

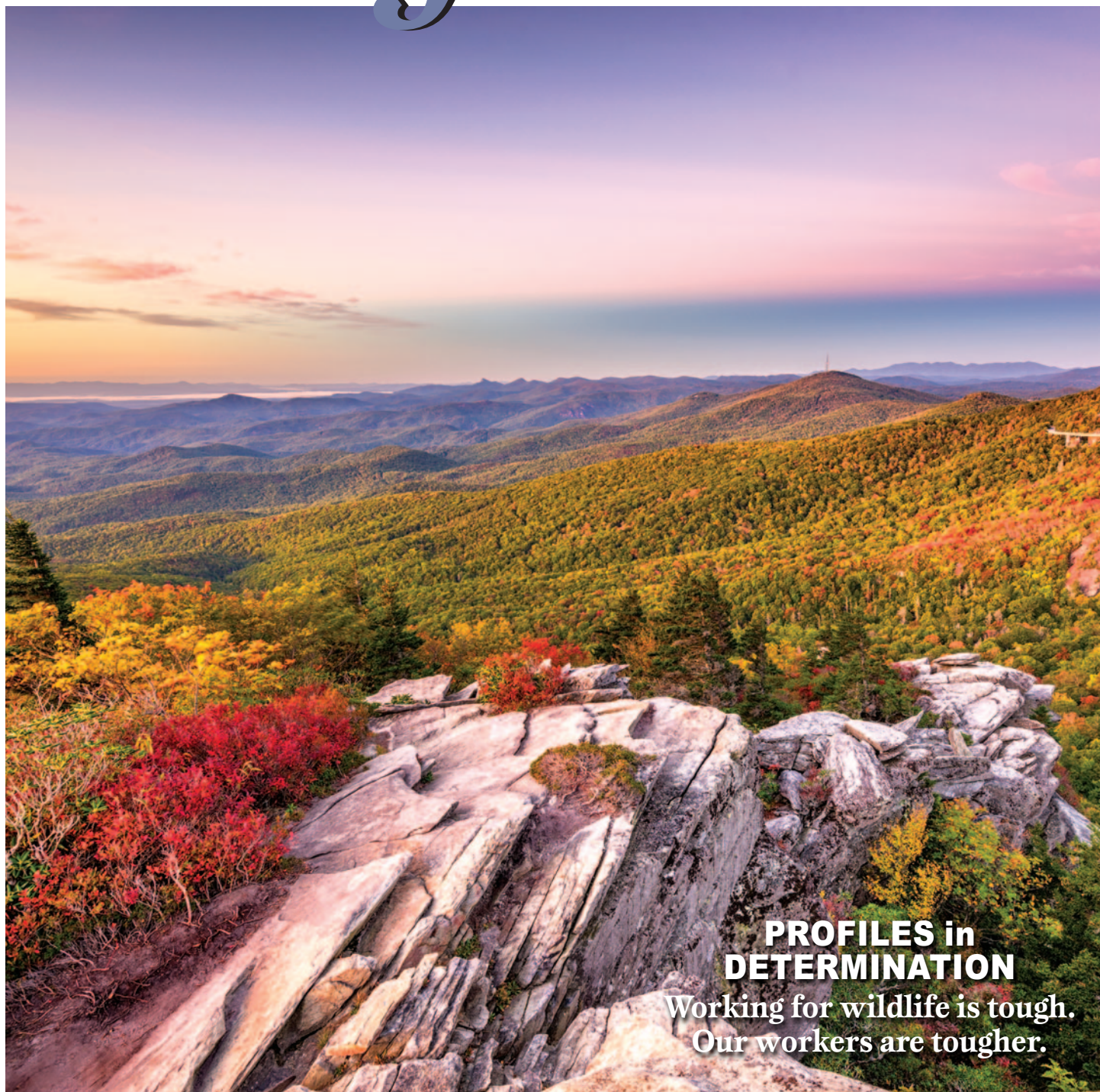


North Carolina
**WILDLIFE
FEDERATION**

Journal

WILD LIVES □ WILD PLACES

Fall 2018



PROFILES in DETERMINATION

Working for wildlife is tough.
Our workers are tougher.

Conservation Awards Winners



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Nature on the Job

BY TIM GESTWICKI, NCWF CEO

From the majestic swoop of a bald eagle with a fish clutched in talons to the awe-inspiring Great Smoky Mountains, nature is simply amazing. And wonderful, and inspirational. But as North Carolina learned—again and painfully this late summer and fall—nature can be incredibly devastating, as well. We are blessed with a bounty of natural splendors we perpetually get to enjoy, but this year we felt the wrath of nature, as well.

Hurricane Florence came through like a wrecking ball, leaving destruction in its large swath followed soon after by hurricane Michael. I hope you were spared from the confrontation with these hurricanes and the unbelievable flooding events and high winds that negatively impacted, and continues to impact, people over the entire state. I fully understand that many suffered immensely during this natural disaster, including Federation members, supporters, directors, and staff. This was an unprecedented period of storms that have many still reeling.

The ramifications from these brutal events, especially Florence, will be lasting. And the reality is that we will experience more Florence-like storms in the future. Ours is a particularly vulnerable state due to our low-lying coastal areas and the large numbers of east-flowing rivers that can overwhelm our estuaries, creeks and marsh areas. And these, in turn, are critical assets that provide drinking water, support fishing and other outdoor recreation, and are the lifeblood of many Carolina communities. So, what should be done?

The storms were a wake-up call for some. Many economists, conservationists, and even military specialists know the science and data about climate change and its human and environmental costs. But many of those who are charged with using government, and its array of tools, to help its citizenry will learn opportunities anew. Immediate relief is needed for many. But important questions remain about what we will do to brace and prepare for future inevitable flooding events.


Resiliency and adaptation to a changing climate is in order. There are immediate needs, and those who need aid immediately. But we must also move beyond the current cycle of infrastructure insanity—doing the same thing over and over and expecting a different outcome. Hurricanes are an act of nature, but nature can also play a critical role in hurricane recovery. Natural solutions can lessen the effects of future storms and increase the quality of life in North Carolina.

The state, in partnership with non-profits and the federal government, will need to invest seriously in floodplain and wetland protections, flood area relocations, coastal habitat protections and storm resiliency programs such as living shorelines, oyster reefs, barrier islands, and revamping our road culverts and floodwater inundation infrastructure. These and other resilience tools and strategies can provide coastal and Piedmont communities with the resources to plan for future flood events, pursue implementation funding and deploy natural solutions to diminish the worsening impacts from severe events.

Nature cannot be controlled, but it can be harnessed in ways and in others left alone to shore up its ability to perform valuable ecological services. Let's put nature to work. Let's let the trees in the our public lands and elsewhere do their job sequestering carbon, let our river buffers and oyster beds soak up sediment and pollutant runoff before it gets into our aquatic ecosystems, let our freshwater mussels filter out pollutants when vegetated buffers are overwhelmed, let nursery habitats spawn marine fish, let wetlands and coastal marshes soak up flood waters like a sponge, let sunlight power our lives, and let bees and butterflies pollinate our crops.

