



North Carolina
**WILDLIFE
FEDERATION**

Journal

WILD LIVES □ WILD PLACES

Fall 2016



NO TIME TO WASTE
NCWF sounds alarm
over marine resources.

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At the Table

BY TIM GESTWICKI, NCWF CEO

As folks gather round the table this holiday season, counting blessings with family and friends, it seems appropriate to consider the connotations of just exactly what being “at the table” means. For many it will be a time to catch up with each other and share stories of children and grandchildren, while for others it’s a time to discuss plans such as college or work. Regardless of the subject, being “at the table” for turkey or sweet potato pie means time to communicate, time for stories and for sharing and often for squabbling. (But that’s a part of it, too.) And if Aunt Betty or Cousin Freddy aren’t able to be there, they miss out on the experience. Sometimes scheduling conflicts and other commitments just keep us away.

Being at the table is important for NCWF, too. That fact was underscored by a statement I overheard an elected official exclaim after we’d made a visit about conservation funding. “If you’re not at the table,” he said, “then you’re on the menu.” If your interests aren’t being heard and recognized, in other words, then likely your goals won’t be achieved.

Those words sure are true in many ways, some of which are often overlooked or moreover unheralded and why we at NCWF must always be seated at the table, pitching for wildlife and habitat and those that enjoy them. This definition of being “at the table” requires being at many places given the scope of our organization and working for all wildlife all across North Carolina. It necessitates us being at the legislature, at committee meetings, and during votes to provide testimony. We simply have to be there day in day out as fast-moving bills get introduced, some get killed, and others need amending to ensure there is a voice for wildlife.

“Eighty percent of success is showing up,” according to the film director, Woody Allen. NCWF shows up and shows up everywhere as a voice for wildlife. Long slogs, many years of unheralded commitment on tedious meetings, working with inherent local or specific knowledge and often behind the scenes without fanfare and grinding to make significant changes for wildlife. In many cases, these are the situations that can be a make-or-break difference for conservation. This kind of conservation work isn’t as sexy or as tangible as building and erecting a wood duck box or planting a pollinator garden or seeing the grin on a child’s face upon catching their first fish. Yet outcomes can be highly significant for wildlife if the time, energy and commitment is put in for the greater good.

For example, consider the dedication of more than eight years of diligent effort during the hydroelectric relicensing process for the 225-mile Catawba River. For years it seemed like endless monthly meetings, analysis of science reports, negotiating for mitigation, or commenting each and every step of the arduous process. Through it all, we were glad to be at the table. If NCWF hadn’t been there, North Carolina citizens likely would not be able to enjoy adequate water releases for duck hunters, or put-in and take-out options short enough for reasonable float trips. These changes don’t happen unless a group such as NCWF is at the table.

Here are a few other ways our staff and volunteers are making sure your concerns are heard about wildlife and native plants across the state.

- During the ongoing process to rewrite the management plans for the Nantahala and Pisgah national forests in western North Carolina, we advocate for a diversity of interests and wildlife. Just consider a single aspect of that plan: Elk management. At every meeting the U.S. Forest Service and stakeholders hear NCWF talking about elk as we work to elevate the priority for expanding the state’s elk population.
- Few issues are as complex as the complicated process of federal cost share programs within the federal Farm Bill, which affects landowners from dairy farmers to row-crop operators. For wildlife, however, the Farm Bill offers huge upsides—and large negatives—for wildlife conservation. The devil is in the details, and NCWF is in the thick of the processes, maneuvering through the minutia of these programs to ensure that funds are spent on wildlife-friendly projects.
- You might not stay awake worrying about how invasive plants depress native wildlife and native plant populations, but we do. We’re working with utilities and agencies to change the way cover plantings are planned and implemented to include native grasses and wildflowers that are beneficial to native wildlife. We’re focusing on discovering more viable choices for seed mixtures that have a positive ecosystem benefit. We will have to increase seed production and distribution and provide technical guidance in maintaining large-scale new restoration areas, but this sea change is critical if we are to impact significantly the rapid decrease in our pollinator species.

