

Severe Weather Brings a Rough Start to the New Year



The heavy snow in January caused some trails to be inaccessible, credit: USFWS.

As 2018 began, refuges in northeastern North Carolina were visited by severe weather that wreaked havoc on them. The first week of January brought a snowstorm which forced facilities to be closed due to dangerous travel. The weight of the snow brought down many tree limbs and caused the trail at the Refuges Visitor Center to be closed due to bushes sagging onto the trail. By the second week, the roads were too slippery with mud to safely conduct the Alligator River Tram Tour. A second snowstorm moved in mid-way into January.

February was mostly quiet weather-wise, but then in mid-March, a nor'easter blew in with a vengeance. As it moved up the coast, it caused severe ocean over wash on Pea Island especially at the Visitor



Workers removing sand from Highway 12 at the south end of Pea Island, credit: NCDOT.

Center. Sand that had been plowed to create dunes on the east side of Highway 12 was quickly moved across the highway and into the parking lot. Travel on the refuge was halted as the North Carolina Department of Transportation worked to remove sand. During times of high tide, the ocean re-deposited much of the sand making it a slow-moving process for the workers. After five days with no access, the highway was finally opened and employees were able to access the refuge. Fortunately, they were relieved to find things in better shape than was feared they might be. The visitor center lost power, but it was restored quickly. The HVAC, water pump, etc. worked just fine. (*continued*)



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Severe Weather Brings a Rough Start to the New Year - continued

There was no evidence water got into the building. However, the bottom portion of the ramp leading up to the visitor center was washed away, along with some of the fence railings, so the visitor center remained closed until March 15 when repairs were completed. As seen in photos taken by North Carolina Department of Transportation and others, there was sand over about half of the parking lot. Some that had been recently "added" was completely washed away, and the pavement was undercut in that location (west side of the parking lot). Staff took equipment out and started pushing sand. The North Pond received ocean water. However, the salinity readings weren't very much higher than normal. There may be some changes due to salinity increase, but again, not as drastic as it might have been.

Above: ocean waters damage fencing and walkway while bringing salt water towards North Pond, credit: Carpenter.

Center: ocean waters flow across Highway 12 into the parking lot at the Pea Island Visitor Center, credit: Carpenter.

Below: aerial view of the Pea Island Visitor Center and parking lot during low tide, credit: Baldwin Video Productions.



Wings

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Pea Island National Wildlife Refuges and
USFWS North Carolina

Resident Volunteers Update

RVs (Resident Volunteers) usually live in RVs (recreational vehicles) on pads provided on the Refuge. Sites are available at Alligator River, Pocosin Lakes, and Mattamuskeet refuges. We also have two sites situated on National Park Service property at Bodie Island for volunteers working at Pea Island refuge. Free hook up and laundry facilities are provided in exchange for a required number of hours. Volunteer opportunities are based on the talents and interests of the volunteers and the needs of the refuge. Check out our RV Volunteer page for more information
https://www.fws.gov/refuge/Alligator_River/what_we_do/resident_volunteers.html.

Mattamuskeet

John and Barbara Eppler
April and May



As part of their 10-month RV/volunteering trip, John and Barbara spent February and March at Alligator River refuge and have now moved on to Mattamuskeet. After 45 years, John retired from electronic manufacturing for military/civilian aerospace industries. He is a nature photographer and loves the outdoors. John also volunteers for the Boy Scouts, state and national parks, as well as national wildlife refuges. In the past, he volunteered for four years at the Potomac River Refuge Complex in Woodbridge, Virginia.

John mentions, "*I look forward to exploring the U.S. and love the National Wildlife Refuge System.*"

Barbara was born in Poland. She retired as an electronic manufacturing technician in 2016 after working for commercial, military, and aerospace companies. She enjoys traveling, camping, hiking, gardening and RVing. She appreciates and cares about nature a great deal.

