



October, 1, 2024

Greetings,

On behalf of the North Carolina Museum of Natural Sciences Advisory Commission, I share our deepest appreciation to the North Carolina General Assembly for its generous and ongoing support of our internationally recognized Museum. For decades, this museum has been a valuable resource for North Carolinians of all ages. Each day, our dedicated researchers, scientists, educators, and volunteers bring STEM (science, technology, engineering, mathematics) and nature-based learning to life, fostering a deeper understanding of the world through scientific exploration and discovery. The Museum's success is rooted in a thoughtful strategy, attentive listening, impactful innovation, and a steadfast commitment to collaboration, inclusion, and efficiency. These principles make the Museum a cherished asset across the state and a wise investment deserving of continued and increased support.

Respectfully submitted,

A handwritten signature in black ink, reading "Rhonda Beatty". The signature is fluid and cursive, with the first name "Rhonda" and last name "Beatty" clearly distinguishable.

Rhonda Beatty, Chair
NCMNS Advisory Commission

OCTOBER 2024

FY 2024

Advisory Commission Report



About *the* Museum

With a mission to illuminate the natural world and inspire its conservation, the North Carolina Museum of Natural Sciences welcomes almost 1 million guests a year, making it the most-visited museum and one of the most-visited attractions in the state. And while its core facility is in the heart of downtown Raleigh, between the Legislative Building and the State Capitol, its impact can be felt across North Carolina and beyond.

The Museum in Raleigh includes two buildings and seven floors packed with top-notch exhibits, presentation spaces, hands-on labs, classrooms, and enough live animals to be considered a mid-sized zoo. Museum educators and the exhibits themselves continually enlighten on-site guests about the many natural wonders of North Carolina and our place in the world.



Students supplement their in-class lessons with hands-on field trips to the Museum

Dozens of Museum scientists conduct internationally recognized research within glass-walled labs designed to let visitors “see themselves” as future scientists or just become more curious individuals. The Museum’s collection of 4.5 million research specimens — from meteorites to ocean sunfish — extends our knowledge of the state’s and region’s incredible biodiversity.

Virtual and outreach programs — highlighting topics from animal tracks to fossil formation — reach thousands of school children across the state, and our professional development programs help hundreds of North Carolina teachers exponentially advance the Museum’s positive educational impact.

To top it off, Prairie Ridge Ecostation in west Raleigh and Contentnea Creek in Grifton provide outdoor learning experiences and programs, while satellites in Whiteville and Greenville provide a museum experience for residents of other areas of the state.

Taken together, the Museum’s efforts and assets support its vision of a knowledgeable and empowered society, making decisions informed by science.

This report highlights current and significant activities, initiatives, and programming that the NCMNS has engaged in over this past year.

Key Museum Accomplishments

THE DUELING DINOSAURS

A first of its kind laboratory / museum public space, Dueling Dinosaurs effortlessly blends research, programming, and exhibits into a novel experience found nowhere else in the world. As the first major addition to NCMNS since 2012, more than 80,000 visitors have come in-person during the first four months since opening with tens of thousands more visiting the exhibit virtually. Garnering international attention, Dueling Dinosaurs cements the place of NCMNS as a world-class institution, breaking boundaries and paving the way for informal science educational experiences and new approaches to conducting science in the public eye.



"This fossil is a scientific frontier," said Head of Paleontology Dr. Lindsay Zanno. "The preservation is phenomenal, and we plan to use every technological innovation available to reveal new information on the biology of the world's favorite dinosaurs."

ADDITIONALLY:

- We welcomed more than 944,000 guests to downtown Raleigh and regional museum locations, making the North Carolina Museum of Natural Sciences the most-visited museum in the state.
- The Museum recorded direct engagement in 98 of North Carolina's 100 counties, including educational program delivery, biodiversity collections, and fieldwork.
- Our outreach and virtual programs served almost 18,000 pre-K-12 students in 44 NC counties.
- Ninety-two high school students and 97 college interns, including 8 HBCU interns, worked in the Museum.
- Museum researchers spent 969 days in the field across 44 North Carolina counties.
- Museum staff produced 80 scholarly and 15 popular-press publications with local to international reach.
- The Friends of the North Carolina Museum of Natural Sciences contributed \$4,836,000 to the Museum to support mission-related activities.

Research & Collections Spotlight

The Museum's dedicated and world-class scientists and researchers continue to break ground on new discoveries.