This is what we signed up for—working for wildlife whether that takes us into the field or into a committee meeting for hour after hour. We’re thankful we have supporters like you across the state that allow us to work in every way and everywhere for wildlife. Rest assured that we will be at the table! **NCWF**

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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.

NCWF STEPS UP FOR MARINE FISHERIES

North Carolina's distressed coastal fisheries need help now.



ABILESTOCK.COM / THINKSTOCK

The North Carolina Wildlife Federation's Sound Solutions campaign aims to protect North Carolina's sounds and estuaries as the most important action the state can take to preserve and sustain our coastal habitats and fisheries. Along with pollution and sedimentation degrading coastal habitats, our inshore waters are quite simply being overfished. NCWF has conducted numerous interviews and conversations with commercial fishermen and other coastal stakeholders, each affirming the urgency of this issue and expressing concern over the loss and deterioration of aquatic habitat and important fisheries.

As a result, the Federation has determined that it is time to take a bold step and petition the N.C. Marine Fisheries Commission (MFC) and the state's Division of Marine Fisheries (DMF) to begin the effort to directly protect our juvenile fish stocks, so they can live long enough to spawn at least one time and help sustain the population. A primary goal of this Petition is to effectively and sufficiently protect fish nursery areas to complement an ecosystem-based management model that would help allow fish to survive early development and grow and thrive to stock recruitment.

Currently, the nursery area boundaries designated by DMF and MFC inadequately protect important finfish and crustacean species within our sounds and estuaries. For example, the most productive nursery areas for juvenile weakfish, and the larger juveniles of many other valuable species, are mostly excluded from the current nursery area boundaries. DMF should use the current and best available science to designate and expand nursery areas that are critical to the growth and development of many commercially and recreationally important fish species.

It has been estimated that for every pound of shrimp harvested in North Carolina sounds, more than four pounds of finfish are caught and discarded as bycatch. The amount of bycatch in the North Carolina shrimp fishery is unsustainably high and unacceptable. Many measures have reduced bycatch in other states, including reduced net head-rope length, shortened trawling time, designated harvest seasons, and scientifically proven bycatch reduction devices (BRDs). However, the most impactful measures have been to eliminate shrimp trawling from fragile nursery areas. No other state on the East Coast allows shrimp trawls in its inside waters, and Gulf Coast states only allow small trawls in their coastal waters.

THE PROBLEM: TOO MUCH WASTE, TOO MUCH GEAR, TOO MUCH OF EVERYTHING

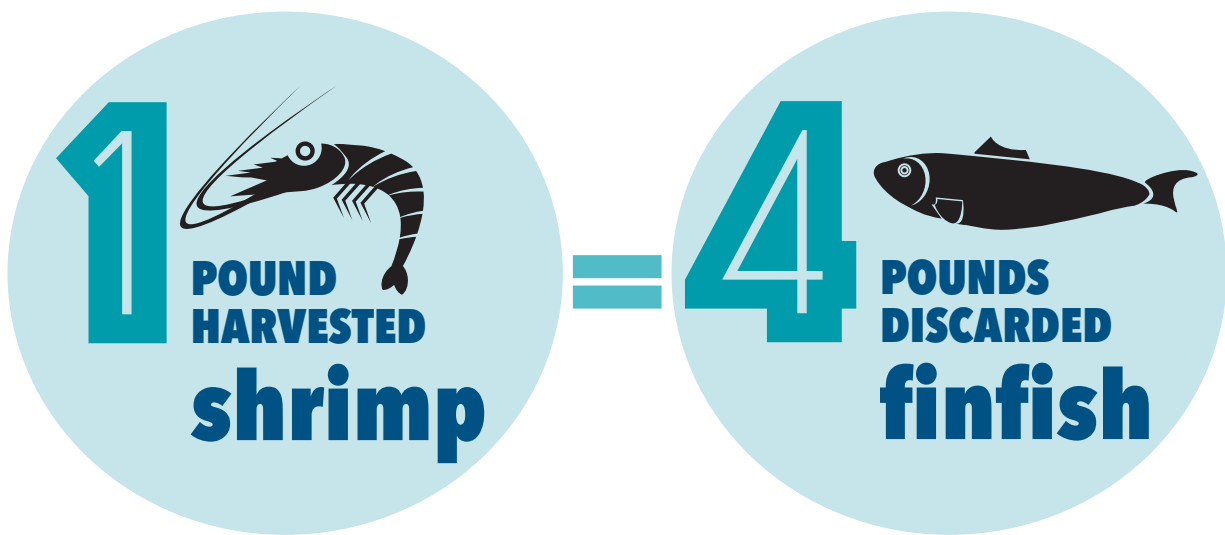
The bycatch and discard mortality of juvenile marine fishes in shrimp trawls in the coastal and estuarine waters of North Carolina is extraordinary. Though many fisheries contribute to juvenile bycatch, shrimp trawls are by far the largest single source of bycatch mortality, and proper management would have a significant and measureable impact in restoring overfished and declining stocks.

