including 12 false crawls and 18 loggerhead nests. Please report any sightings of sea turtles or nesting activities on Pea Island to the Supervisory Refuge Biologist, Becky Harrison, at 473-1132 x 231. If you're lucky enough to see a live turtle on the beach, please try to take some photos.

Pea Island Crabbing Rodeo a Huge Success

The second Saturday of June is always an exciting time at Pea Island refuge. For over 20 years, refuge staff have invited visitors to go behind the gate at the North Pond and spend three hours of the morning crabbing and fishing. This rare opportunity has brought over a hundred adults and children each year. (There were two years the refuge was unable to hold the event due to damage from Hurricane Irene.)

This year we had over 150 participants! The weather was great, and the crabs were plentiful. Just a reminder that the North Pond is closed to fishing, crabbing, paddling, wading, and other activities at other times.



Turner Thornbrough enjoyed the beautiful day while bringing in many crabs, credit L.Thornbrough

Welcome Bio Tech Lindsey Green

If you've been at Pea Island refuge recently, you might have seen a new face among the U.S. Fish and Wildlife Service staff. We caught up with Lindsey recently to find out more about her. She told us, "I am originally from South Florida and have lived in Florida my whole life. I moved to Orlando a couple of years ago to attend the University of Central Florida (Go Knights!). I received my Bachelors last August and focused on Biology and Environmental Science. While I was at UCF, I started my journey with the U.S. Fish and Wildlife Service at Merritt Island National Wildlife Refuge.



Lindsey Green, credit USFWS

I am extremely passionate about conservation and working to protect wildlife and the spaces that they rely on. I enjoy fly-fishing, hiking, reading, and working out! I hope to start a Masters program within the next year with research focused on the Eastern Indigo Snake. I am so thrilled to have this opportunity at Pea Island National Wildlife Refuge and am excited to learn as much as I can while I'm here!" We are glad to have Lindsey join us at such a busy time!



Our firefighters at work at Great Dismal Swamp NWR, credit USFWS

Helping Out at Great Dismal Swamp Refuge In Virginia

A recent lightning strike on June 29 caused a wildfire on Great Dismal Swamp refuge on the Virginia/North Carolina border. Members of North Carolina National Wildlife Refuges Complex fire crew provided assistance. Eric Meekins from Alligator River Refuge and Linwood Beckwith from Mattamuskeet Refuge responded to the fire with a flex track. The crew laid hose to help flood and contain the two-acre moderate-to-deep ground fire.

RV Volunteer Update

Many resident volunteers spend their time traveling around to new locations while they are volunteering. Still others return to North Carolina Refuges year after year. For more information about this program, contact Volunteer Coordinator Tracey Rock at tracey_rock@fws.gov or check out this webpage for details: https://www.fws.gov/refuge/Alligator_River/what_we_do/resident_volunteers.html.

We welcome back these couples:

Wendy and Roy Gatewood
Alligator River, August through November

Lauren and George Radecsky
Pea Island, October through January

A Busy Start for Summer Interns

Summer interns hit the ground running when they arrived in mid-May. After two weeks of extensive training in all program areas, they began providing essential assistance.

You may see an intern out on the beach helping with the biological program or behind the wheel of a riding mower helping to spruce up the trails and other public areas. If you participate in any of the guided interpretive programs, you'll certainly have an opportunity to chat with an intern and get to know them better.

For anyone interested in learning more about the intern program, contact Volunteer Coordinator Tracey Rock at tracey_rock@fws.gov or visit our website for more information https://www.fws.gov/refuge/Alligator_River/what_we_do/internships.html.

Alligator River and Pea Island National Wildlife Refuge Interns spent several days in fields of waist deep, thick vegetation surveying the survival of tree saplings planted on Alligator River refuge back in 2015. The seedlings were planted on approximately 16 acres in a strip of fields along Bear Road as part of a goal identified in the refuge's Comprehensive Conservation Plan to convert cropland to hardwoods to provide corridors and habitat for a variety of wildlife. Forestry expert and refuge volunteer, Rick Bentz, coached the interns on ways to identify the different species of trees.

Kelley Van Druten, Assistant Refuge Manager, expressed,

"It will be great to know which species of trees are making it, but I'm most concerned with an overall count of the number of trees that have survived thus far and which fields they are surviving in."



Interns spent many hours on the tree survey project, credit USFWS/D. Canning.



Interns Madi and Dani helped get the Visitor Services vehicles ready for the summer; credit USFWS/Rock.



Intern Mara works on cleaning out the bed of a truck in preparation for all of the equipment that will be hauled this summer; credit USFWS/Rock.



Interns lead canoe tours at Alligator River and Pea Island refuges. While wind can be a challenge at Pea Island, high water levels sometimes cause an issue at the Milltail Creek Paddling Trail launch site at Alligator River. After heavy rain and a westerly wind, Interns Caroline and Dani had to start the program from the parking lot where the water had risen a half foot, credit USFWS/Heffley.