Barbara says, "*It always gives me joy to volunteer either in our own home, Reston, VA or on the road, wherever our travels take us.*"

Pocosin Lakes

Roger and Janet Cannady
April – September



Roger and Janet Cannady have been RV volunteers since 2016 serving with Florida State Parks and U.S. Fish and Wildlife Service. Prior to arriving at Pocosin Lakes refuge, they volunteered at Crystal River National Wildlife Refuge in Florida.

Alligator River

Jeff and Amy Setzer
May - September



Jeff and Amy Setzer got married in 2009 and were brought together for their love of animals, especially dogs and wolves.

They have traveled to Alligator River National Wildlife Refuge many times, including for their honeymoon.

One of their favorite things is going to red wolf howling events and trying to get the red wolves to howl back. North Carolina and the Refuge feel like home.

Jeff and Amy love to travel and recently purchased an RV to make traveling with their dogs easier. They are owned by Siberian Huskies and German Shepherds. The Siberians are show and performance dogs participating in events like confirmation and rally, and the Shepherds are in training for search and rescue with Blue and Gray Search and Rescue Dogs of Virginia.

When not traveling and training dogs, Jeff works remotely as a web developer and volunteers as a firefighter. Amy is lucky enough to be a stay at home doggy mom but has most recently held a job as a veterinary assistant before moving. They are looking forward to volunteering with the Refuge and learning something new.
(Submitted by Jeff and Amy)

Returning RV Volunteers:

Peggy and George Harrison

Cyndie and Jim Worley

Nancy and Ernie Mizzelle

Welcome Our Summer Interns

National Wildlife Refuges in North Carolina offer a variety of internships. The primary purposes of the intern program are to identify potential employees for the National Wildlife Refuge System and to introduce potential employees to the National Wildlife Refuge System. For this reason, internships are usually filled by college students or recent graduates. Interns provide a valuable work force for these refuges. Having an interest or goal of future employment with the U.S. Fish and Wildlife Service is not a requirement for those applying to be refuge interns. All interns will be involved in multiple refuge programs. This gives an intern a well-rounded look at and direct involvement with many aspects of national wildlife refuge operations. That often proves useful when searching for jobs after the internship. Duties for interns include biological, visitor services, and maintenance work.

Check out our internship page to learn more about the program:

https://www.fws.gov/refuge/Alligator_River/what_we_do/internships.html

Pea Island National Wildlife Refuge

Morgan Davis



Morgan is a junior at The University of North Carolina Wilmington studying Environmental Science with a Conservation option. She lives in Manteo, North Carolina but is originally from a small town outside of Scranton, Pennsylvania. Along with interests in wildlife and the environment, Morgan loves kayaking, fishing, paddle boarding, and being active. Her other hobbies include playing the guitar, hanging out with friends, and photography.

Madison Fairbanks



Madison is a junior at The University of North Carolina Wilmington studying Environmental Science with a focus on Environmental Conservation. She grew up on Hatteras Island and loves anything that has to do with wildlife.

Hollie Hatfield



Hollie is a junior at Virginia Tech studying Wildlife Conservation with a minor in Leadership and Social Change. She was born and raised in Raleigh, North Carolina. Hollie enjoys hiking, kayaking, and rafting.

Alligator River National Wildlife Refuge

Meghan Roberts



Meghan graduated from Old Dominion University with a Bachelor of Science in Parks, Recreation, and Tourism (concentrating in Parks and minoring in Public Service) and is working on a Master's Degree in Parks and Recreation Management. Meghan is a huge lover of the outdoors, loves traveling, and has a passion for the care and conservation of the environment and animals.

Elizabeth Piña



Elizabeth graduated from The University of Mary Washington in the fall of 2017 with a Bachelor of Science in Biology with a minor in Environmental Sustainability. She loves animals and enjoys drawing. Elizabeth is adventurous and loves trying new things including skydiving and jumping off waterfalls.

*Red Wolf Caretaker
Katerina Ramos*



Kat graduated from Delaware Valley University with a Bachelor of Science in Zoology with a minor in English. She has a deep love and appreciation for animals and the environment and often spends her free time adventuring, hiking to new places, slack-lining, rock climbing, and hacky-sacking.

