

# NEMOURS GAZETTE

A publication of the Nemours Wildlife Foundation

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[www.nemourswildlifefoundation.org](http://www.nemourswildlifefoundation.org)

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FALL - WINTER 2020



## The Nemours Wildlife Foundation: 25 Years and Going Strong

Photo by Richard Carnes

Like most of the world, we had different plans for 2020, specifically the celebration of the Nemours Wildlife Foundation's 25<sup>th</sup> Anniversary complete with friends, colleagues and former students gathered in person for a "birthday party" of sorts. Since those plans had to be altered and the celebration delayed, for now we "gather" in writing to share some comments about what the foundation means to some of those who have known it best.



**Colden R. Battey, Jr., longtime attorney and friend of Eugene duPont III, original trustee for the foundation, former chairman of the board and current board member:**

"The Foundation was Gene's way to preserve and protect his beloved Nemours and to increase our understanding of this remarkable place. I think Gene would be pleased and proud of what the Foundation has accomplished."



**Billy Dukes, Chief of Wildlife, South Carolina Department of Natural Resources:**

Nemours has been and continues to be on the cutting edge of wildlife research. We at SCDNR are grateful to have the Foundation as partners and are grateful for their efforts in managing wildlife in South Carolina and beyond.



**Dean Harrigal, retired biologist for the South Carolina Department of Natural Resources:**

"The Nemours Wildlife Foundation is a cornerstone of our conservation efforts in the Lowcountry. It is the nonpartisan "Conservation Think Tank" that brings people together to discuss issues and solve problems. It is a laboratory for conservation

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## From the President...

### Reflecting on Our First 25 Years

As we approach the final days of the 25<sup>th</sup> year of the Foundation's existence, it is important to take a moment to look back on how much we have accomplished in that quarter century. We have gone from a few words on paper establishing the foundation to a vibrant organization that is a leader in wildlife science and education. The Foundation's impacts are broad and significant: from playing a key role in the development of a General Permit that streamlined the process and reduced the costs for conducting routine and emergency repairs on thousands of acres of impoundments critical to wildlife conservation, to advancing our knowledge of wildlife management and contributing to the education of a new generation of wildlife professionals. I believe our accomplishments exceeded the dreams its founder, Eugene duPont III, may have had when he established this organization through his will two and a half decades ago.

The first years of the Foundation were lean times which forced us initially to take baby steps. In time we developed the idea of a "Friends of Nemours" group and the financial support from these champions meant we could initiate new, broader research studies and involve more students. By my count we have supported some 25 graduate students working on projects that include waterfowl and other marsh birds, mammals, reptiles, fish, and invertebrates. These students have worked on topics critical to some of our most iconic species, such as whooping cranes and southern fox squirrels, and other species most of us rarely see but which are still ecologically important like clapper, king, and black rails. Other students have assessed traditional land management practices such as flooding regimes in wetland impoundments and prescribed fire in pine savannas while testing alternative practices which may produce more desired outcomes. Some students have studied species some might consider a threat or undesirable, such as Eastern Diamondback Rattlesnakes and the American Alligator, but they too are a valuable part of our coastal ecosystem.

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#### THE NEMOURS WILDLIFE FOUNDATION

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# Transitions at Nemours

By Mike McShane, Chairman, Nemours Wildlife Foundation

## Board of Directors

After 12 years of serving as chairman of the Nemours Wildlife foundation board of directors, Colden Battey has elected to step down but remain as a trustee. We are all tremendously grateful for Colden's 25 years of dedicated service to the foundation and I am very pleased Colden will remain engaged. Please see his statement below.

## President & CEO

Dr. Ernie Wiggers has announced his retirement as President and CEO of the foundation effective December 31, 2021, giving us 12 months to not only celebrate Ernie's accomplishments but to prepare for a successor.

Foremost, before we discuss our search process, I must express our collective and profound appreciation for the accomplishments by Ernie as Executive Director, then as President and CEO. Retiring at the end of next year will bring his tenure at Nemours to 22 years of building a now nationally recognized, preeminent wildlife research and education program. This is not only Ernie's legacy, but one we can all be very proud of as supporters.