But let us not be fooled: In this modern world, nature needs an assist to accomplish its work. This will take resources, but the cost of storm cleanup and rebuilding far exceeds the necessary funding of strategic expenditures that will make human and natural communities and recreational areas more resilient in the face of future storms. Investments in nature infrastructure must happen.

“If we give nature just a little assistance, she will do her majestic thing.”

Fortunately, there is much for which to be thankful. There is a new generation of eager, earnest problem solvers as exemplified by our scholarship award winners. The recipients of the Governor's Conservation Achievement Awards also show us there is hope and possibility and promise when it comes to protecting wildlife and wild places. These winners inspire with their quest to learn more, to do more, to protect more, to work hard, and to fight harder for nature and for us all. We are pleased to share all of their inspiring stories in this issue. 

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Designed by: Kimberly KC Schott, Red Gate Design
Printed by: Progress Printing, Lynchburg, VA
Published by: North Carolina Wildlife Federation

ABOUT THE COVER

Cover photographs Endless views of wild, untrammelled mountains underscore the importance of working for conservation; istock.com / Sean Pavone. Buck in field; istock.com. *Contents photograph* Young raccoons; cynoclub / © Can Stock. All other photos, unless noted, courtesy of NCWF.

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North Carolina WILDLIFE Federation Journal

WILD LIVES □ WILD PLACES

Fall 2018

Official publication, North Carolina Wildlife Federation (Affiliate of National Wildlife Federation)

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NORTH CAROLINA WILDLIFE FEDERATION

MISSION To protect, conserve and restore North Carolina wildlife and habitat.

VISION Our stewardship will result in a North Carolina with bountiful and diverse wildlife, including all species of wild flora and fauna, that is valued by its citizens and elected officials, and sustainably managed for future generations.

Our strength is derived from values driven leadership – science-based decision making; non-partisan approach to policy; stewardship of North Carolina's natural resources; inclusivity of broad wildlife interests and perspectives; and partnering with organizations and individuals who share our vision and our passion for wildlife.

GOALS Toward that vision, we will:

POLICY AND PROTECTION – Strongly influence state and federal policy that affects wildlife and habitat in North Carolina using established conservation models to guide our positions.

NETWORK OF IMPACT AND INVOLVEMENT – Foster a diverse, robust network of chapters, members, affiliates and partners; a network fortified by a variety of wildlife and outdoor interests.

EXPERIENCE AND LEARN – Enhance and expand opportunities for youth and adults that foster awareness and appreciation of wildlife and the important role healthy habitat plays in sustaining wildlife and humanity.

SIGNATURE PROGRAMS – Sponsor and support programs for the enjoyment and conservation of wildlife and habitat, including ethical and sustainable outdoor recreation pursuits.

PEOPLEpower

WHAT DOES "WORKING FOR WILDLIFE" MEAN? ASK THESE THREE NCWF STALWARTS WHO OVERSEE PROGRAMS IN PUBLIC LANDS, FISHERIES, AND CONSERVATION EDUCATION.



THE MILLION-ACRE MAN • Bill Kane dreams of a better Nantahala-Pisgah forest. It won't happen without a plan



The Nantahala and Pisgah national forests blanket more than one million acres of public lands in western North Carolina, and the U.S. Forest Service is deep into a multi-year process to rewrite a long-term management plan for these vital forests. Bill Kane, one of the North Carolina Wildlife Federation's most passionate, committed members, serves as the Federation's representative in the planning process. Kane has spent countless hours in countless meetings, driven untold miles to attend untold numbers of public hearings, and has remained an indefatigable friend to wildlife in the North Carolina mountains.

NCWF is ensuring that wildlife considerations are a priority and that ecological integrity and science-based habitat protection and restoration are the focus of the plan revision. We believe a full complement of options is essential for the imminent reintroduction of American chestnut, the improvement of trout streams, expansion of our elk populations, and the return of open woodland conditions and fire-adapted ecosystems that were once prevalent in the mountains. We fully support the complete protection of old-growth stands, as wildlife such as bear, owls, hawks, squirrels and many songbirds, including neo-tropical migrants, require old-growth habitat.

Kane has been involved with NCWF for more than 30 years. He's served as a long-time board member, a president of the Board, and as acting executive director for almost two years. A President Emeritus, he represented NCWF in the long hydropower relicensing process of the Nantahala and Tuckasegee Rivers. Along the way he worked on an Appalachian Trail maintenance crew every Wednesday for more than 12 years, and remains active in his local hunt club.

THE SCOPE OF THIS PROJECT IS MASSIVE. HOW IS THE PROCESS PLAYING OUT?

The Nantahala/Pisgah forests, which for planning purposes are considered as a single unit, are undergoing the development of a forest plan that will govern how the 1.1 million acres of western North Carolina public land will be managed for the next 15 to 20 years. The U.S. Forest Service approved the current plan in 1987 and amended it in 1994. Since then, however, a new rule has called for increased public input. The Forest Service has received an unprecedented volume of public input through public meetings, email and traditional mail, and from many organized groups, and is working to incorporate that input into the new plan. The draft plan and environmental impact statement are to be released in January 2019, after which there will be a 90-day period for additional public input. The final plan will probably be released in early 2020.

HOW DOES THIS WORK MESH WITH NCWF'S MISSION OF PROTECTING, CONSERVING AND RESTORING NORTH CAROLINA WILDLIFE AND HABITAT?

The Federation's wildlife and habitat missions mirror the opportunities this process and final outcome provides. We participate in the forest planning process because without a diversity of habitat there cannot be a diversity of wildlife. NCWF concerns itself with all wildlife and all habitats. Currently there is less than 1 percent of the forest in early successional habitat, which results from timber harvest, restoration activities, and prescribed fire. Wildlife like deer, turkey, grouse, many neotropical songbirds, and the critters that crawl around in these shrubby, thicket-like places are underrepresented within the forest complex because of inadequate habitat. NCWF is working with other interests to provide input into the plan to create a better balance of habitat and wildlife across the forest. In essence, we are working for a mosaic of habitats including old-growth forests, mid-age forest stands and early stage understory.

WHAT DOES PARTICIPATING IN THE PROCESS ENTAIL?

NCWF participates in two work groups, one called the Partnership and the other called the Forum. The many different interests talk, negotiate, and yes, sometimes argue trying to find common ground that will lead to a more healthy and balanced forest. Representing the Federation, I have been involved in this process for more than three years. There have been many, many meetings, and there will be many, many more. Some are productive, some are not. That is the nature of this kind of work. The groups' participants have learned, and are learning, how to find the difference between what they want versus what they need. No one interest should achieve everything it wants at the expense of other interests because that cannot lead to a well-balanced and healthy forest. Once the draft is released, these two groups will develop feedback within the 90-day public comment period.

WHAT INTERESTED YOU ABOUT LEADING THE FEDERATION'S FOREST MANAGEMENT WORK?