North Carolina is the only state on the east coast that still allows shrimp trawls to operate in actual estuarine nursery areas, and its trawling regulations are the least restrictive nationwide. Hundreds of millions of juvenile fish continue to die each year from shrimp trawls, which significantly contributes to declining stocks. The species provide forage for larger fish, and the critical importance of all these species to the recreational and commercial fisheries of North Carolina cannot be overstated.

Viable fish populations depend on the recruitment of juvenile fish into the adult population so that they can spawn and replace themselves before being harvested or dying. This is the essential tenet behind the "Sustainable Harvest" requirement of North Carolina's Fisheries Reform Act of 1997. Juvenile fishes first enter the estuary at the larval or early juvenile stage and move into shallow protected habitats inside North Carolina's expansive estuarine system. In the currently defined Primary Nursery Areas (PNAs) and Secondary Nursery Areas (SNAs), these fishes are partially protected from recognized, destructive fishing practices such as shrimp trawling. Natural mortality during these early life stages is extremely high. Fishes that survive the high natural mortality rates during these stages move out of the confines of North Carolina's limited nursery area system and into the open rivers and sounds where juvenile fish receive far less regulatory protection.

Many fish stocks deemed overfished or of concern in the DMF Stock Status Report are impacted by shrimp trawl bycatch. For fish stocks subjected to shrimp trawl bycatch, adult populations have declined significantly, which means that increased juvenile recruitment to rebuild those populations is more important today than ever. Specifically, spot, Atlantic croaker, and weakfish were critical components of North Carolina's estuarine commercial and recreational fisheries prior to their dramatic declines in the last 30 years.

THE PETITION PROCESS NCWF has always sought sound, rational solutions to problems facing our coastal waters, problems that have been allowed to exist and perpetuate for many decades. Unfortunately, North Carolinians are facing a situation with our marine fisheries that calls for bold steps. Status quo and business as usual will not suffice any longer as insufficient oversight of our marine resources has simply failed North Carolina and the ramifications have taken a toll on our fisheries. Therefore, the Federation is filing a Petition for Rulemaking to the N.C. Marine Fisheries Commission (MFC) to request that it take the necessary steps to protect juvenile fish in nurseries within North Carolina waters. This is an administrative process that deals with making and changing regulatory rules, not laws. This legal process could take up to a year, and consists of public meetings and public debate. After this public process, MFC will have to make decisions on how to make and change rules related to nursery areas and juvenile fish.



In 1981, the commercial landings of these three species totaled 37.6 million pounds. In 2015 that number dropped to 2.3 million pounds, a 95 percent decline. The recreational fishery shows a similar trend: in 1981 recreational landings were 5.3 million pounds compared to 1.6 million pounds in 2015, a 70 percent decline. This precipitous decrease comes despite increases in angler effort in terms of numbers of fishermen. Declining spawning stock biomass and continued high discards must be addressed immediately to restore the viability of these important fisheries to North Carolina and the East Coast.