As a reminder, Ernie grew up on a farm in Pomaria, SC, graduated from Clemson University in 1975 with his bachelor's degree and in 1979 with his master's in wildlife biology. Ernie and his wife, Hope, then travelled to Texas Tech for his PhD which he completed in 1983. They then moved to the University of Missouri where he was on the faculty in the Department of Fisheries and Wildlife in the College of Agriculture from 1983 until 1999 when we were fortunate to lure him back to South Carolina.

I have appointed an executive search committee which our very capable colleague and board member Alex Shuford has agreed to lead. Board members Colden Battey and Jerry Schulze will serve as well. I appreciate and trust their wisdom and commitment to excellence.

My commitment is to keep our stakeholders engaged as we work collectively on a decision to find the right successor for the foundation. Meanwhile, please do not hesitate to contact me to discuss any questions regarding our plans or suggestions.

With Warm Regards,  
Mike (ravenspoint@msn.com)



*"In March of 2020 I began to experience some physical challenges and decided it was best for the foundation that I step down from the chairmanship of the board of directors. Mike McShane, the board vice chairman, has assumed the chairmanship and I believe he will provide the foundation with great leadership.*

*It has been one of the high points of my career to lead this foundation. I will remain on the board and will continue to work for the success of the foundation."*

**Colden R. Battey, Jr.**

# Fall 2020 Wood Duck Study Update

by Beau Bauer

Last Spring, we reported the expansion of the wood duck study across eight states: Delaware, Maryland, North Carolina, South Carolina, Georgia, Florida, Mississippi, and Louisiana. The primary objective of the study is to estimate the contribution of artificial nest boxes to wood duck recruitment (the number of female adults and ducklings that survive to subsequent breeding seasons). This vital rate drives population growth within box-nesting populations and such data are lacking across the southeastern United States and is necessary to assess the effectiveness of nest boxes and economics of associated nest-box programs. Graduate students are also addressing how surrounding habitat conditions, nest parasitism, microbial communities,



**Lead Delmarva Peninsula technician, Tori Mezebish, holding recently hatched wood duck ducklings.**

and nest box characteristics may affect box use, nesting success, and recruitment.



**LSU M.S. student, Dylan Bakner, banding a black-bellied whistling duck in Louisiana.**

Management techniques to deter predation by snakes, woodpeckers, and mammals are also being evaluated. We wrapped up the 2020 field season in late July with results far exceeding our expectations. First, we thank our partners and cooperators from the University of Delaware (Dr. Chris Williams); Clemson University's James C. Kennedy Waterfowl & Wetlands Conservation Center (Dr. Richard Kaminski); Mississippi State University (Dr. Brian Davis, James C. Kennedy Endowed Chair in Waterfowl and Wetlands Conservation); Louisiana State University (Dr. Kevin Ringelman); Delaware, Maryland, South Carolina, Georgia, Florida, and Louisiana state wildlife agencies; U.S. Fish and Wildlife Service Refuge System; and the U.S. Geological Survey Bird Banding Laboratory. Their collaboration, logistical, and financial support have made this possible. The big "shout out" goes to the graduate students: Emily Miller and Jacob Shurba [Clemson University], Taylor Gibson [Mississippi State University], and Dylan Bakner [Louisiana State University], and the field technicians: Tori Mezebish [University of Delaware]; Nathaniel Simmons [Maryland DNR]; Cindy Von Haugg, Haley Keff, Sam Fishman, Jake Merendino, Dylan Sanborn,

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## **“Wood Duck Update” Continued...**

Chuck Farrell, Sam Sauber, Hannah Schley, and Joseph Kizior [Clemson University/Nemours Wildlife Foundation]. Thank you all for the dedicated and hard work!