New Fall Intern

Morgan Lewis

Refuge Education / Red Wolf Caretaker Intern

September – December 2019

Morgan graduated from Rutgers State University of New Jersey with a B.S. in Wildlife Biology and Conservation Management and comes from Oak Ridge, New Jersey. She has interned in Alaska and travelled around the country doing various research projects. At Alligator River and Pea Island National Wildlife Refuge, Morgan is looking forward to bringing wildlife programs to youth, providing maintenance on the refuge, assisting biologists with the management of red wolves, and building connections with the community surrounding the refuge.



Morgan Lewis, credit USFWS

Guided Programs on the Refuges

Summer programs are going on now! To find out dates and times through the end of the year, check out the schedule at <https://www.fws.gov/ncgatewayvc/images/interp-schedule.pdf>.

Whether you're looking to join a guided canoe, van, or tram tour, learn about turtles, bears, birds, or sea life, or have always wanted to howl with the captive red wolves, you're sure to find something fun and exciting on the schedule. Many programs are FREE.

Support Your National Wildlife Refuges - Donate to Coastal Wildlife Refuge Society

Coastal Wildlife Refuge Society exists to support interpretive, educational, and volunteer programs of eastern NC national wildlife refuges with a focus on Alligator River and Pea Island National Wildlife Refuges and the National Wildlife Refuges Visitor Center on Roanoke Island. Your contributions to the Coastal Wildlife Refuge Society help make it possible to provide this support.

Your donation helps support local K-12 schools by assisting with educational programs and funding transportation grants for students and teachers to visit the refuges and the National Wildlife Refuges Visitor Center. They also help to maintain refuge land and water trails, provide refuge visitor services staff, assist with the annual Wings Over Water Wildlife Festival, and support dozens of refuge projects and programs.

Please support your national wildlife refuges by donating \$10, \$25, \$50, \$100 or more. Send check or money order to, Coastal Wildlife Refuge Society, PO Box 1808, Manteo, NC 27954. You can also use a credit card by calling 252-216-9464 or visiting <http://www.coastalwildliferefuge.com/donate.html>.

Coastal Wildlife Refuge Society (CWRS) is a 501(c) (3) non-profit organization. Your contribution may be tax deductible as a charitable contribution. You will receive a receipt for each contribution and an annual CWRS membership card to use for savings in CWRS gift shops.

Students from Windsor Elementary School Enjoy a Morning of Learning



Teams of students learn about various habitats and wildlife during the indoor scavenger hunt, credit USFWS/Rock.

For six years, fifth-graders from Windsor Elementary School in Windsor, North Carolina have been treated to a morning of learning at the National Wildlife Refuges Visitor Center. This trip is made possible because of a transportation grant provided by the Coastal Wildlife Refuge Society. Not only do the students and teachers enjoy learning about a variety of topics inside the exhibit hall and classroom, they also participate in a scavenger hunt on the trail behind the building. Staff and volunteers also enjoy interacting with the students since many are so excited to explore topics they have never encountered.

If you are an educator and would like more information about the transportation grant, check out this webpage for details: <https://www.coastalwildliferefuge.com/educational-grants.html>.



Intern Caroline leads the students on outdoor scavenger hunt, credit USFWS/Rock.

Wings Over Water Wildlife Festival is Just Around the Corner!

In 1997 Wings Over Water Wildlife Festival was begun under the direction of then refuge manager, Mike Bryant, as a way to encourage and offer the public wildlife and wild land interpretation, educational opportunities and experiences on regional national wildlife refuges.

This annual national wildlife refuge fundraising event has grown from a few offered activities in 1997, to over 90 birding, paddling, photography, art and natural history programs. The festival takes place in six national wildlife refuges over six northeast North Carolina counties. It is one of the premier east coast wildlife festivals.

Locally, many activities take place on National Park Service property, specifically Cape Hatteras National Seashore, one of the Festival partners.

What keeps Wings Over Water going year-after-year with a high registrant return rate? Great, knowledgeable activity leaders along with a small ratio of participants-to-leader (so you don't get lost in the crowd) and of course wonderful wildlife opportunities.

Every festival leader is a professional in their own field, volunteering their time, travel and expertise. Wings Over Water leaders come from a wide range of professions and fields such as professors, top birders, well-respected botanists and biologist, authors and award-winning photographers and artists. For more information, visit <https://www.wingsoverwater.org/home.html>.



The refuges are open one half hour before sunrise to one half hour after sunset. Whether you are looking for wildlife or simply seeking solitude and beauty, there is no better place than YOUR national wildlife refuges, credit USFWS/D. Canning

Wings Over Water Keynote Speaker Julie Zickefoose

Writer/artist Julie Zickefoose, author of *Letters from Eden* and *The Bluebird Effect*, is a Contributing Editor to *Bird Watcher's Digest*.

Because she believes birds to be the most vibrant vessels for the life force, painting baby birds as they grow has been her favorite project to date.