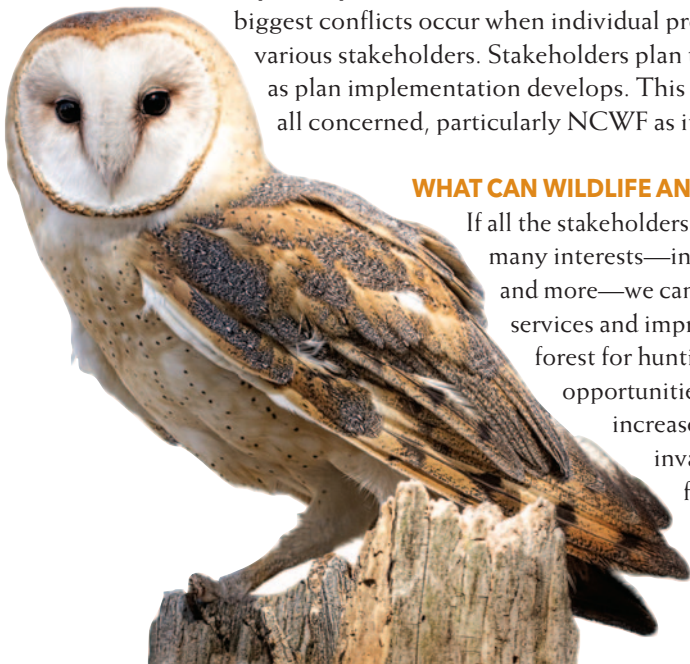
These plans will dictate for decades how our mountain habitats and wildlife are managed. It is NCWF's mission to be involved in such a large, long-term wildlife management efforts, and it's a rare honor to be a part of the group that will shape North Carolina's western public lands for a generation.

WILL THERE BE FOLLOW UP NEEDED TO ENSURE IMPLEMENTATION OF THE PLAN OCCURS?

Conservation groups and volunteers will have to step up to supplement federal and private resources that will continue to be insufficient. NCWF's involvement will not end when the new forest plan is in place. The next steps are to plan implementation and monitor whether or not the Forest Service follows the plan. Many of the biggest conflicts occur when individual projects aimed at implementation do not meet the interests of various stakeholders. Stakeholders plan to work with the Forest Service to minimize these conflicts as plan implementation develops. This is a years-long effort that requires ongoing participation by all concerned, particularly NCWF as it insists on a variety of habitat to support a variety of wildlife.

WHAT CAN WILDLIFE AND PUBLIC LAND ENTHUSIASTS OF ALL CLOTHES EXPECT?

If all the stakeholders can come to the consensus that the forest belongs to all and serves many interests—including carbon sequestration, water quality, outdoor activities, and more—we can have a plan that works to enhance all these important ecological services and improves the health of the forest. There will be better access to the forest for hunting, fishing, camping, hiking, and other activities, and increased opportunities for species that are decreasing and of concern. We should have increased elk populations, a forest more resilient to climate change and invasive species, and a Forest Service that has new partnerships—from horseback riders and bikers to hikers and hunters.



A DIFFICULT GAME OF CATCH • Louis Daniel can tell you how to catch more fish: Listen to the science



Louis Daniel knows fish. He received a bachelor's degree from Wake Forest University, concentrating on marine science, a Master's degree from the College of Charleston studying the early life history of red drum and spotted sea trout, and a Ph.D. from William and Mary in fisheries oceanography. That's a lot of book knowledge, but he didn't stop there. Daniel went to work as a fisheries biologist for the U.S. Fish and Wildlife Service in 1994, and then moved to the N.C. Division of Marine Fisheries. He was promoted to assistant to the MFC director to represent North Carolina on the South Atlantic Fishery Management Council in 1997, and served as vice-chair and chair of the Council from 2003-2006. In 2007, Daniel was named DMF director, and in 2015 he began teaching a class on marine fisheries management and policy at N.C. State University. He left DMF under the McCrory administration in February of 2016, but he hasn't left the water. Daniel started work with NCWF in June of 2016, helping the organization shape its marine policies. And he's still quite fond of studying fish on the end of treble hook.



THE NORTH CAROLINA WILDLIFE FEDERATION HAS UNQUESTIONABLY GROWN ITS PRESENCE IN MARINE FISHERIES ISSUES. WHAT HAS BEEN YOUR ROLE IN THESE NEW EFFORTS?

My new role with the NCWF started as a technical consultant for the shrimp petition, and as the petition issues grew, and NCWF board interest in fisheries issues expanded, I assumed the role of marine scientist for the Federation. We've since developed a strategic plan to address the petition issues that focus on juvenile fish and crustacean bycatch, nursery area designations and spot and croaker management, as well as issues related to southern flounder management and capacity in the commercial fishery. My primary intent is to ensure sustainable marine resources that will support a viable commercial and recreational fishery.

LET'S START WITH THE CHALLENGES FROM THE SCIENCE AND RESOURCE SIDE. WHERE IS NORTH CAROLINA IN TERMS OF HOW OUR FISH STOCKS ARE FARING?

The primary, current challenge is to convince the two agencies, DMF and MFC, of the critical need for action in two arenas: Meaningful reductions in fishing mortality and habitat protection based on sound science. Many of our fish stocks are collapsing or have already collapsed as evidenced based on truncated age structure, lack of spawning stock biomass, declining landings, and other factors. Basic biological parameters such as size at maturity and declining size structure of the fishery are available, yet too often harvest is comprised of juvenile

or first spawning adults. Further, science is clear that shrimp trawling in a vast majority of our estuarine waters occurs in critical nursery habitats that must be expanded and protected.

The Fisheries Reform Act has failed, and I base that position on the lack of any meaningful improvements in our fish stocks over the past 20 years. There is one exception, and that is red drum, which is being managed with quotas, slot limits, and restrictive bag limits.

OF COURSE, MANAGING FISHERIES AND WILDLIFE MEANS MANAGING PEOPLE AND THEIR EXPECTATIONS. WE'VE ALL HEARD, FOR MANY YEARS, ABOUT THE TENSIONS BETWEEN MARINE RESOURCE USERS. TELL US ABOUT WHAT YOU SEE AS THE COMMON GROUND BETWEEN THESE VARIOUS GROUPS.

Unfortunately, common ground can be hard to find. Many efforts towards meaningful harvest reductions are met with concerns over the economic impacts. Most people should be concerned about the long-term health of the resources we depend on, but short-term financial impacts seem to always take precedent over sustainability. For example, we proposed a size limit on spot and croaker to allow those fish to spawn at least once before harvest in the face of a reduction in harvest and truncated age structure. But concerns from the commercial side of fishing pointed to reduced catches of juvenile fish while recreational anglers argued that they would no longer be able to use those fish as bait for red drum, tarpon, and other species. Meanwhile, the vast majority of the harvest and virtually all the discard mortality for shrimp trawls are juvenile fish that never have the opportunity to contribute to the population. That is not sustainable.

Another example is southern flounder. The current size limit on southern flounder is 14 inches for commercial fishermen and 15 inches for recreational anglers. But taking even a 15-inch flounder hurts the overall population. A fish that size likely hasn't even spawned a single time. Yet at 18 inches, 75 percent of southern flounder are sexually mature, and the number jumps to 100 percent at 22 inches. The current size limits result in the vast majority of the catch—both commercial and recreational—being juvenile female flounder that have yet to spawn for the first time. As a result of the significant pressure on these fish, current age structure of the population is severely truncated. Southern flounder have historically lived up to 10 years. Today, a fish over age three is uncommon. We can do better.