Now, to the numbers. We sampled 1,272 nest boxes from 15 study sites across the aforementioned states. We documented 1,102 boxes used (87%) with 1,902 unique nesting attempts. Of these nesting attempts we recorded 883 successful (46%), 383 abandoned (20%), 489 depredated (26%), and 146 other/unknown (8%) nest fates. We captured 1,259 incubating females (including black-bellied whistling ducks and hooded mergansers) and deployed 897 new leg bands. Overall, we recaptured 390 incubating females from nest boxes. We also marked 4,445 wood duck ducklings with web tags across 8 states and another 581 and 504 wood duck and black-bellied whistling duck ducklings, respectively, with PIT tags in Louisiana. Finally, we collected measurements (mass, breadth, height) from 20,010 eggs! Combined with multiple habitat surveys and nest box measurements, we compiled a massive amount of data...for just one year!



**Taylor Gibson, MSU graduate research assistant, holding wood duck ducklings at Mr. Kennedy's York Woods property in Mississippi.**



**Cindy Von Haug (L) and Haley Keff (R) web-tagging wood duck ducklings on Roanoke River National Wildlife Refuge in North Carolina.**

Currently, we are gearing up for the next field season. Expect some new and familiar faces to join us next year. Also, additional states have expressed interest in joining and expanding this partnership. This is great news and highlights the importance of cooperative research as we continue to grow our “flock” to better understand waterfowl ecology throughout the southeastern United States. In the meantime, this hunting season please check your harvested wood ducks for web tags (affixed to the webbing between their toes) and/or leg bands and report these encounters to the Bird Band Lab ([www.reportband.gov](http://www.reportband.gov)). Thank you again to all of our collaborators and happy hunting!

## **"Nemours' 25th" Continued...**

research and education and a training ground for future natural resource professionals and leaders. The respected leadership of the professional staff (especially Dr. Ernie Wiggers) has established an important legacy for the Foundation as it moves forward into the next decades."



**Richard M. Kaminski, Ph.D., Director, James C. Kennedy Waterfowl and Wetlands Conservation Center, Clemson University:** "Visionaries planned and implemented a union between the Nemours Wildlife Foundation (NWF) and Clemson University's James C. Kennedy Waterfowl & Wetlands Conservation Center (KC). To operate separately would have been a mistake; to operate together will continue yielding science and conservation benefits to waterfowl, wetlands, and the stewards of these natural resources. I'm confident that NWF, KC, and all our partners of the North American Waterfowl Management Plan will persist in perpetuity for the conservation of coastal and other wetland ecosystems."



**J. Drew Lanham, Ph. D., Professor of Wildlife at Clemson University, ornithologist and author:** "Nemours is perhaps the best kept secret of culture and conservation convergence in the ACE Basin -- maybe on the eastern seaboard. When one can study the impacts of salt marsh management on black ducks and black rails while contemplating the bitter history of Black enslavement and the triumph of liberation over that bondage by the heroism of Harriet Tubman's daring Combahee Raid, all in the same place -- that's extraordinary. I can't think of any place else where so much wild richness and history flow together. "



**Christopher P. Marsh, Ph.D., Executive Director, Spring Island Trust and Tony Mills, Education Director, Spring Island Trust :** "The Nemours Wildlife Foundation has been a critical environmental education partner for the Spring Island Trust for two decades. There is no better place to have the Master Naturalist classes experience such a wide diversity of Lowcountry wetland habitats and wildlife species. Everyone especially enjoys interacting with Nemours' outstanding staff who share their knowledge while conducting the field trips. Our staff feels very fortunate to have such great colleagues at Nemours!"



**Dr. Greg Yarrow, Professor of Wildlife Ecology at Cleamons University:** "Nemours has been an invaluable partner for Clemson University. The partnership has allowed our students to get first-hand experiences in coastal ecology in our courses, internships, and research. The partnership is second to none, and we look forward to continuing our collaborative efforts in the future."

## **“From the President” Continued...**

These studies have resulted in more than 30 publications in peer reviewed journals and have increased our collective scientific knowledge dealing with coastal ecosystems. We have given one-of-a-kind work experiences to 65+ interns (students working on undergraduate degrees) which have helped them navigate their professional paths. The breadth of work we have done and number of lives we have impacted in 25 years is remarkable, and we should all take a moment to enjoy and fully appreciate these achievements.