During the 2014 shrimping season, observers collected data from 149 of the 8,670 reported shrimping days in the estuary and ocean waters fishery (1.72 percent). Spot, Atlantic croaker, and weakfish accounted for over half of the total catch observed, including shrimp. Expansion of these observed numbers to the total catch of these species in the shrimp trawl fishery in 2014 results in an estimated 15.6 million pounds of these three important species discarded as bycatch by shrimp trawlers. This number represents four times the combined commercial and recreational harvest in North Carolina (3.9 million pounds) and nearing the Atlantic coast wide harvest of all three species in 2014 (18.7 million pounds).

Sound Solutions believes that sufficient available data provide solid evidence that all regions and locations of North Carolina surveyed using trawls are dominated by the presence of juvenile fishes and that all estuarine and nearshore ocean waters of North Carolina meet the criteria and function of nursery areas.

The currently designated SNAs contain but a small fraction of these important areas and must be expanded. Further, protection would aid the growth, development, and maturity of these sensitive life history stages that currently lack protection and confound the ability of these fisheries to measurably improve. In addition, the failure to protect these juvenile fishes by significantly reducing the human sources of mortality compromises the ecosystems effects of these life stages by their premature loss and inability to either provide energy exchange to higher trophic levels or contribute to the spawning stock.

North Carolina's important, but rudimentary, nursery area program fails to consider and protect those areas in the estuarine and nearshore coastal waters where juveniles are abundant and

need protection in order to develop into adults. Outside of the current designated nursery areas, fish populations in Pamlico Sound are clearly comprised of larger juveniles that will soon put energy into reproductive growth for their first spawn. These largest juveniles have migrated out of the designated PNAs and SNAs located in the more upper portion of the estuarine system to the middle and lower portion of the system.

It is counterproductive to protect the smallest juveniles that already face high natural mortality rates in the current nursery area and not continue that protection until they actually contribute to the health of the population by spawning. The only difference between the limited areas currently defined as nursery habitat in North Carolina and the rest of North Carolina's estuarine and near-shore coastal ocean waters is the size of the juveniles encountered.

In summary, bycatch and discard mortality, along with the directed harvest of juvenile and pre-spawn adult fishes in North Carolina, is alarming. Current trawling practices lead to the discard of billions of juvenile fish each decade, decimating populations and seriously impacting local, fishery dependent economies and communities. The potential yield of these small fishes, if they were afforded the protection to grow to adulthood, is staggering: the benefits of protecting juvenile fish far outweigh the costs in terms of fishery yield and success for commercial and recreational fisheries alike.

THE SOLUTION: A BALANCED APPROACH 🌀 The need to substantially reduce bycatch in the North Carolina shrimp trawl fishery cannot be overstated. Our recommendations are based on what is best for the long-term viability of these fish stocks. Our proposed measures thoughtfully balance conservation goals with current fishing practices to mitigate the effects of bycatch mortality while still providing for a productive commercial and recreational fishery.

The specific measures recommended in the Petition are outlined below.

1. Designate all inshore, estuarine and ocean (0–3 miles) waters as nursery habitat.

Because this area functions as an important nursery habitat, bycatch and mortality issues from the shrimp trawl fishery in estuarine waters is unique to North Carolina in the south Atlantic.

Data collected by DMF in regards to the occurrence of juvenile fishes in inside waters is adequate, appropriate, and clear to support nursery area designation for all inshore, estuarine and ocean waters (0-3 miles offshore). These data, along with the Pamlico Sound Survey and the decline of spot, Atlantic croaker, and weakfish in the south Atlantic, provide unequivocal support to the argument that the area functions as critical nursery habitat, consistent with the objectives of that survey.

The data from this analyses regarding juvenile life stages of fishes illustrate that all inside waters serve as important locations where juvenile fishes feed and grow to maturity. Juvenile fish are defined here as fishes that have yet to spawn. While some fishes may be harvested and possess mature gonads, if they are harvested prior to spawning, their contribution to the population is zero, threatening population stability, let alone population growth. In fact, there is no evidence that any areas within the estuarine system of North Carolina do not function as a nursery area.