WHAT ARE THE REAL OPPORTUNITIES FOR POSITIVE CHANGE AND MOVEMENT, BOTH FROM THE MARINE SCIENCE AND SOCIAL SCIENCE PERSPECTIVES?

Commercial fishing license reform is a critical first step. There are about 2,000 fishermen who depend on commercial fishing as a livelihood. Nearly 5,000 license holders either have no landings or do not report what they catch. These 5,000 fishermen impact the catch rates of the full-time commercial fishing families, affect the prices paid for wholesale seafood, and result in unknown rates of catch. All of that results in greater uncertainty to stock assessments and population projections. We must professionalize our fishery.

Socially, we must reduce the impacts of public comment on technical science. Now, let me explain. If a fish stock is determined to need a 30 percent reduction in harvest, that should be the baseline recommendation. Economics should play no role in this basic requirement. Ending overfishing should occur immediately and catch limits should be set for both sectors.

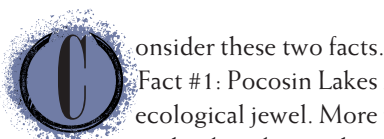
Further, the legislative interference in what should be scientific decisions has reached unprecedented levels. The General Assembly must relegate fisheries management to the agencies and a professional, non-partisan commission with representatives throughout our state. Until legislators outside the coastal counties recognize that these issues impact their constituents and stop relying on coastal legislators—who consistently err on the side of the commercial fisheries—little progress will be made.

Finally, we believe our petition for rulemaking, whether accomplished through the actual petition or the upcoming Shrimp FMP, is the most critical first step.

WHAT IS THE MOST CRITICAL, TIME-PRESSING ASPECT OF FISHERIES MANAGEMENT?

End overfishing immediately where it is occurring and if there is uncertainty in the stock status, take a precautionary approach that errs on the side of the resource. Significantly reduce bycatch in the shrimp trawl fishery at the population level and begin setting nursery areas aside with no trawling where the data are clear.

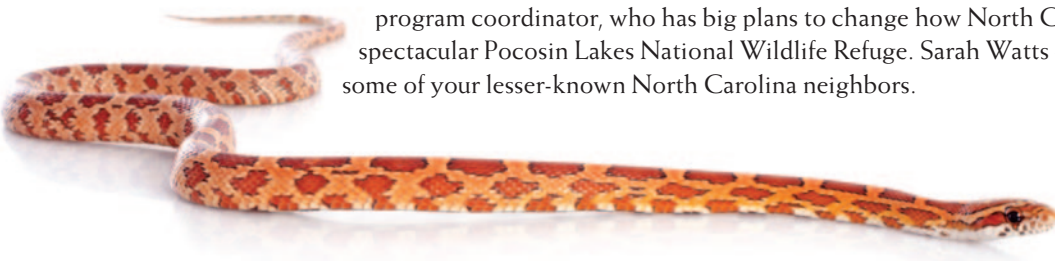
PLANTING THE SEEDS • What does touching a snake have to do with raising a conservationist? Ask Sarah Watts



Consider these two facts.
Fact #1: Pocosin Lakes National Wildlife Refuge, located in Tyrell, Hyde, and Washington counties, is an ecological jewel. More than 110,000 acres of open water, wetlands, riverine forest, pocosin, pine forest, open grassland, and agricultural fields create a recreational mecca. More than 300 different wildlife species, including the endangered red wolf and red-cockaded woodpecker as well as one of the densest populations of American black bear reported anywhere in the world, inhabit the Refuge, which is also home to more than 100,000 migratory waterfowl each winter.

Fact #2: You've probably never been there.

And NCWF wants to do something about that. The Federation has provided a new Pocosin Lakes volunteer and program coordinator, who has big plans to change how North Carolinians view the vast and spectacular Pocosin Lakes National Wildlife Refuge. Sarah Watts can't wait to introduce you to some of your lesser-known North Carolina neighbors.





YOU HAVE A NEW POSITION AT THE POCOSIN LAKES NATIONAL WILDLIFE REFUGE, AND IT INVOLVES A STRONG CONNECTION TO THE NORTH CAROLINA WILDLIFE FEDERATION. TELL US ABOUT THAT.

My role here at the refuge is to create, market, and present environmental education programs, enhance existing visitor services and visitor facilities, and recruit and coordinate local refuge volunteers. I'm also to assist in the creation of a local Wildlife Federation chapter.

TELL US ABOUT THE IMPORTANCE OF YOUR EFFORTS AND HOW THEY RELATE TO NCWF'S MISSION OF PROTECTING, CONSERVING AND RESTORING NORTH CAROLINA WILDLIFE AND HABITAT.

A Senegalese environmentalist, Baba Dioum, once said: "In the end, we conserve only what we love. We will love only what we understand. We understand only what we are taught." I'm here because NCWF saw a need for environmental education and increased visitor services at Pocosin Lakes NWR. This refuge not only encompasses a unique North Carolina habitat, but it is also part of the only area in the world where wild red wolves exist. So how can we expect people to want to conserve North Carolina wildlife and habitat if we do not teach them about it? That's why our efforts here are so important.

WHAT ARE SOME EXAMPLES OF HOW YOUR ROLE IN ENVIRONMENTAL EDUCATION HAS MADE AN IMPACT?

One example of how our education has already made an impact was with a little girl who came to our reptile and amphibians program. She was so excited about touching the corn snake that she had to show her little brother how to do it, as well. She convinced her dad to bring her little brother—who was just a toddler—inside, and she said, "Now, look here, this is how you do it." Then she gently used two small fingers to touch the snake. It was that gesture that showed me how, through our program, we had just encouraged one more person to appreciate wildlife.

Another example occurred at one of the red wolf programs. A young lady from Boston stopped in the visitor center while traveling through on her way to the Outer Banks. The volunteers informed her of the red wolf program we had scheduled later that day, and she decided to delay her travel plans in order to attend. She was incredibly enthusiastic about the information we were able to provide her and she was full of questions. She visited for almost two hours asking questions and observing the resident wolves from the viewing area. She left very grateful for the information and experience we were able to give her.

IT OFTEN TAKES A PERSONAL CONNECTION TO BRING EDUCATION EFFORTS TO LIFE. WHY IS THIS PROJECT AND THE TIME AND EFFORT YOU HAVE COMMITTED TO IT IMPORTANT TO YOU?

Growing up, I was blessed to have parents who saw the importance of showing me the natural beauty of this country and its intrinsic value. Because of this, I developed a love for wild places and all the species they contain. Federal lands like national wildlife refuges and national parks hold some of America's last wild places. This job is important to me because I enjoy sharing my love of those places with others and helping them build their own relationship with the natural world. And there is no better place to do that than here—in a place where the natural beauty is so often overlooked.

WHAT IS NEXT? WHAT NEEDS TO STILL BE DONE? AND WHAT CAN WILDLIFE ENTHUSIASTS EXPECT OF THE REFUGE IN THE NEXT FEW YEARS?

