
NEMOURS GAZETTE

A publication of the Nemours Wildlife Foundation

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SPRING - SUMMER 2021

Education & Outreach Coordinator Joins Nemours Staff

Nemours Wildlife Foundation set out this spring to find someone with a passion for wildlife conservation who could educate and encourage people of all ages toward becoming better stewards of our abundant natural resources. We believe we have found just that person in the most recent addition to our staff, our new Education and Outreach Coordinator, Heather Kraus.

Heather, originally from Ligonier, Pennsylvania, earned her Master of Science with a concentration in Biology, Ecology and Biodiversity in 2019 from Emporia State University in Emporia,



Heather Kraus

Kansas. She was a

magna cum laude graduate of Washington and Jefferson College in Washington, PA, where she received her Bachelor of Arts Degree in General Biology in 2011.

Following her undergraduate studies and during graduate school, Heather worked on several projects including as a research assistant for the Kansas Department of Wildlife, Parks & Tourism, field research assistant at the University of Maryland, crew leader for Bat Conservation International in Massachusetts and a field technician at Cornell University.

Through these projects she has honed her skills in bird banding, preparing educational material, communicating scientific topics to diverse audiences, project management,



Above, Heather extracts a Downy Woodpecker from a mist net during fall migration at Kingston Wildlife Research Station in Rhode Island. Photo by Liz Resenic.

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From the President – We are Growing!

By Ernie Wiggers

As you read through our newsletter, we hope you will notice we jumped into 2021 at full throttle!

We have hired Heather Kraus to fill a newly created staff position overseeing our education and outreach efforts. With Heather on board, we hope to connect more strongly with local schools to encourage young people to learn about and appreciate the incredible natural world just beyond their backdoor. I am grateful to our Board of Directors for seeing the importance of this new position.

The Education and Outreach Coordinator position would not have been possible had three long-time Friends members not approached us about making legacy gifts to support these specific efforts: Vicki and Steve Mix, and Lainey Lortz.

Steve Mix is lifelong nature lover whose expertise on butterflies and moths takes him into schools and local organizations to speak about them. He has donated his extensive lepidoptera collection to Clemson University. Vicki Mix is a former teacher with an enthusiastic appreciation of education. Lainey Lortz's gift was made in honor and memory of her husband and former NWF Board member Bill Lortz who was passionate about developing educational programs promoting the value and conservation of our natural resources.

These generous gifts have been placed in an endowed account with the proceeds used to support our educational programs. We have been most fortunate to have supporters like the Mix and the Lortz families provide a commitment for a sustained education and outreach program for today and into the future.

Another of the outreach opportunities we hope to take advantage of is the network of Motus telemetry stations we are helping develop across South Carolina. You can learn more about this program elsewhere in this newsletter, but just imagine the excitement of a class of fifth graders as they capture, handle, and outfit a painted bunting with a tiny transmitter and then use their computers to track its migration. These hands-on opportunities are invaluable ways to expose



Ernie Wiggers, Ph.D.

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From the President continued...

our youth to the natural world, encourage their exploration of fantastic feats such as migration, pique their interest in science and technology, and realize the importance of conservation, not just locally but across continents. The learning opportunities are limitless!

I am pleased to welcome Mr. Kevin Dukes as the newest member of our Board of Directors. Kevin grew up in North Augusta, and between his hometown and the South Carolina coast, he has spent many days outside hunting, fishing, and exploring. Kevin said “my love for the history and environment of the Lowcountry started as a youth duck hunter on Donnelley and Bear Island Wildlife Management Areas in the ACE Basin. At a young age, those experiences instilled in me an understanding of the importance of land preservation for the benefit of future generations, the environment, and the public trust”.



Kevin Dukes

Kevin obtained degrees in civil engineering and law from the University of South Carolina. He began his legal career as a real estate attorney with the Harvey and Battey Law Firm in Beaufort, where his focus has been on all aspects of property ownership and preservation.

Kevin is filling a board vacancy which opened when Jamie Beard completed his term limit. We wish to thank Jamie for his six years of dedicated service and great leadership!

On page 6 you will see we are in the middle of our second field season of a multi-state study on wood duck recruitment rates associated with wood duck boxes. Also, read Stephanie Braswell’s thoughts on being our intern for the winter and spring. Stephanie has done an outstanding job and will soon be off to Auburn University to begin her Master of Science studies in wildlife biology. We wish Stephanie much success in her graduate program!