**Pocosin Lakes
National Wildlife Refuge**

Rhett Casey



Rhett is a senior at Clemson University studying Parks and Conservation Area Management with a minor in Wildlife and Fisheries Biology. He enjoys rock climbing, backpacking, kayaking, hunting and fishing.

Jacob LoVullo



Jacob is a junior at Allegheny College in Northwest Pennsylvania studying Environmental Science and Geology. He is from Buffalo, New York and enjoys being outdoors hammocking, kayaking, and playing street hockey.

**Mattamuskeet
National Wildlife Refuge**

Heather Morris



Heather is a junior at The State University of New York College of Environmental Science and Forestry studying Conservation Biology with a minor in Marine Science. She is originally from North West New Jersey near the Delaware Water Gap and enjoys camping, hiking, kayaking, caving, and catching frogs and snakes.

**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 Refuge 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 Refuge Visitor Center. It also helps to maintain refuge land and water trails, provides refuge visitor services staff, assists with the annual Wings Over Water Wildlife Festival, and supports 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 (CWR) 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 CWR membership card to use for savings in CWR gift shops.

Biological Program Update

Submitted by Supervisory Wildlife Biologist Becky Harrison, PhD

Beginning every fall, biologists start to document waterfowl migration activities on the refuges. We begin surveys at Pea Island and Alligator River refuges in September and November, respectively, and continue observations through the beginning of March. Ground surveys using the Integrated Waterbird Monitoring and Management protocol are conducted three times per month, while aerial surveys typically occur monthly during November through February.

Management of the refuge's moist soil units, impoundments, and marshes for waterfowl is important for meeting the refuge's purpose. The refuge's waterfowl objectives help guide water management actions on the refuges. In order to meet waterfowl objectives, the refuges must maintain the moist soil units to meet waterfowl habitat needs and provide sufficient sanctuary areas that provide undisturbed resting and feeding areas for waterfowl.



Credit: Orsulak

Biologists record total numbers and locations for each species seen during each survey. To help us avoid double-counting individuals, we use the metric "Maximum peak number" instead of a sum total of birds on different survey days. "Maximum peak number" represents the most individuals of any given species detected during a single survey effort.

These areas are roughly at the midpoint of the Atlantic Flyway migration corridor and include valuable feeding and resting areas for numerous species of wintering waterfowl, as well as important breeding habitats for many duck species.

Alligator River refuge is a great place to see large groups of dabbling ducks like Northern pintails, green-winged teal, and gadwall.

The most common diving species observed this year was the ring-necked duck. Similar to last season, we identified 17 species of waterfowl in the moist soil units, with 14,000+ individuals being documented during the maximum peak observation period.

It was also a terrific year to watch waterfowl on Pea Island refuge. We recorded 23 identified species of waterfowl, with over 38,000 individuals being documented during the maximum peak observation day between the impoundments at North Pond, New Field, and South Pond. The most common

species observed was redhead, with more than 16,000 ducks seen during peak periods in mid-December. Other species observed in large groups included dabbling ducks Northern pintails, gadwall, buffleheads, and American wigeon.

We observed nearly 1700 tundra swans during peak activity periods in mid-December. If you are interested in seeing what's using Pea Island now, we encourage you to explore the wildlife trails at North Pond or Salt Flats.



The Preschool Young Naturalist Program meets every Friday from 10 – 11 am at the National Wildlife Refuges Visitor Center on Roanoke Island

This free program is geared towards children up to five years old, but older children are also welcome. Recently, Intern Maggie Veith helped the children find insects on the trail behind the building. For more information, contact Cindy Heffley at 252/475 4180, credit: G. Grubbs.

Pea Island Refuge Crabbing and Fishing



Credit: USFWS

Come join your friends and neighbors at one of the most looked forward to events for families on the Outer Banks on Saturday, June 10, from 9 am to noon at Pea Island Refuge.