The Red Wolf Education and Health Center is an underutilized resource, but it has great potential, so that's a focus. I mean, how many people can say they have seen a red wolf up close? This place could greatly impact people's understanding and appreciation of red wolves. It just needs to be better utilized. We must also continue developing and offering a variety of educational programs.



© CAN STOCK PHOTO / ABZERT

Some visitors only stop in for a quick look, others come planning to spend several hours at the refuge, and others just drive on by. We need to continue to make the educational programs we offer attractive and accessible to all visitor types in order to better reach more people.

As for the near future, I hope to increase accessibility to the Red Wolf Education and Health Center. This will require increased assistance from volunteers and better signage. With increased accessibility, visitors would be able to come and learn when it is more convenient for them. As it stands now, the facility is only open by request and for scheduled programs. The long-term goal is to develop a professional, educational, and red wolf-focused visitor center at the facility. This would include both indoor and outdoor improvements to the site to make it more inviting and interactive. If every person that visits learns at least one thing, then we would be that much closer to the ultimate goal of increasing appreciation for this endangered species.

WHAT ARE THE MOST EXCITING CHALLENGES YOU FACE?

I think the development of the Red Wolf Education and Health Center is one of the challenges I find most exciting. It has such potential, and I am excited to be a part of that development. I want to be able to look back at my time here and find that the center is thriving, more functional, and more educational than when I arrived. This endeavor is a group effort and I am looking forward to working with others creating new ideas and possibilities for the center.

WHERE DID YOUR INTEREST IN THE OUTDOORS BEGIN?

My interest in the outdoors began when I was young and I traveled with my family every summer visiting national parks. This appreciation and enjoyment have not changed and so far I have visited over 100 and I'm still working on the list. This led me to attend N.C. State University, originally with the idea of becoming a park ranger. Since then, I have worked in many different aspects of natural resources and couldn't imagine being in any other field. Over the years, I have interned with the National Park Service doing native grassland management, worked in various aspects of fisheries management with the U.S. Fish and Wildlife Service and state agencies, assisted with facilities maintenance and visitor services at a state park, and worked with a volunteer group of Master Gardeners to provide educational programming through the Cooperative Extension Service. I am excited about my new role here because it will give me the opportunity to continue to learn about nature, experience new challenges, and give me the ability to make an impact. **NCWF**



Charlie Shaw Society

Members in the Charlie Shaw Society are our most dedicated supporters – generous members who have made a commitment to the work and programs of the North Carolina Wildlife Federation through an annual contribution of \$1,000 or more. Gifts can be made in one lump sum or in any number of smaller contributions within a calendar year, and can be directed to any Federation program that is of interest to the donor.

Carol Buie-Jackson grew up in rural north Florida with lots of free time to get outside and explore the ponds and swamps. This is one reason why she invests in the North Carolina Wildlife Federation as a Shaw Society member. She values the emphasis placed on protecting wildlife and habitat and connecting people with nature and conservation education.

"NCWF has given me a way of life," said Carol. It all started with installing a Certified Wildlife Habitat. She then began to volunteer, helping others do the same. Carol and her husband, Jay Jackson, own Bird House on the Greenway and Wildology, two birding and wildlife enthusiast stores in Charlotte.

"NCWF covers the entire breadth and depth of wildlife and habitat in North Carolina," said Carol. "If you hunt with cameras versus guns and fishing rods, or if you're into gardening, plants, and restoring ecosystems, NCWF is a really big tent with a lot of interests and passions."

NCWF greatly appreciates all the time, talent and treasure Carol has invested in protecting wildlife and habitat in North Carolina. If you would like to join her as a Shaw Society member, contact NCWF Vice President of Philanthropy, Kate Greiner, in Charlotte at 704-332-5696 or kate@ncwf.org.



GOVERNOR'S CONSERVATION ACHIEVEMENT AWARDS WINNERS

Conservation's Front Lines

The North Carolina Wildlife Federation presented its 55th Annual Governor's Conservation Achievement Awards to notable citizens dedicated to conservation in North Carolina. This year's winners ranged from volunteers to life-long resource professionals. They are water quality advocates, land stewardship champions and leaders in the preservation of unique ecosystems. The award winners include agency professionals, elected officials, academia, non-profit leaders and organizations rising to the challenge.

By recognizing, publicizing and honoring these conservation leaders—young and old, professional and volunteer—the North Carolina Wildlife Federation hopes to inspire all North Carolinians to take a more active role in protecting the natural resources of our state. The awards were presented at the Annual Governor's Conservation Achievement Awards banquet and celebration held in September at the Embassy Suites RTP.

CONSERVATIONIST OF THE YEAR

John McMillan (*Raleigh*)

A passionate conservationist for more than 30 years, McMillan has served on the boards of The Nature Conservancy and N.C. Museum of Natural Sciences, improving science education across the state while serving as a scoutmaster for young conservationists. McMillan played major roles in the creation of the Natural Heritage Trust Fund and the Clean Water Management Trust Fund.

WILDLIFE CONSERVATIONIST OF THE YEAR

Mark Craig (*Greensboro*)

As chair of the Wildlife Resources Commission's Habitat, Nongame and Endangered Species Committee, Craig uses sound science and leadership to advocate for sustainable recommendations for wildlife management. Craig has ensured accurate documentation of nongame species through frequent, scientifically-supported updates to the state listed species list.

LAND CONSERVATIONIST OF THE YEAR

Margaret Newbold (*Vilas*)

With more than 20 years of exemplary service for land conservation through her work with the Conservation Trust for North Carolina, Newbold has forged partnerships across the state to support

Sportsman of the Year



Eddie Smith (*Greenville*)

Many North Carolinians know Eddie Smith as the man who turned a nearly bankrupt boat company, Grady-White Boats, into an internationally known marine icon. They may know that he was one of the founders of the North Carolina chapter of the Coastal Conservation Association. He's also transformed a historic farm in Pitt County into a showplace of cultural and wildlands restoration. But Smith's interest in, and connection to outdoor heritage goes much deeper.

Through the Eddie and Jo Allison Smith Family Foundation, he has supported riverkeepers and clean air initiatives. He worked tirelessly for passage of the Outdoor Heritage Act in 2016, which includes an Advisory Committee tasked with developing strategies for getting more young people engaged in outdoor sporting activities. The Act created a trust fund specifically to expand outdoor recreational opportunities for North Carolina youth.

Environmental Educator of the Year



Jenna Hartley (*Hillsborough*)

After seven years teaching science at a public high school, Jenna Hartley realized that teachers needed a different approach to interpreting science to young people. She is now a fellow through the Association of Schools and Programs for Public Environmental Health, a position hosted by the U.S. Environmental Protection Agency. There she's independently developed a K-12 educational curriculum that translates high-level EPA research into educational materials that can be used across the country.

Since December of 2016, she's directly taught the materials to more than 1500 students and 847 teachers, scientists and professional staff. Hartley is also a Science Leadership Fellow with the N.C. Science Leadership Association, and she's spoken at conferences from coast to coast. She recently joined Dr. Kathryn Stevenson's lab at the N.C. State Parks, Recreation, & Tourism Department for Ph.D. work focusing on identifying drivers of environmental literacy among K-12 students.

the growth and development of local land trusts. She focused on diversifying the land trust community and making conservation more inclusive through her internship program and support of AmeriCorps programs.