We soon will be joined by Stephen Clements, a new PhD student in wildlife biology at Mississippi State University under the direction of Dr. Brian Davis. For his dissertation, Stephen will measure the occurrence of diet items consumed by waterfowl in managed tidal impoundments and estimate the energy values of these forages. His work will provide vital information that will help biologists and managers better understand the forages produced and consumed in our wetlands and how well these forages meet the nutritional requirements of wintering waterfowl.

You will learn more about Stephen’s work in future newsletters. It is important to note the construction of our new research lab facility is nearing completion and Stephen will be one of the first to use this facility, so the timing of his research is perfect!



Education Coordinator continued...

and supervising and training staff. All these experiences will be useful in her new position in which her duties will include developing programs that explore regional conservation issues for all age groups, especially K-12 students.

Heather will represent the foundation in the statewide Palmetto Bird Conservancy currently in development. Her responsibilities will involve coordinating regional bird banding stations, training and supervising citizen science collaborators and implementing a collaborative network of MOTUS towers (see article on Page 8).

"I remember after reading the position description thinking that this place (Nemours) and the job itself sounded amazing," Heather said. "What really interested me in the position was the combination of outdoor education, research, and community outreach. I grew up attending events and camps hosted at Powdermill Nature Reserve and these programs got me hooked on exploring the outdoors. I liked that through this position I would be able to hopefully get kids in the Lowcountry interested in discovering and exploring nature."

She added, "I'm looking forward to learning about all the habitats and wildlife of the area. Nemours and the area in general have so many habitats with which I am unfamiliar, and I cannot wait to explore each new habitat and start feeling comfortable identifying all the new wildlife and vegetation. As it goes in Aladdin, it will be "a whole new world" for me. (I am a pretty big Disney fan, and I just couldn't help using the reference. It seemed fitting!)."

This new position at the foundation was made possible by an endowment created from extremely generous donations from long-time supporters Steve and Vicki Mix and Lainey Lortz.



Above, Heather (right) with a seasonal field technician taking vegetation measurements using a Robel pole. These Measurements are used to determine concealment cover surrounding grassland bird nests. This field work was conducted in restored grasslands in central Kansas.

Below, Heather bands a Northern Saw-whet Owl at Powdermill Nature Reserve.



RCW Chicks – At Last!

By Ernie Wiggers

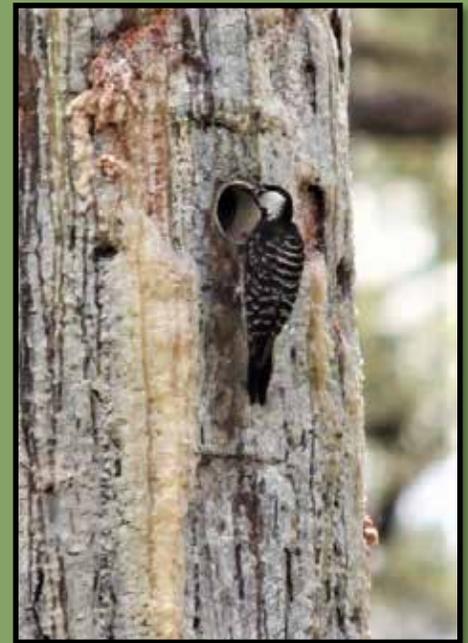
In the fall of 2014, Nemours received a family of red-cockaded woodpeckers (RCWS) being displaced due to development in Horry County. This was a notable milestone for us, both for confirming our success in establishing a pine savanna habitat on Nemours and for restoring this endangered species to the ACE Basin.

The sunrise release of the birds was witnessed by several of our Friend's members including Wendy Zara, Dean Moss, and Jessica Loring. We had high hopes this family group would stick around to produce young the following spring. But as often happens with restoration programs, some animals do not stay and in this instance only a bachelor male remained.

Then in 2019, Nemours was selected to receive four pairs of yearling RCWs. Biologists have had greater success with yearling birds remaining in the area where they were released as opposed to older birds when moved. So, there was great anticipation we might have nests initiated in the spring of 2020, but none were detected. However, we continued to see and hear RCW's in the savanna throughout the year. As spring of 2021 rolled in, the anticipation was high for us to find our first nest and Stephanie, our intern who was monitoring the cavities, excitedly announced in early May we had eggs in a nest

Now the eggs have hatched and soon the young birds will be leaving the nest. Given it has taken us nearly seven years to get to this point, even much longer when you consider the time invested in restoring the savanna and developing quality red-cockaded woodpecker habitat, we are all thrilled to have young birds produced in our woodlands.