2. Implement strategies to reduce shrimp trawl bycatch of juvenile fishes in all newly designated nursery areas.

Although limited data are available to unequivocally prove the effectiveness of various strategies to reduce bycatch, the critical importance of such reductions is logical, particularly for species of concern. It is important to note that data are limited in the south Atlantic estuarine shrimp trawl fishery because it only takes place in North Carolina; however, concerns related to its impact on inter-jurisdictional fish stocks are enormous.

While no shrimp trawling in newly designated nursery areas would yield the best result biologically, if shrimp trawling is to continue, effort needs to be significantly reduced by employing the following suite of management strategies:

First, open the shrimping season only when shrimp reach a certain size. Delaying the harvest season until shrimp are larger provides not only a more valuable and marketable product to the industry, but reduces the length of the time when gear is in the water, thereby reducing bycatch.

Second, reduce the maximum allowable combined net head-rope length from 220 feet to 90 feet. Head-rope length is a measure of the size of the shrimp trawl, with larger vessels tending to fish larger nets to catch more shrimp. While improved efficiency and overall yield are the primary objectives, bycatch increases. A reduction in the allowable head-rope length is necessary to reduce effort, and subsequent bycatch in this fishery.

Third, limit tow times to 45 minutes. Reducing tow times to a maximum of 45 minutes would reduce bycatch, culling time, and discard mortality.

Fourth, limit all shrimp trawl effort to three days per week during daylight hours only. Fishermen are known to fish harder in the wake of restrictions to make up for lost opportunities due to measures such as tow times and reduced net size. This time restriction would both reduce bycatch and improve the efficiency of the shrimp trawl industry. Finfish bycatch is significantly higher at night while shrimp catches are higher during the day. Additionally, studies indicate that more shrimp are taken early in a fishing week than later.

Fifth, require the mandatory use of a second, federally certified bycatch reduction device ("BRD"), or device tested by DMF and certified to further reduce bycatch by at least 25 percent.

THE CONCLUSION: USE SOUND SCIENCE ♻️ Sound science points to shrimp trawl bycatch as the primary factor that is impacting North Carolina's fisheries. Measures taken to date to reduce shrimp trawl bycatch in North Carolina have skirted around the edges of a complex problem. The current data clearly indicate that the magnitude of shrimp trawl bycatch is substantial and impacts to fish populations are significant. More must be done to protect the juvenile fish in our nursery areas.

This is a Sound Solution: Measureable improvements in North Carolina fisheries and the fragile ecosystems they rely on for food, protection, growth, and reproduction will occur when shrimp trawl bycatch is addressed. **NCWF**

BROOKE FULLER / THINKSTOCK



2015 Governor's Conservation Achievement Awards Winners

Congratulations!



Conservationist of the Year

Tom Harrison | Plymouth | When you close your eyes and think about the most meaningful moments out of doors, I'd guess that your fondest memory would fall into one of three categories. You might think of some unforgettable place that you've returned to time and again—in icon of the landscape. Or you might recall some encounter with wildlife that left you speechless—you round a corner in a trail to find a bobcat in the sun, or you watch a flock of swans settle into the water in the last light of day. Or perhaps you think of a treasured friend or family member, and those times in the woods or on the water when kinship and relationship seemed keener than ever.

Tom Harrison knows how you feel. Harrison has poured himself into work that nurtures those three scales of our interaction with the natural world. A founding partner of the 11,000-acre Mattamuskeet Ventures, Harrison has helped shepherd one of the most iconic landscapes in North Carolina—that sprawling wildland and working landscape of Hyde County where apex species still roam.

If your memory was of a thrilling wildlife encounter, Harrison knows how you feel, too. He has worked tirelessly on behalf of our coastal population of black bears, especially through the North Carolina Black Bear Festival, which he founded and fostered, and the Black Bear Discovery Center in Plymouth.

And Harrison knows in his heart that the wild untrammelled places can help send the human spirit soaring. He serves as chairman of the executive board of Cross Trail Outfitters, a national Christian outdoor ministry that Harrison has helped grow to 15 chapters in North Carolina alone.