Our journey and accomplishments, the history of Nemours Plantation, Eugene duPont III, his interest in establishing the foundation, and the early leaders of the foundation have been chronicled in a book we have assembled and published titled: *Nemours Wildlife Foundation: Its History and Its Legacy*. We created this book so you and others can fully appreciate what we all helped start and to celebrate all the young biologists you have helped develop. Their stories are amazing, and hopefully will provide you great satisfaction knowing you helped make all this possible. I thank each one of you!

*For more about our book, please see the article on Page 11.*

### **2020 Peer-Reviewed Journal Publications**

- Bauer, B. A., R. M. Kaminski, J. D. Lanham, P. D. Gerard, and E. P. Wiggers. 2020. Hydrological management of submersed aquatic vegetation in South Carolina coastal impoundments. *Wildlife Society Bulletin* 44:579–584.
- Croft, G. D., R. M. Kaminski, E. P. Wiggers, P. D. Gerard, and G. K. Yarrow. 2020. Nest-box use by wood ducks and black-bellied whistling ducks in coastal South Carolina. *Wildlife Society Bulletin*. <https://doi.org/10.1002/wsb.1135>.
- Masto, N. M., B. A. Bauer, R. M. Kaminski, C. Sharpe, R. C. Leland, E. P. Wiggers, and P. D. Gerard. 2020. Rake sampling to estimate biomass of submersed aquatic vegetation in coastal wetlands. *Wetlands* 40:957–966.
- Masto, N. M., R. M. Kaminski, P. D. Gerard, B. E. Ross, M. R. Kneece, and G. L. Wilkerson. 2021. Aerial strip-transect surveys: indexing autumn–winter waterbird abundance and distribution in South Carolina. *Journal of the Southeastern Association of Fish and Wildlife Agencies* 8:in press.

The final step of the scientific method is reporting results and it is often said that science is not finished until it is communicated. Completion of a master’s thesis or Ph.D. dissertation is the end of a long road for graduate students. However, for many it is only the beginning as they prepare manuscripts from their research to submit to peer-reviewed, scientific journals. The peer-review process is arduous as experts in their fields of study anomalously scrutinize every detail of a manuscript, thus beginning multiple rounds of revisions and edits among the authors, reviewers, and journal editors – which may last for months or years. The final product is a fully-vetted, quality journal article that furthers the scientific understanding and management of our natural resources. Just as important, these articles and their results are now communicated across a wide audience of fellow professionals. Congratulations to our students, staff, and colleagues and thank you for your hard work, professional contributions, and completing the scientific method!

## Perspectives from our Interns



**Above: Ayanna Browne on the Combahee River going to retrieve a water quality data logger.**

### **Ayanna Browne, Tuskegee University:**

In March I embarked on a new journey to work with the Nemours Wildlife Foundation. I am a graduate of Tuskegee University with a degree in Animal Science concentrating in Wildlife Studies. I have always had a love for nature growing up in the U.S. Virgin Islands on the beautiful island of St. Croix. I know what you're thinking: "who would ever leave a place everyone wishes they could live but only get to vacation and maybe retire"? Yes, I love my island and hope to conduct research back home soon, but until then I've enjoyed the experiences and skills I have gained with Nemours working alongside my supervisor, Nemours Biologist Beau Bauer.

Starting out I got to assist on a prescribed burn and provided an extra hand on Anje Kidd-Weaver's (Clemson University, PhD Candidate) urban alligator study. My work evolved to focus on two subjects: the mystery marsh bird, Black Rail, to see if we could detect their presence on Nemours, and Red-cockaded Woodpecker (RCW) use and monitoring of artificial cavities.

Nemours is experimenting with two impoundments to attract and manage for Black Rails. While I was unable to hear them on our night surveys or capture any on game cameras, we did have a couple of rare visitors appear for a few days on two separate occasions: Virginia and Sora Rails. This means we might be getting closer to figuring out what factors are needed to appeal to the Black Rail.