On a birding trip with a few of our Friend's members, including Wendy Zara and Dean Moss, in early June we stopped by the cavity tree with the active nest, and everyone was able to see the parents bring food for the new chicks. The excitement everyone shared that morning was easy to detect. Finally, it dawned on me how fitting it was to have Wendy and Dean here to see the successful beginning of a new chapter in a story they saw get started over seven years ago.



A female RCW arrives to feed her young at her nesting site on Nemours on May 18, 2021. Photo by Jeff Dennis.



The above photo, captioned "Observing history in the making at Nemours Plantation" accompanied our Fall/Winter 2014 newsletter story about the first release of RCWs at Nemours. Left to right, Paula Sisson (US Fish & Wildlife Services biologist), Ernie Wiggers, Friends of NWF members Wendy Zara and Dean Moss, Carolina Causey (SC Department of Natural Resources biologist) and Jessica Loring, Friends of NWF member.

Regional Wood Duck Study Spring '21 Update

By Beau Bauer

Our regional wood duck research continues into year 2 across Delaware, Maryland, North Carolina, South Carolina, Georgia, Florida, Mississippi, and Louisiana. This study addresses needs indicated by biologists representing state agencies, U.S. Fish and Wildlife Service, universities, and non-government organizations throughout this region for contemporary data to better manage wood ducks and evaluate the effectiveness of nest box programs. Our overall objective is to estimate recruitment rates (i.e., females and their female offspring surviving nesting and returning to nest boxes during subsequent breeding seasons) from nest boxes throughout these states. These data are lacking, but necessary to properly evaluate the efficiency of nest boxes and associated economics of nest box programs.

Thankfully, returning to the field this year are graduate students Dylan Bakner (Louisiana State University), Taylor Gibson (Mississippi State University), Emily Miller (Clemson University), and Jacob Shurba (Clemson University), and technicians Chuck Farrell (Georgia), Hannah Schley (University of Delaware, Delmarva Peninsula coordinator), Nathan Simmons (Maryland Department of Natural Resources), and Cindy Von Haugg (South Carolina). This continuity of experience has yielded a full-speed, successful start to this

field season with over double the number of wood duck ducklings marked ($n = 2,439$) from this time last year ($n = 1,005$)! The number of web-tagged female ducklings that return and are re-captured from nest boxes will be used to calculate our recruitment rates.



South Carolina technician, and former Nemours intern, John Powell, holding a recently hatched and web-tagged wood duck duckling on Lake Moultrie.



North Carolina technicians, Collin Mulcahy (L) and Laura Wallace (R), with recently hatched wood duck ducklings on Roanoke River National Wildlife Refuge.

Across all states, we are sampling 1,379 nest boxes. Box use is 78.7% ($n = 1,085$) with 1,044 unique nesting attempts. Cumulative nest fates include 302 successful (28.9%), 181 abandoned (17.3%), and 322 depredated (30.8%). Currently, we have captured 763 adult females across three species (wood duck, $n = 711$; hooded merganser, $n = 51$; black-bellied whistling duck, $n = 1$). We deployed 322 new leg bands (wood duck, $n = 291$; hooded merganser, $n = 30$; black-bellied whistling duck, $n = 1$) and recorded 442 recaptures (wood duck, $n = 420$; hooded merganser, $n = 22$). We observed 42 web-tagged and 6 PIT tagged (Louisiana) females within wood duck recaptures. We web- or PIT-tagged (Louisiana) 2,471

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Wood Duck Update continued...

ducklings across two species (wood duck, $n = 2,439$; hooded merganser [Mississippi], ($n = 32$). And, we have measured length (mm), breadth (mm), and mass (g) for 12,390 eggs across three species (wood duck, $n = 11,252$; hooded merganser, $n = 1,128$; black-bellied whistling duck, $n = 10$).

As always, this project would not be possible without our many partners and we thank them!

- The Delaware Department of Natural Resources and Environmental Control, Delaware Wild Lands, Maryland Department of Natural Resources, U.S. Fish and Wildlife Refuge System, South Carolina Department of Natural Resources, Georgia Department of Natural Resources, Florida Fish and Wildlife Conservation Commission, Louisiana Department of Wildlife and Fisheries, Mississippi Department of Wildlife, Fisheries, and Parks, and Clemson University's James C. Kennedy Waterfowl & Wetlands Conservation Center for their financial, logistical, and technical support.
- The U.S.G.S. Bird Banding Laboratory for their assistance with permitting and promoting leg band and web tag recoveries. We acknowledge J. B. Davis (Mississippi State University), G. R. Hepp (Professor Emeritus, Auburn University), R. M. Kaminski (Clemson University), K. M. Ringelman (Louisiana State University), P. Schmidt, and C. K. Williams (University of Delaware) for their strategic development of this study and technical assistance.
- The graduate and undergraduate students and technicians from partnering universities and agencies for their diligent data collection.