WATER CONSERVATIONIST OF THE YEAR

Joe Mickey (*State Road*)

As the Stream Restoration Coordinator for the Wildlife Resources Commission, Mickey has dedicated his career as a naturalist to stream restoration, particularly by working with streamside and riparian landowners through conservation easements. As a founding board member for grassroots conservation groups such as the Yadkin River Trail Association, Mickey is a proven conservation leader and ally, who has mentored over two generations of aquatic resource professionals.

LEGISLATOR OF THE YEAR

Richard Burr (*Winston Salem*)

Senator Burr is the leading legislative champion for the landmark Land and Water Conservation Fund, working tirelessly to ensure its security through reauthorization and full funding. Senator Burr also played a major role in the passage of the Blue Ridge National Heritage Area Reauthorization Act of 2017, a critical step in expanding protected areas in western North Carolina.

MUNICIPAL CONSERVATIONIST OF THE YEAR

City of Concord

Achieving Certified Community Wildlife Habitat status, the City of Concord has supported conservation through its signing of the Mayor's Monarch Pledge and its creation of a native plant project with a local juvenile detention facility. The City competed in the Global City Nature Challenge, partnering with local schools, community groups and libraries to organize four major community-wide citizen science events, while educating children on native flora and fauna.

WILDLIFE VOLUNTEER

Beth Heile (*Valdese*)

Known for her dedication to the Valdese community and conservation, Heile worked for years to improve natural resource protection and improve park land for Valdese citizens. As the founder and president of the Friends of Valdese Rec., Heile helped to procure private and public grants for the purchase of 302 acres of wooded lakefront property on Lake Rhodhiss for a new park.

HUNTER SAFETY EDUCATION INSTRUCTOR OF THE YEAR

L.C. Jones (*Warsaw*)

Jones' commitment to conservation began when he was a Hunter Education course instructor for Duplin County

Schools where he was instrumental in getting Duplin County physical education teachers certified as Hunter Education instructors. Due to his tireless passion for conservation and hunter safety, all eighth graders in Duplin County are now offered Hunter Education.

NCWF CHAPTER OF THE YEAR

South Wake Conservationists

(*Holly Springs*)

The South Wake Conservationists established a deer donation site south of Raleigh where hunters have donated venison meat to thousands of needy community members. Chapter leaders facilitated the signing of the Mayor's Monarch Pledge in Holly Springs and offered engaging programming to the local community.

NCWF AFFILIATE OF THE YEAR

NC Chapter of The Wildlife Society

The state chapter of The Wildlife Society brings together wildlife professionals and scholars across the state, dedicated to furthering science-based research and management. The organization established a mentorship program where wildlife professionals mentored students from four chapter universities and hosted the national annual Wildlife Society Conference with record numbers in attendance.

continued on page 10

Conservation Hall of Fame



William “Bill” Holman (Pittsboro)

Bill Holman has worked for 39 years on behalf of public lands and waters protection. As an environmental lobbyist from 1979 to 1997, Holman is credited with helping to pass the Clean Water Responsibility Act, the Brownfields Cleanup Act, the Clean Water Management Trust Fund Act, the Watershed Protection Act, and numerous other North Carolina environmental bills. He served as Secretary of the Department of Environment and Natural Resources under Governor Jim Hunt. As executive director of the N.C. Clean Water Management Trust Fund from 2001 to 2006, Holman was in charge of funding some of the state’s most important public land acquisitions.

From 2007 through 2012, he served as director of the State Policy Program at the Nicholas Institute at Duke University, where he worked on state water allocation policy, water infrastructure financing, green infrastructure, planning for and adapting to climate change, and state energy policy. He is currently North Carolina State Director of The Conservation Fund, a position he has held since January 2013, where he continues to think critically and act forcefully to work every angle, squeeze every deal, and wring every last dollar out of every last pocket to help protect the last of wild North Carolina.

NATURAL RESOURCES SCIENTIST OF THE YEAR

Theodore Simons (Cary)

In his 34 years as a wildlife ecologist, Simons has strived to improve species conservation and monitoring by developing various methods including an experimental simulation system for bird songs and frog calls. His work on conserving endangered species through improving ecological survey methods has influenced programs of organizations such as the National Park Service and U.S. Fish and Wildlife Service.

FOREST CONSERVATIONIST OF THE YEAR

Fred Hain (Raleigh)

An accomplished forest entomologist at N.C. State University, Dr. Hain founded the Forest Restoration Alliance in 2007 with the goal of restoring healthy forests and landscapes by addressing invasive pest threats to native trees. Hain has dedicated his research to observing and breeding adelgid-resistant hemlock trees to promote forest regrowth.

CONSERVATION ORGANIZATION OF THE YEAR

Land For Tomorrow

This coalition of conservation advocates is dedicated to increasing land and water conservation in North Carolina. Funding for the states’ natural resource trust funds for parks, farmland, and game-lands is due in great part to the dogged efforts of the coalition.

BUSINESS CONSERVATIONIST OF THE YEAR

IBM – Research Triangle Park

This certified Wildlife and Industry Together site has a robust conservation program, focusing on energy and water conservation, recycling, green buildings, and wildlife habitats. Recent Wildlife@Work projects include bluebird nest box installation, planting butterfly gardens, and the creation of habitats for aquatic wildlife on the site’s pond. The 225-member Green Team also participated in a red-tailed hawk nesting project.


MARINE PATROL OFFICER OF THE YEAR

Jason Parker (Wilmington)

Officer Parker has been a member of the North Carolina Marine Patrol since 2010 where he has used his resources and knowledge to protect North Carolina waters and species from offenders. He has extensive experience working with and apprehending those involved in illegal flounder gigging, mechanical clamming operations, shrimping and shellfishing cases. Officer Parker has been quick to embrace technology such as thermal imaging cameras and GIS applications to track and witness violations.

WILDLIFE ENFORCEMENT OFFICER OF THE YEAR

D.J. Woods (Pilot Mountain)

Master Officer Woods has dedicated the past decade to the Wildlife Resources Commission’s Law Enforcement Division as a public safety officer, protecting wildlife in Stokes County. Woods has effectively used technology to document multiple illegal turkey baiting sites in his patrol area through trail cameras, interviews and social media search warrants. Woods is an innovative, persistent leader who leads others in protecting wildlife resources. 

“Conservation is the preservation of human life on earth, and that, above all else, is worth fighting for.”

–Rob Stewart



TAKE BACK OUR COVE!

Lake James Area Wildlife and Nature Society chapter members rallied around a common goal of eradicating the invasive floating yellow heart plant from one of Lake James' coves. Realizing this aquatic plant's ability to spread over large swaths of the lake, chapter members gathered to manually pull out nearly a third of the area's plants, with plans to help coordinate removal of the remaining invasives.

ASHEVILLE HABITAT CERTIFICATION BY MOUNTAIN WILD! CHAPTER

NCWF's Mountain WILD! chapter led efforts to certify the City of Asheville as a Certified Wildlife Community, making Asheville the seventh community in North Carolina to receive this honor. A Certified Wildlife Habitat includes habitat areas in backyards, schoolyards, corporate properties, community gardens, and other spaces. The presentation of this award was made by chapter members at Asheville's City Council meeting.