The Rodeo is a great way to introduce a child, relative, or friend to the fun activity of crabbing. This is the only day that North Pond, directly behind the Pea Island Visitor Center, is open to the public for crabbing and fishing. Participants may drive around the service road to a specified end point making this a great way for anyone to have access to the North Pond.

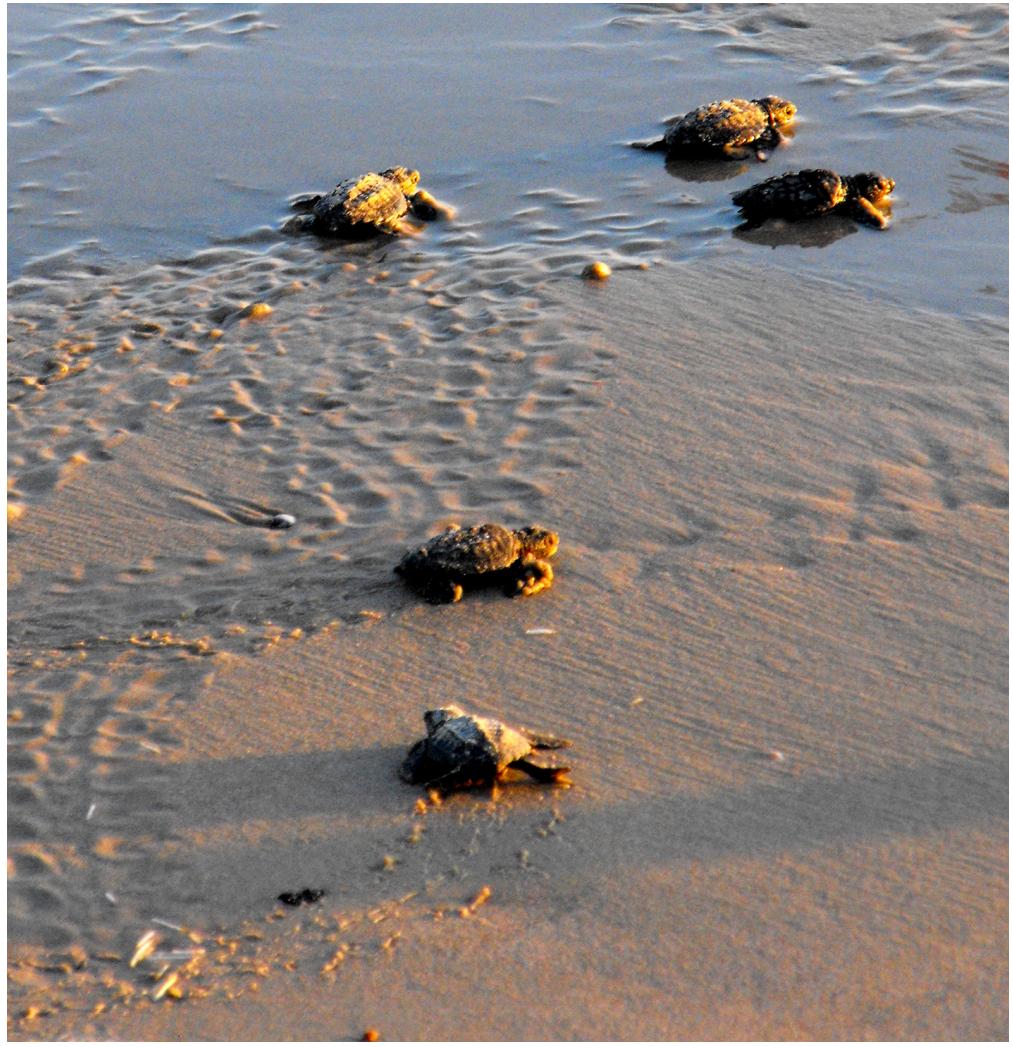
“Though one of the focuses for this day is family fun in the great outdoors, the extra access allowed at North Pond on Saturday is strictly for fishing and crabbing. The pond will continue to be closed to paddling and other activities. We hope folks will come out and enjoy a morning of outdoor recreation on one of the prettiest national wildlife refuges in the whole system,” mentioned Cindy Heffley, Visitor Services Specialist.