Her latest book is *Baby Birds: An Artist Looks Into the Nest* (2016). *Saving Jemima*, about a blue jay she raised and released in 2017, is due out from Houghton Mifflin Harcourt, September 10, 2019.

The keynote talk will be about blue jays! It will be the book talk for Julie's latest book, *Saving Jemima: Life and Love With a Hard-luck Jay*. Saving a sick, orphaned nestling blue jay opened the door to their world. You'll never look at these boisterous, clever birds the same way after meeting Jemima in this hour-long talk. You may want to study them yourself!

New Wings Over Water Trips

While many trips are already full, there are quite a number of openings in all categories. To find more information about the festival schedule, visit <https://www.wingsoverwater.org/schedule.html>.

New trips this year include:

Beginning Birding at Bodie Island and Oregon Inlet with Julie Zickefoose

Join keynote speaker, Julie Zickefoose, and veteran leader, Susan Campbell, on this special trip for beginning birders. This trip will focus on how to look at birds closely in order to make good field identification. The group will stop in a diversity of habitats on both National Park Service and U.S. Fish and Wildlife Service refuge lands in order to encounter a wide variety of coastal birds. Bodie Island hosts an array of waterfowl and water birds as well as songbirds in the fall. Oregon Inlet should provide ample opportunities to view gulls, terns and some shorebirds.

Meet: Bodie Island Lighthouse parking lot, near north end restroom. 8210 Bodie Island Lighthouse Drive, Nags Head, NC 27959. Carpooling is possible.

Leaders/Field Experts: Susan Campbell and Julie Zickefoose.

Wednesday, 10-16-19, 7:30-11 am, \$25.00

Pea Island National Wildlife Refuge Stargazing (Family Friendly)

Experience a rare opportunity to stargaze on the beach at Pea Island Refuge. Bring a beach chair or blanket, bug spray and dress for the weather for a tour of the sky. Discover the stories of the sky. Explore constellations and bright star that have fascinated humankind over the ages. Our hope is that your new knowledge will help transform the vast sea of stars into a readable map. If you have a red-filtered light for reading maps & charts, bring that along with your night sky guide or constellation chart book. Binoculars are not necessary but can be used. You are welcome to use cellphone night sky apps if you have them. A standard flashlight or headlamp will be useful to get from your vehicle to the viewing location.

Leader/Field Expert: Jim Gould.

Wednesday, 10-16-19, 7-8 pm, \$15.00.

Mattamuskeet National Wildlife Refuge Tram Tour-Birding & Wildlife with Julie Zickefoose

Join keynote speaker Julie Zickefoose and veteran leader Susan Campbell on this special trip! Mattamuskeet National Wildlife Refuge is renowned for its waterfowl and is widely recognized as one of the best birding sites in North Carolina. During the fall and winter hundreds of thousands of migratory birds, including a variety of ducks, geese and swans migrate to Lake Mattamuskeet, the largest natural lake in the state. Besides waterfowl, you may also see Bald eagles, warblers, waders, otters and muskrats. Binoculars and a bird identification book are recommended. Dress for the weather. The tram has hard seating; you may bring a seat cushion, towel or blanket on which to sit for more comfort.

ALERT: Approximately 59 miles from Roanoke Island to this location. For distant trips, consider travel times when planning your WOW schedule.

Leader/Field Experts: Julie Zickefoose and Susan Campbell.

Saturday, 10-19-19, 9 am-noon, \$25.00.

Wings

Alligator River & Pea Island National Wildlife Refuges
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Have You Checked Out the New Items at the Refuge Book Stores?

If you haven't visited the Wild Things store at the National Wildlife Refuges Visitor Center or the Pea Island Visitor Center lately, you are missing out on seeing the many new items available. While there has always been a great variety of books and t-shirts to purchase, there is so much more to buy for yourself or as a gift.

Bookstore Manager Mary Grindlay is always searching for fun and educational items to add to the line of merchandise.

Many items support local artists and authors. Whether you are heading out to one of the refuges or are stuck inside on a rainy day, you're sure to find items to help you through your day. While some of the items are available at all of the bookstores, some are refuge-specific, so be sure to visit all of the locations to find that special gift for yourself or someone else!

Wild Things is open Monday through Saturday from 9-4 and Sunday from noon-4; Pea Island Visitor Center is open seven days a week from 9-4. Hours for Pocosin Lakes (252/796 3004) and Mattamuskeet (252/926 4021). Bookstores vary due to volunteer availability. Contact the individual refuge for hours of operation.



All credit CWRS

Thanks to our Volunteers

Volunteer Jim Worley has spent a lot of time preparing Pea Island for the summer rush. The entrance signs have stainless steel letters, which had rusted (**everything**) rusts at Pea Island!), which were looking pretty bad. Jim sanded each letter and painted with metallic silver paint. They look like new!

Here, Jim (on the left) is joined by Alligator River Resident Volunteer George Harrison, installing the new interpretive kiosk. We couldn't survive without our dedicated volunteers.



New Stickers
by
Stephanie
Kiker!