LAKE NORMAN'S ISLAND ADOPTION: MORE BUTTONBUSH, LESS HYDRILLA



As part of its Island Habitat program, the Lake Norman Wildlife Conservationists are educating lake users and working to keep hydrilla, an invasive plant, from expanding on Lake Norman. This aquatic plant spreads rapidly making boating and swimming miserable. Planting native buttonbush plants to protect the shoreline and provide wildlife habitat is a proactive, ongoing effort of the chapter.

NEW CHAPTERS ON THE HORIZON

The Wildlife Federation is expanding its conservation reach with new chapters across the state. The Union County Wildlife Chapter is organizing monthly educational programs on topics from pollinators to coyotes. The Catawba River Wildlife Coalition, based in Caldwell and Burke Counties, has completed river cleanups and participated in a "kids in nature" day event. Wildlife efforts also began in Greensboro last month with a program on backyard wildlife habitats and gardening for wildlife. **NCWF**

CHECK OUT OUR CHAPTERS! For more information on how you can participate, contact Tara Moore at tara@ncwf.org.



Capital Chapter



Community Alliance for Wildlife



Concord Wildlife Alliance



CROWN (Charlotte Reconnecting Ourselves With Nature)



HAWK (Habitat and Wildlife Keepers)



Lake James Area Wildlife and Nature Society



Lake Norman Wildlife Conservationists



Mountain WILD!



Neuse River Hawks (Wake Forest)



PAWC (Pamlico Albemarle Wildlife Conservationists)



PAWS (Gaston County Piedmont Area Wildlife Stewards)



South Wake Conservationists



The Albemarle Conservation and Wildlife Chapter



NCWF Scholarship Winners Announced

For more than 50 years, North Carolina Wildlife Federation has provided scholarships and grants to help hundreds of North Carolina students pursue their dreams of studying and working in the conservation field. Here are this year's scholarship recipients.

North Carolina State University graduate student **Michael Walter** is the recipient of this year's Conservation Leadership Grant, a \$2,500 grant awarded to one student of exceptional merit annually. His focus is on less-touted, yet equally important, non-game species such as freshwater mussels. Walter was essential in reconfiguring lab techniques and protocols to more effectively research and propagate freshwater mussels to facilitate his work. His passion for working with non-game aquatic species was sparked when he worked with the Wildlife Resources Commission's Aquatic Wildlife Diversity Program in the conservation of imperiled non-game species. He hopes that his work will provide opportunities for public outreach on the importance of non-game species to protect these species and preserve their vital roles in the eco-system.

Amberly Neice is a graduate student at East Carolina University. She has worked with a vast range of avian species in capacities including banding, tracking, rehabilitation, public education and research. The focus of her master's project is the development of non-invasive detection methods for king rail and the rare black rail, both elusive marsh birds. The black rail has declined severely in North Carolina and is under consideration for federal listing as endangered. Neice's research requires extensive travel to locate the birds and test the methods. She has logged countless hours surveying challenging terrain, at times in inclement weather and for long hours, with determined, cheerful persistence.

A graduate student in the Environmental Management and Policy program at Duke University, **Julia Geschke** is the incoming president of Duke's Conservation Society. Her wildlife experience has included work with species ranging from birds to bats to tortoises, using methods including geospatial analysis, acoustic monitoring and the use of cameras and drones to monitor populations. This summer, Geschke

served as an intern establishing habitat and population connectivity models for large mammals and salamanders in western North Carolina, work she hopes will inform national forest management plans.

Doctoral candidate at North Carolina State University **Brendan Runde** is investigating varying management approaches to offshore reef fish species. Runde has had a lifelong passion for marine life and has amassed almost a decade of experience related to marine life and management, including work with the Chesapeake Biological Laboratory and the NOAA National Marine Fisheries Service. He mentors a local Envirothon team and has contributed numerous publications and presentations on marine populations, health and management to the field. Runde's goal is to identify conservation-oriented strategies that promote sustainable fisheries management and lessen the turmoil among its diverse stakeholder groups. This grant was awarded in conjunction with the Alamance Wildlife Club.

Rose Rosell is an undergraduate student at Appalachian State University who grew up near the Pisgah National Forest, giving her a deep appreciation for the beauty and diversity of North Carolina's natural landscape. Rosell wants to pursue a career related to water and air quality, and plans to enroll in graduate school in the future and study water chemistry to achieve her goal. She has been actively involved in faculty research during her time at ASU, studying hydrocarbons released by cyanobacteria in the open ocean that negatively affect air quality and pose a threat to human health.

Virginia Frediani, a graduate student at Duke University, wants to use her skills to incentivize private land owners to utilize their property for the conservation and protection of wildlife, particularly rare and endangered species, through the creation of voluntary wildlife protection programs that appeal to those landowners. Frediani has experience working on wildlife conservation legislation and project and grant funding on the federal level, and has completed fieldwork both locally and in other countries. She is currently working with a former USDA undersecretary for natural resources and environment on issues related to the management of rare species on private lands.

New Director Takes Office



BONNIE MONTELEONE RESEARCHES THE IMPACT OF PLASTIC DEBRIS IN OUR OCEANS.

Bonnie Monteleone, from Wilmington, is a new addition to the Federation's board of directors. Monteleone is the director of science, research and academic partnerships as well as the executive director for Plastic Ocean Project, Inc., organizing outreach and citizen science projects involving plastic marine debris.

Monteleone also works in the chemistry department at UNC-Wilmington as an administrative assistant, and collaborates with faculty and undergraduate and graduate students involved in plastics research. Research projects vary from field work, such as collecting samples in the open ocean and beach surveys, to lab analysis on plastic leachates, persistent organic pollutants absorption, and marine organism plastic ingestion. She is a co-investigator on the NOAA-funded research project, "Microplastic Ingestion in the Black Sea Bass." Monteleone has co-developed the environmental studies course, "Plastic Ocean Field Research," and has assisted more than 100 UNCW students in Directed Independent Studies projects related to plastics. For Monteleone's UNCW Master's thesis, she traveled nearly 10,000 nautical miles studying plastics in three of the world's five gyres. After defending her thesis, she used the ocean plastics to create an internationally award-winning art exhibit titled, "What goes around comes around."

New Vice President of Philanthropy Joins NCWF

Growing up, Kate Greiner would run the woods with her dogs in rural Virginia near the Blue Ridge Mountains. Since then, she has backpacked the Shenandoah Mountains, camped on the Coastal Plain of the Arctic National Wildlife Refuge, watched gray wolves in Yellowstone National Park, kayaked in Alligator River National Wildlife Refuge, and has clocked many miles mountain biking Pisgah National Forest. Her most enjoyable hiking, however, has been with her husband, Eric, their 7-old son, Brodie, and a West Virginia hound, Butler. Being outdoors and enjoying wildlife makes Greiner a natural fit for the North Carolina Wildlife Federation.