All his life, Harrison has poured all his energies into making sure that his fellow North Carolinians have the chance to love eastern North Carolina's wildlands, and make memories that will sustain the work of conservation in the future.



Sportsman of the Year

Robin Hayes | Concord | As a U.S. Congressman, Robin Hayes never shied away from taking a stand on the big issues that matter to hunters and anglers—the big issues that shape landscapes and support entire wildlife communities. He was our most strident advocate for state wildlife grant funding, and chaired the Congressional Sportsman's Caucus. He spoke out against the Pebble Creek Mine in Alaska that would have devastated salmon populations, one of the most galvanizing environmental threats of the last half-decade.

And now as a private citizen and a special advisor to the Wildlife Federation, Hayes continues to work on behalf of a fair and balanced use of natural resources. During the recent captive deer controversy in North Carolina, Hayes was on the phone and working his contacts on an hour-by-hour basis to keep intact the state's heritage of wildlife as a part of the public trust. And as the Federation grapples with the complex issues of marine conservation and sharing resources between private and commercial uses, Hayes helps navigate turbulent waters, knowing that there is more that unites commercial fishermen and recreational anglers than divides them.

The public trust doctrine is the bedrock of conservation—the understanding that wildlife belongs to everyone.



Wildlife Volunteer of the Year

Kayne Darrell | Wilmington | What were you doing 8 years ago? Think for a second. Eight long years. Many of us had more hair, without question. You were 10 pounds thinner. Eight years is long enough to get a Ph.D. It's long enough to get worn out, beat down, and disillusioned, if you happen to be taking on a massive corporate entity seeking to spoil your back yard. But 8 years ago Kayne Darrell, a nurse down in Wilmington, first took up the sword and drew a line in the sand down around Castle Hayne.

For 8 years the fight raged against Titan Cement, which planned a gigantic open pit cement plant on the banks of the Northeast Cape Fear. Darrell wasn't alone. To be certain, this was a big issue and plenty of fine organizations played major roles. But with no incorporated organization, no staff, no grants, with nothing but conviction and energy and passion, Kayne Darrell put together a social media strike force and a grassroots coalition called Citizens Against Titan, and for 8 long years she never flagged and never wavered as she rallied the local troops. This past spring, Titan Cement dropped its plans. That's a victory, no doubt. But another victory is this: Through that long fight, another hero of conservation emerged down along the Cape Fear. And we're betting she's keeping that sword handy—and sharp—for the next good fight on behalf of her beloved Cape Fear.



TOM KOERNER / USFWS

*Plans to protect air and water,
wilderness and wildlife are
in fact plans to protect man.*

—STEWART UDALL

Wildlife Conservationist of the Year

John D. Groves | Asheboro | The first curator of amphibians and reptiles for the NC Zoo, Groves is a leading researcher in many wildlife fields including alligator, eastern box turtle, and Cape Fear shiners. He established the eastern hellbender conservation program and the hellbender captive breeding program.

Land Conservationist of the Year

Thomas A. Berry | Greensboro | A pioneer in conservation easements, Berry's 400-acre nature farm in Caswell County is protected and managed for wildlife. Berry's leadership as the Chair of the Land Use Committee for the Wildlife Resources Commission has bolstered elk habitat expansion and waterfowl impoundments in North Carolina. Under his tenure since appointment in 2013, over 12,000 acres valued at over \$60 million have been protected by fee purchase or landowner cooperative agreements.

Water Conservationist of the Year

Grady McCallie | Raleigh | An expert in policy evaluation and analysis, McCallie provides the data and interpretation of water quality and quantity issues to the conservation community, tracks state and federal legislation regarding water issues, educates decision makers on pending legislation and serves as the hub for all who advocate for water quality in North Carolina.

Environmental Educator of the Year

Whitney Greene | Laurel Springs | This County Extension Agent is transforming the 4-H Youth Development program in Wilkes County and beyond. From bee pollination and worm composting to the effects of beaver dams, Greene's solid science background fuels her passion for inspiring kids to get involved with hands-on stewardship projects that make a difference.