“We invite all participants to bring crab nets, fishing lines, rods, bait, tackle, and whatever else they think will help them have a memorable day. Everyone will receive a flyer with crabbing regulations and must abide by these regulations.” The event ends promptly at noon.

Sea Turtle Update

- In 2017 on North Carolina beaches, there were nearly 1200 loggerhead nests, 26 green nests (two of which were on Pea Island refuge), and two Kemp’s Ridley nests. In Northeast North Carolina, we represent most of the northern extent of the range (there were a handful in Virginia this year though), with Florida getting the bulk of nests (>96,880).
- Hatching success was significantly impacted by storms this year. Approximately 80% of nests laid in May and June emerged, compared to 40-50% laid in July and August.

- DNA studies are ongoing still with one egg being collected from each nest. In North Carolina, of 8500 nests (analysis is ongoing) sampled to date, there were 2100 unique females identified. Most females laid three nests/season with nests ranging up to ~49 miles apart.
- In 2017, there were higher than average rates of strandings reported (789, live and dead combined) due to cold stunning events in December and January. The United States Coast Guard has been helpful in coordinating with the North Carolina Aquarium to release treated turtles offshore.



Baby sea turtles, credit USFWS

Summer Programs Begin June 12

Our 2018 program schedule has been posted! You can find it at <https://www.fws.gov/ncgatewayve/images/interp-schedule.pdf>.

Whether you’re looking to join a guided canoe 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. Programs through December are listed on the schedule.

New Recycled Lumber Deck Furniture – Still time for SPONSORSHIPS!



Coastal Wildlife Refuge Society has purchased extraordinarily functional, durable, and attractive furniture for the back deck of the National Wildlife Refuges Visitor Center. Each piece will have a beautiful aluminum plaque with your personalized message of honor or memorial. The cost of sponsorship covers both the costs of the furniture and the plaque. We have 26 individual pieces. Eleven pieces have already been sponsored, but the following pieces are available for sponsorship: Child's chair-1; Adult chair-11; Small table-1; Trash can-2.

COURTESY OF <i>Daniels'</i> Homeport	COURTESY OF LINDA & GERALD MCCLESKY	IN MEMORY OF CPL. PATRICK GLENNON MISSING IN ACTION IN NORTH KOREA NOVEMBER 1, 1950
IN MEMORY OF MARTHA THE LAST KNOWN PASSENGER PIGEON: 1885-1914	COURTESY OF A FORMER REFUGE VOLUNTEER	IN MEMORY OF PAUL W. STURM REFUGE MANAGER PEA ISLAND NATIONAL WILDLIFE REFUGE 1947-1949
IN MEMORY OF DEDICATED REFUGE VOLUNTEER VICTOR J. 'KRIS' KRISTOFFERSON	IN RECOGNITION & APPRECIATION OF PROJECT LEADER MIKE BRYANT FOR HIS SERVICE TO THE COASTAL NORTH CAROLINA NATIONAL WILDLIFE REFUGES COMPLEX APRIL 15, 1996 - OCTOBER 15, 2016 CONSERVATIONIST, LEADER, MENTOR, FRIEND	Examples of personal messages from currently sponsored pieces.
IN MEMORY OF DEDICATED REFUGE VOLUNTEER HERB LEWIS 'MR. TURTLE'	IN HONOR OF MY GRANDS... KORY, MYA, LANEY, WAYLON, HEIDI, JOLENE, AND KANAN WHO LOVE THIS PLACE & ALL THINGS WILD!	Sponsorship Fees/ Contributions: Child Chair \$325 Adult Chair \$400 Large Table \$500 Small Table \$200 Trash or Recycle Bins \$600

Please call 252/473 1132 x 224 or
email Steven_Brumfield@fws.gov
to claim your piece and learn the
details of sponsorship.