- The popular Museum specimen Willo was the subject of a new study that suggests *Thescelosaurus* dinosaurs may have spent at least part of their time underground. A CT scan of Willo's skull revealed that "while it may not have been all that 'brainy,' it had a super sense of smell and outstanding balance." The paper — coauthored by Head of Paleontology Dr. Lindsay Zanno and former Brimley Postdoctoral Scholar Dr. David Button — is the first to link a specific sensory fingerprint with this behavior in extinct dinosaurs.
- Chief Veterinarian Dr. Dan Dombrowski and other Living Collections / Veterinary Sciences staff helped rehabilitate three Kemp's ridley sea turtles that had suffered a cold stunning event in February. These are the smallest and most critically endangered species of sea turtle in the world. Dombrowski returned the third and final sea turtle to the ocean off Sunset Beach on World Sea Turtle Day.
- In late March, "A Guide to North Carolina's Freshwater Fishes," co-authored by Museum Research Associate Bryn Tracy and Ichthyology Collections Manager Gabriela Hogue (and others) became available. This book allows anyone to identify any of the 258 freshwater fishes that call North Carolina home.
- An updated and expanded version of "Seashells of North Carolina" came out in June. Research Curator of Mollusks Dr. Art Bogan provided guidance, reviews and details across all sections of the book, as well as access to the Museum's full mollusk collection.
- A team of American and Malagasy researchers, including Museum Research Curator of Paleontology Dr. Christian Kammerer, published a report on the discovery of a new species of prehistoric reptile that provides important information on the early history of the dinosaur lineage. *Mambachiton fiandohana* was discovered in southwestern Madagascar and dates to the Triassic Period, roughly 235 million years ago.
- Research Curator of Herpetology Dr. Bryan Stuart, in collaboration with Cambodian wildlife biologists and managers, discovered a new species called the "royal cave bent-toed gecko." Said Stuart, "I'm also very pleased that this project of discovering and describing the new species was led almost entirely by Cambodian wildlife biologists and managers."



Dr. Dan Dombrowski gives a Kemp's ridley sea turtle a final check before release.

More Statewide Impact

- The Museum had an amazingly successful **Educators of Excellence Institute in Yellowstone National Park** in June with 12 participants, six of whom were funded on scholarship by the Anonymous Trust, which supports teachers from 30 eastern North Carolina counties. The trip featured excellent wildlife sightings, interactions with experts, and lucky sightings of unpredictable geysers.
- Kellie D. Lewis was named the new **Director of the North Carolina Museum of Natural Sciences at Whiteville** in November. Lewis had served multiple roles for the museum during the past 16 years, most recently serving as the natural sciences education coordinator. In that position, she spearheaded the museum's goal of curriculum-based programs for third grade through adult groups.
- Dancing, drumming and singing were among the ways that members of the Waccamaw Siouan Tribe shared their culture during a heritage celebration in November at the NC Museum of Natural Sciences at Whiteville. Charles Yelton, Director of the Museum's Regional Network, shared information about the tribe while reading a land acknowledgment at the beginning of the event.
- The **NC Museum of Natural Sciences at Greenville** re-opened in the historic Cupola Building. Greenville's Executive Director Emily Jarvis notes, "In its new location, the museum has expanded its Discovery Forest and Naturalist Center and has added live reptiles, a virtual underwater experience, physics exhibits, as well as a 300-gallon saltwater aquarium displaying the aquatic life found off the coast of North Carolina."
- Emily Jarvis also oversaw the opening of **NCMNS at Contentnea Creek's** new Nancy and John Bray Environmental Education and Visitor Center. Jarvis praised the new center as well as Contentnea Creek's 400 acres of outdoor, and now indoor, amenities.
- Fifty-three science centers across the state have been awarded a total of \$2.4 million in grants as part of the sixth year of the **North Carolina Science Museums Grant Program**. "We have more science museums in North Carolina than any other state and this funding supports them as they advance science education," said Darrell Stover, Head of the Grant Program for the Museum.
- When the state received funds from the American Rescue Plan Act, the General Assembly allocated an extra \$6.3 million towards the **North Carolina Science Museums Grant Program** to help museums recover lost revenue and improve their facilities.



The Waccamaw Siouan Heritage Celebration is a free, outdoor event held during American Indian Heritage Month and features traditional dancing, STEM activities, and food.

A Beacon *for Today and Tomorrow* Needs Support

The North Carolina Museum of Natural Sciences reaches into every corner of our state to instill curiosity, wonder, and understanding about our state's natural history and heritage. An important touchstone for so many — K-12 students, teachers, families — it is critical to continue to invest in this vital resource.

Little about the Museum facility has changed in 25 years. Exhibits and infrastructure need critical repairs and updates, and the near-static annual state appropriation has not kept pace with inflation.

While the public and private sectors have been generous with specific project funding, we must now turn our attention to investing in this landmark institution that supports the important everyday education, research, and outreach work our talented museum staff conduct and that helps inspire us to understand and conserve the natural world.

As the museum approaches its 150th anniversary, it is the perfect time for the the General Assembly to reaffirm its commitment to North Carolina's Museum of Natural Sciences facilities with a capital investment so it can continue to serve North Carolinians at the highest levels for generations to come.



Prairie Ridge, the NCMNS outdoor facility in Raleigh, provides a magical oasis within the city for people of all ages.