Georgia technicians, Chuck Farrell (L) and Rebeca Bravo (R), recording egg measurements (length, width, and mass) on Redlands WMA.



South Carolina technician, Cindy Von Haugg, with a sleepy eastern screech owl discovered during weekly nest box checks on Lake Moultrie.

Motus Tower Installed at Nemours as Part of New Palmetto Bird Conservancy

by Beau Bauer

In January 2021, Nemours staff, with assistance from South Carolina Department of Natural Resources biologists (Jessica Kinsella and Matt King, ACE Basin NERR McKenzie Field Station), installed a Motus tower at Nemours Wildlife Foundation (see photos of the installation at right). The Motus (Latin for *movement*) Wildlife Tracking System is a unique network of automated receiving stations (towers) that detect passing birds equipped with special transmitters.

Unlike bulky and expensive satellite transmitters that continually collect locations, Motus transmitters are small, cheap and emit a unique identifier code upon passing within range of a tower, thus providing the location of that individual. Some Motus transmitters are small enough for butterflies and dragonflies! Researchers can track movements and migratory routes by examining which towers recorded their marked birds.

Currently, there are 1,046 Motus towers deployed across four continents (31 countries) and 241 species (26,026 individual animals) tagged. There are 14 Motus towers deployed across South Carolina, mostly along the coast south of Charleston. Motus research success is contingent upon coordinated tower deployments that establish virtual “fence lines” across key migration routes.

With this realization, Nemours, SC Audubon, and numerous partners have begun a new initiative: the Palmetto Bird Conservancy. This is a collaborative partnership to engage various stakeholders, scientists, and agencies in strategically deploying Motus towers across South Carolina. Ideally, we envision a network encompassing the entire coastline and inland through the I-26 corridor. Additionally, the Conservancy will work toward identifying priority species to mark with Motus transmitters and coordinating banding efforts.

Another primary objective is to use Motus as an educational outreach platform to engage the public, especially schools, with science and technology to promote avian conservation. This exciting initiative is still in the works but stay tuned for further developments!

We thank SCDNR, SC Audubon, and Dr. Adam Smith (US Fish and Wildlife Service) for their expertise and assistance.



Nemours Wildlife Foundation's Spring 2021 Intern

My name is Stephanie Braswell and I am a recent graduate of Clemson University (as of May 7th, 2021). I majored in wildlife and fisheries biology with minors in animal and veterinary science and forest resource management.

I have been here since the beginning of March, spending much of my time working out in the marsh surveying for the elusive black rail and attempting to capture these marsh birds on game cameras. I also monitor red-cockaded woodpecker (RCW) cavities throughout the pine savannas.

When I am not looking for black rails or RCWs I do some miscellaneous things like assisting with prescribed burning, group tours, checking wood duck boxes, helping set up data collection devices, and pretty much anything else that needs to be done! I have been learning tons of things and getting valuable hands on experience that will help me in the future. I would like to eventually work full time as a biologist and do habitat management.

While here I have added several new species to my birding "life list" that I have never seen before! Birds like wood storks, painted buntings, and parula warblers just to name a few. That is actually one of my favorite things about working here. The amount of animal diversity in this one place is incredible; rarely a day goes by that I don't get to see something exciting that most people would never have the chance of seeing at all.

Another species that I have had the privilege to see is the eastern diamondback rattlesnake. I had never seen one in the wild before coming to work here. I saw it one day while I was cleaning out some old traps in a pine savanna...I think we scared each other equally!

Unfortunately, I will not be able to spend my entire summer at Nemours as I will be attending Auburn University in June to begin my masters thesis on the development of methods to survey waterfowl populations.

I am very thankful for the opportunity to work here and to the staff who are very helpful and who contributed to my learning experience.



Top left, Stephanie examines photos from trail cameras.

Above, she uses a peeper camera (and her trusty bucket!) to check a red-cockaded woodpecker cavity at Nemours.

News & Notes...

Lab Nears Completion!