Conservation Communicator of the Year

Lisa Rider | Sneads Ferry | An expert on all forms of recycling, Rider created the Onslow County Earth and Surf Fest and the annual N.C. Marine Debris Symposium. Whether leading presentations in elementary schools and national conferences or training volunteers to create new programs in their communities, her articulate voice and her daily demonstration have convinced thousands of North Carolinians to act with conservation in mind.

Legislator of the Year

Rep. Jay Adams | Hickory | Representative Adams is a leader for public trust resources, wildlife and sportsmen issues. Adams is a staunch and valiant voice for proper deer management, ethical hunting,

keeping wild deer wild and bringing to bear the serious issues of import and export of wild animals and the diseases associated with these activities.

Forest Conservationist of the Year

Dan Ryan | Wilmington | Ryan is the longleaf pine program manager with The Nature Conservancy. Through his work, thousands of acres of longleaf pine habitat has been restored, preserved, and protected. Ryan has successfully collaborated with private timber managers to put acreage into conservation, to convert acreage into longleaf, and to manage lands in a sustainable fashion.

Municipal Conservationist of the Year

City of Rockingham | Rockingham is a city with the vision and commitment to natural resources highlighted with the first Urban Wildlife Conservation Area in the state being implemented with focus on walking trails, boating, fishing and wildlife viewing. The Hitchcock Creek Blue Trail is another city-planned gem of 14 miles of paddling through Rockingham to the Pee Dee River.

Hunter Safety Educator of the Year

Link Grass | Denver | Grass has literally educated thousands of new hunters on hunting safety and conservation. Grass instructs tirelessly through the years and introduced hunter education into the Lincoln County school system. He has evolved web-oriented teaching in a technological landscape while incorporating elaborate visuals and displays for in-person trainings. He is a sought-out mentor for newly certified hunter education instructors.

NCWF Chapter of the Year

Pamlico Albemarle Wildlife Conservationists | Washington | Building community for conservation is the hallmark of this wildlife chapter. They accomplished many endeavors including building a handicapped hunting blind, pollinator plant sales, advocating for watershed protection, incorporating beekeeping and organic gardening into the curriculum of their local community college, fighting industrialized pollution from degrading the area waters and wildlife refuges, and raising awareness about the value of endangered species on the landscape.

NCWF Affiliate of the Year

Cabarrus Soil and Water Conservation District | This agency is a leader in farmland preservation and a model for a natural resources conservation district, while also contributing a prairie tract to the NC nature preserve system as well as being a leader in youth conservation education and amphibian and reptile sustainability.

Natural Resources Scientist of the Year

Christopher S. DePerno, Ph.D. | Raleigh | A research scientist and educator in Fisheries, Wildlife, and Conservation Biology at North Carolina State University who is dedicated to sound science and mentoring, DePerno has conducted research on numerous species including white-tailed deer, black bears, coyotes, Canada geese, river otters, raccoons, woodcock, feral hogs, wild horses, and elk while preparing many graduate and undergraduate students for careers in wildlife and conservation biology.

Conservation Organization of the Year

Save Blounts Creek | Chocowinity | Beaufort County is the site of a proposed 50-year open marine limestone pit mine that would see 12 million gallons of ground and stormwater pumped out of the mine and discharged each day into this pristine, brackish water gem that supports herring, flounder, and red drum. This community group has been working diligently each step of the way on behalf of this aquatic treasure.

Business Conservationist of the Year

ReVenture Park | Charlotte | This innovative Brownfield restoration site is transforming over 600 acres of Superfund site land into a hub for renewable energy, recycling and wildlife habitat restoration including vast wildlife meadows, riparian buffers, a conservation easement protecting land yet allowing the public to use its nature trails and utilizing prescribed burns for management.

Wildlife Enforcement Officer of the Year

Isaac R. Hannah | Casar | Representing District 8 in Cleveland County, Officer Hannah demonstrates a professional and profound demeanor dealing with the public he serves and engages with the local community to educate them on hunter safety, boating safety, and assistance with wildlife related issues. He was instrumental in establishing the largest public shooting complex in the southeast and led poaching cases and search and rescue operations while leading the way on boating safety and community engagement with youth, disabled, and other law enforcement agencies.