Six RCWs were released on Nemours in November 2019 among four cavity clusters. I found on my sunrise surveys at least three RCWs would mostly hang around three new cavities in one of the clusters, working on the trees to run sap to protect against predators and placing wood-chips in the cavities. I was excited to see woodchips in just the first few months of their breeding season but was once tricked by Eastern Bluebird eggs. However, whether these woodpeckers would breed this year or not, our main concern was the Flying Squirrels occupying these cavities and depredating eggs. This developed into an experiment of using pepper spray to evict and possibly deter Flying Squirrels. Would the Flying Squirrels return to these cavities or find another home? So far, we discovered the squirrels would stay away for one to two weeks but eventually return.

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During my last month, I have helped with vegetation surveys and herbicide treatments of Japanese Climbing Fern (*Lygodium japonicum*) and a new exotic for South Carolina we discovered during our vegetation surveys...Jointtail Grass (*Mnesithea granularis*). I have been able to take the lead in the research of Black Rails and Red-cockaded Woodpeckers and to be given such a role has equipped me with more than just additional skills and experience, but independence on my journey to being a Wildlife Scientist.

*When Ayanna Browne left in August to pursue the next step in her wildlife career, we were joined by John Powell. He is assisting our biologist, Beau Bauer, getting his feet wet literally and figuratively in the wildlife field!*

### **John Powell, Clemson University:**

As a native of North Myrtle Beach and a College of Charleston graduate, I have always known the South Carolina Lowcountry to be a special place. I fell in love with the Beaufort area over the past decade while spending long weekends camping on Hunting Island and exploring the surrounding area. Driving through the ACE Basin stretch of Highway 17 was always a highlight!

After earning a B.S. in Anthropology, I served in the US Navy followed by assuming the General Manager position at my family's shag club on Main St. in North Myrtle Beach. By 2015, finding myself with a desire to expand my horizons, I decided to follow a dream and enroll in Clemson's Wildlife and Fisheries Biology program. I was accepted into the online M.S. program which I completed in August 2020. I am incredibly grateful for the opportunity to work as an

intern at Nemours and put the theoretical skills and knowledge I've learned to practical use. I have been fortunate to experience a wide variety of things in my short time here, from vegetation sampling, to Red Cockaded Woodpecker translocation, to assisting with alligator mitigation research and prescribed burns. I have a passion for this area, and the opportunity to launch my new career at Nemours is really a dream come true. Every day is a new adventure, and I will continue to soak up the experience and hopefully be of some benefit to the staff and wildlife while here.

*Post Script: John just recently accepted a position as a member of the team working at Lake Moultrie as part of the eight state Wood Duck study in which Nemours is participating! Congratulations, John!*



**John Powell sampling invertebrates in a Nemours impoundment.**

# News & Notes...

## Exotic Grass Discovered at Nemours

By Beau Bauer

One of my favorite duties at Nemours is conducting vegetation surveys, every other year or so, to monitor our restoration and maintenance of our beautiful pine savanna habitat. Despite oppressively hot and humid summer days and bloodthirsty mosquitos, these surveys are rewarding and valuable in their results. These are also great opportunities to train our interns and technicians in basic field biologist techniques and plant identification. This summer, our technician, Ayanna Browne, and I came across an unusual grass in one of our long-term monitoring plots. I brought back a specimen, but had no luck determining what I was staring at! I sent a few photos to my colleague and plant guru at Clemson Extension, T.J. Savereno. An email from the South Carolina Department of Natural Resources botanist, Keith Bradley, circles back to me indicating that we were the proud owners of a new exotic grass, *Mnesithea granularis*. Yay. The genus, *Mnesithea*, is commonly referred to as jointtail grass. They are native to the old world tropics and subtropics. The USDA Plants Database website indicates rare and spotty accounts throughout the southeast; including Georgia, Florida, Alabama, and Mississippi. Interestingly, according to Keith, this grass was collected in South Carolina twice before. The first by famous naturalist, Mark Catesby, sometime between 1722–1725 and again by Henry William Ravenel somewhere near the Santee Canal in the mid-late 1800's.