With more than 17 years of fundraising and marketing experience, Greiner recently joined NCWF as vice president of philanthropy. Her goal is to get to know those who care about the state's wildlife and habitats and explore ways of engaging people in meaningful and rewarding ways. You may hear from her, with the suggestion of getting together for coffee or a meal or asking for a few minutes of your time over the phone. She would also love to hear from you directly! If you have questions, want to share ideas, go on a hike or explore one of the many places NCWF is working to conserve, reach out to Kate Greiner at NCWF's Charlotte office at (704) 332-5696 or by email at kate@ncwf.org.



(FROM LEFT TO RIGHT) ERIC, BRODIE, AND KATE GREINER ON THE TRAIL.

NCWF Leader Inducted into Hall of Fame

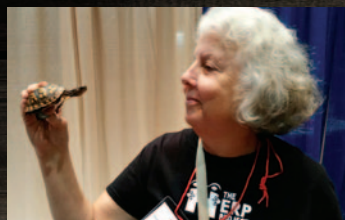


A NICE BROWN TROUT TAKEN ON THE FLY BY JOYCE SHEPHERD.

On September 8, Joyce Shepherd, a member of the North Carolina Wildlife Federation board of directors, was inducted into the Fly Fishing Museum of the Southern Appalachians Hall of Fame. She was honored in the Humanity Category for her long-standing contributions to fly fishing and for her dedication to helping others recover from personal challenges through flyfishing.

Shepherd, a trained flycasting instructor, co-founded Women on the Fly and has been a leader with Trout Unlimited and NCWF for many years. Her passion is introducing youth to flyfishing and helping others through her work with Casting for Recovery and Project Healing Waters. These flyfishing endeavors support women with breast cancer and disabled active military service personnel and veterans. The museum is located in Bryson City, North Carolina.

Your legacy.
Their future.



Anne Berry Sommers has spent a lifetime protecting amphibians and reptiles, like salamanders and box turtles. They are some of the most diverse and endangered species in North Carolina.

To protect them and carry on her legacy, Anne has left a gift in her will to the North Carolina Wildlife Federation because she values NCWF's mission to protect, conserve and restore NC wildlife and habitat.



To learn more about leaving a gift to NCWF in your will and creating a legacy of wildlife and habitat protection in NC, contact NCWF Development Director, Dom Canavarro at 919-833-1923 or dom@ncwf.org.

WHERE THERE'S A WILL, THERE'S A WAY... FOR WILDLIFE

THE Season

Jeff Beane's GUIDE TO
NATURAL NORTH CAROLINA

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DECEMBER

December 12: Most flycatchers and other primarily insectivorous birds winter in the tropics, but the eastern phoebe hangs around all year, shifting its winter diet to berries along with whatever winter insects it can find.

December 14: Geminid meteor shower peaks at 2 a.m. Bundle up and find a dark beach, open field, or other area with low artificial lighting for the show.

December 14-January 5: The 119th Annual Christmas Bird Count happens around the state. For information on how you can participate in the world's largest and oldest organized wildlife survey, contact your local Audubon chapter or the Carolina Bird Club, www.carolinabirdclub.org.

December 15: Tiger and Mabee's salamanders — two of our rarer salamander species — begin breeding with the first warm or heavy winter rains in the Sandhills and Coastal Plain.

December 17: Black bears begin their winter sleep, but they may be active during warm periods. In the big coastal refuges, where food is plentiful, they may stay active virtually all winter.

December 18: Migration peaks for Canada geese and snow geese.

December 21: Winter is here! Solstice is at 5:23 p.m. Eastern Standard Time (22:23 Coordinated Universal Time).

December 22: Ursid meteor shower peak.

December 25: Most herbaceous plants have been killed by frost, but Christmas fern and running-cedar add a touch of festive holiday green to the forest.

December 30: Good fishing for striped bass in large reservoirs like Kerr Reservoir and Lake Gaston.

December 31: Large flocks of yellow-rumped warblers can be seen in the red-cedar and wax-myrtle thickets along our coast. Not only can these flocks be spectacles in themselves, but it pays to check them carefully for occasional overwintering warblers of other species.

JANUARY

January 1: New Year's resolutions? Why not resolve to spend more time outside?

January 2: Most butterflies have migrated, hibernated, or been killed by freezing temperatures, but on warm January days, especially in the Coastal Plain, lingering adults of a few hardy species, including monarch, common buckeye, variegated fritillary, red admiral, and American lady, may be seen flying.

January 3-4: Quadrantid meteor shower peaks.

January 5: A good winter finch irruption is predicted for this winter. Watch for visitors like red crossbills, white-winged crossbills, evening grosbeaks, and common redpolls.

January 6: Peak waterfowl populations along the coast; Pea Island and Lake Mattamuskeet National Wildlife Refuges are especially good waterfowl viewing areas. Swanquarter and Cedar Island ferries provide good viewing opportunities for sea ducks.

January 7: Harbor seals, and occasionally other seal species, may be seen along our coast in winter, more regularly in recent years. Oregon Inlet is a good place to see these small marine mammals, either swimming or hauled out on spoil islands.

January 8: Bald eagles are laying eggs.

January 9: Some small mammals sleep most of the winter, but shrews will be active in underground tunnels or beneath the snow. The high metabolism of these tiny predators requires that they consume more than their weight in insects, earthworms, and other food daily to survive.

January 10: Peak migration for mallards and black ducks.

January 12: Great horned owls are nesting.

January 13: White-tailed deer have begun shedding their antlers.

January 14: Barred owls have begun nesting.

January 16: Mourning doves are beginning their courtship flights.

January 17: Black bear cubs are being born.

January 18-20: The Carolina Bird Club will hold its winter meeting in Nags Head. For more information, visit www.carolinabirdclub.org.

January 21: The huge flocks of red-winged blackbirds and other blackbirds overwintering along our coast are an impressive sight. Large coastal refuges, like Pocosin Lakes, Alligator River, and Mattamuskeet are good spots to view this spectacle.

January 25: Watch for humpback whales and other marine mammals along the coast, particularly the Outer Banks.

January 28: Raccoons and opossums are mating.

January 30: Wood frogs breed during winter rains. Like many winter-breeding amphibians, these handsome frogs of our Mountains and Foothills (and a few isolated localities in the outer Coastal Plain) are highly freeze-tolerant.

January 31: Chorus frogs have begun calling over much of the state: upland chorus frogs in the Piedmont; Brimley's, southern, and ornate chorus frogs in the Coastal Plain; and spring peepers over much of the state.

FEBRUARY

February 2: World Wetlands Day; visit your favorite wetland. Groundhogs are typically still hibernating, so you probably won't see one out looking for its shadow (but it might be possible on a warm day).

February 3: Spring waterfowl migrations are beginning.

February 4: Atlantic sturgeon are migrating to their upriver spawning areas.

February 5: The Neuse River waterdog, a large, permanently aquatic salamander occurring only in the Neuse and Tar river systems, is most readily encountered during this time of year.

February 6: Spotted salamanders breed in temporary woodland pools with the first warm, heavy rains.

February 9: Striped skunks have begun their mating season; males are moving in search of females.

February 10: Mourning cloaks fly on warm winter days. These beautiful and interesting butterflies overwinter as adults and have the longest adult lifespan (up to 11 months) of any eastern U.S. butterfly.