The Nemours laboratory is almost complete! We hope to hold a formal ribbon cutting ceremony for the lab in October during our belated celebration of the foundation's 25th anniversary. Pictured below, left to right, are Nemours Biologist Beau Bauer, Education and Outreach Coordinator Heather Kraus, and CEO/President Ernie Wiggers in front of the nearly finished structure.



Scopes Donated to Nemours

Nemours Wildlife Foundation has received two monocular dissecting scopes for its new research lab from Michael E. Wiggers, DVM (at right, brother of our president and CEO, Ernie Wiggers).

One dates to 1954 when William S. Jackson, Jr. took it with him to study veterinary medicine at the University of Georgia. The second was obtained by Mike Wiggers in 1968 when he left Clemson to study veterinary medicine at UGA as well.

Dr. Wiggers joined Dr. Jackson's practice in Greenville and acquired his scope when he became sole owner of their practice after Jackson retired. The scopes were used until 2013 when Wiggers retired. He said it is so gratifying to know students will continue to use these scopes to probe questions and gain knowledge. Thank you, Mike!



Pavilion Opens

A ribbon cutting ceremony was held April 17th to officially open a new pavilion built by Nemours staff near the NWF headquarters. The

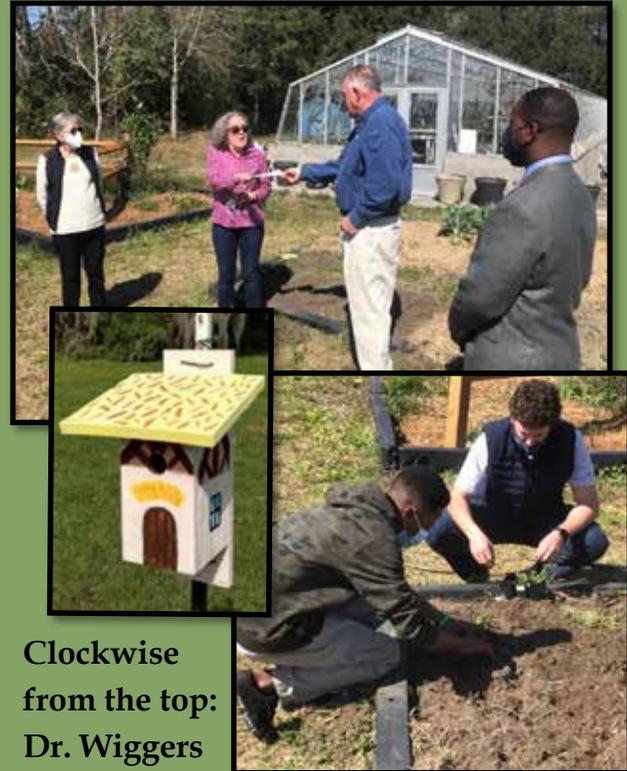


pavilion was tailored for use by children and their families visiting through the Outdoor Dream Foundation which is led by Nancy Benton (seen above center with ODF families at the ceremony). and funded by a very generous donation by Nancy in honor of her late husband, David Crockett.

Nemours Presents Grant

The NWF's Board of Directors made a \$5,000 grant to Heritage Community Farm (HCF) in February to support their work developing a gardening and outdoors program on the Whale Branch Elementary and Middle schools campus in northern Beaufort County. HCF is an outgrowth of a project begun by volunteers who completed the Beaufort County Senior Leadership program in 2019. Heritage Community Farm achieved 501(c)(3) status in 2020. Their mission is to develop community gardens for the purposes of food security, education, economic opportunity, conservation, and preservation. HCF volunteers working with Whale Branch teachers and students have planted vegetable gardens, pollinator gardens, and established a bluebird box trail on campus. The boxes (built by Nemours own Ernie Wiggers) were each painted with different themes by students.

Teachers regularly comment on how students look forward to their time outside tending to the gardens. Several Whale Branch teachers have enrolled in the School and Community Gardens course taught by the Clemson Extension Service. HCF hopes these first gardens are just the beginning of more outdoor learning opportunities for the students. For more information, please visit www.heritagecommunityfarm.org.



Clockwise from the top: Dr. Wiggers presents a check to Cathy Isbell of Heritage Community Farm at Whale Branch Middle School accompanied by Anne Hartzell, HCF's treasurer, left, and Whale Branch Middle School Principal Freddie Lawton, right; A teacher assists a student planting spinach in a raised vegetable garden; One of the blue bird houses built by Dr. Wiggers and painted by students.

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www.nemourswildlife.org!