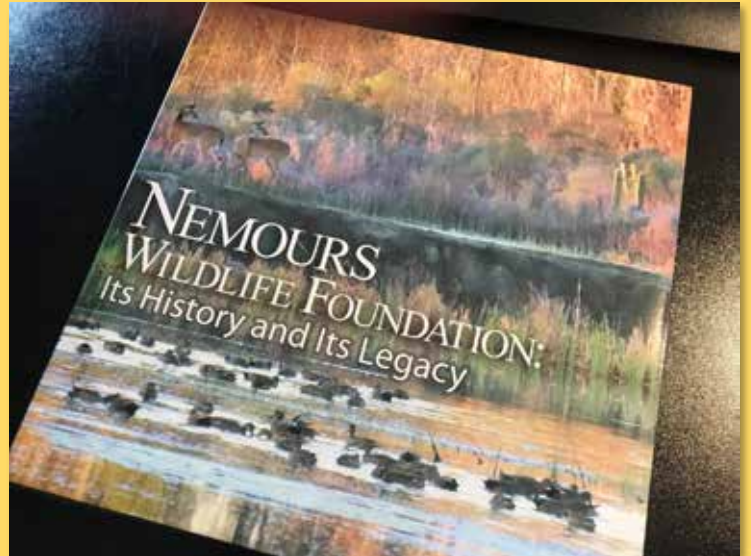
*Mnesithea granularis* is very distinct and easily identified by a hairy collar beneath where the leaf sheath attaches to the stem. The seeds are also unique along with the overall “look” of the grass. So how did it end up at Nemours? Good question. We found a couple of small patches near the main driveway across from the manager’s house. There is not much information in literature regarding dispersal mechanisms, but I suspect it was spread by seeds inadvertently brought in by vehicle traffic. Thankfully, it does not appear to be as aggressive as other invasive exotic species. It was not present when we last conducted surveys two years ago and we have not encountered additional patches (trust me, we have been looking!). After Keith and I collected herbarium specimens, we promptly treated these sites with herbicide (Roundup®).

I much prefer finding rare and unique native flora and fauna; nonetheless, this was a truly interesting find. It just goes to show that you never know what you will find when you are out conducting good, old-fashioned field work! We thank Keith Bradley for his expert advice and follow-up information.

## Nemours Wildlife Foundation Releases Book

After months in production, the foundation has released a comprehensive overview of the Nemours Wildlife Foundation, its founder, Eugene duPont III, and its mission. It was a collaborative effort among the board of directors, researchers and writers Pete Laurie and Nemours' own Michele Barker, our director, Dr. Ernie Wiggers, our biologist, Beau Bauer (whom we have discovered to be an excellent wildlife photographer. Just look at that cover photo!) and editor John Burbage of Evening Post Books in Charleston. Numerous photographs were contributed by staff, former students and local photographers who graciously shared their work with us.

Once we've distributed the book to members of the Friends of Nemours Wildlife Foundation and our partners, it will be available to purchase for \$100 with all proceeds going toward our education and research programs.



Please contact us at [mbarker@nemourswildlife.org](mailto:mbarker@nemourswildlife.org) if you are interested in purchasing a book.

## Lab Update

With a rock solid foundation in place, the walls are going up on our long-awaited laboratory. We're crossing our fingers and hoping for a spring completion! Many thanks to Micky Scott of Collum Lumber in Allendale for the generous donation of five bundles of framing lumber for the lab!



## New Foundation Website Under Construction

SNS Technologies of Bluffton is giving the Nemours Wildlife Foundation website a much needed makeover! The plan is to have a much more interactive site and the ability to keep it much more current. The web address, [www.nemourswildlifeoundation.org](http://www.nemourswildlifeoundation.org), will remain the same. Stay tuned for the launch!



NEMOURS WILDLIFE FOUNDATION

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