Marine Fisheries Enforcement Officer of the Year

Gene Maready | Columbia | Maready made many cases involving the illegal use and/or abandonment of commercial gear, violations of size and creel limits related to fish and crabs, recreational and commercial license violations, the illegal sale of seafood, larceny of gear and has participated in undercover operations. He also saved a capsized fisherman from dying of hypothermia.

NCWF's GoU Connects Kids to Nature



Fishing and paddling are favorite GoU activities in the summer.

During spring and summer of 2016, our Great Outdoors University (GoU) program provided nearly 12,000 kids and families with outdoor experiences.

Check out our summer gallery! And stayed tuned to all the great GoU activities throughout fall and winter, including the launch of our GoU Junior Naturalist Club and early spring family fun days. For more information, visit www.ncwf.org or email mary@ncwf.org.



Forked tongues, scaly skin, and out-of-this-world jaws—our Super Snakes program investigates the fascinating world of reptiles.



In our Trail Blazers program, participants discover adaptations living things use to survive. Kids participate in a variety of activities including "The Hunter and the Hunted" and "Trail Blazing 101" as they explore the body parts, behaviors and body coverings critical to an animal's survival.



In the Wildlife Detective program, kids search for clues as they explore tracks, scat, homes, animal markings and other wildlife signs in nature.



Special thanks to The Women's Impact Fund and Duke Energy Foundation for their generous grants of support.

HIGHEST HONORS

The North Carolina Wildlife Federation's "Chapter of the Year" title was bestowed on the Pamlico Albemarle Wildlife Conservationists during the awards ceremony for the Governor's Conservation Achievement Awards program, held in September in Research Triangle Park, North Carolina. Here's what the evening's master of ceremonies had to say about this awesome chapter, based in Washington, NC.

"You think you've got problems? Our chapter in the northeast corner of the state might offer a little perspective. This is one of the wildest regions in North Carolina, yet it faces environmental challenges that are daunting. It is home to the most endangered predator in the world, pollution from North Carolina's largest egg factory, entire ecosystems that could be lost to climate change, one of the last dark-sky regions on the East Coast, and entire creeks on the edge of collapse.

But thankfully, the Pamlico-Albemarle region also can count on our local chapter, the Pamlico Albemarle Wildlife Conservationists. PAWC has flexed its muscles on behalf of rare Henslow's sparrows and accessible hunting blinds. They've fought to raise awareness on the effects of climate change on lowland wildlife refuges and pushed back against scientifically unwise alligator hunting. It's not an easy place to work. Biting flies, briars and a public wary of a federal presence on the land all combine to test the most ardent conservationist. But thankfully, the people of the Pamlico Albemarle region are people of the land, paddlers and anglers and hunters and crabbers. Our chapter down there has done a magnificent job of bringing them all under the tent of common good, and for that, the Pamlico Albemarle Wildlife Conservationists is the N.C. Wildlife Federation Chapter of the Year."




TAKING FLIGHT

The Federation's newest chapter, Community Alliance for Wildlife (CAW), has taken on the great responsibility of enhancing and protecting wildlife habitat in their local community in north-west Charlotte. This community has thrived through family, faith, and friendships and is now working to make sure wildlife is welcomed as well. Already they have erected bird nesting

boxes, planted native gardens for pollinators, and seeded a 2-acre meadow within a utility corridor. As the chapter continues to grow, so will the habitat for wildlife. This energetic chapter is ready to make a difference!

LOOKING FORWARD

A new emerging chapter is forming in Wilmington to provide a voice for wildlife in the lower Cape Fear river basin. The area is rapidly growing and impacting the lower Cape Fear river basin, the largest watershed in the state. The watershed has a diverse ecosystem with a wide range of plant and animal life, such as cypress trees, alligators, otters, black bear, and a variety of bird and fish species. If you live in Wilmington or are interested in any other area of the state and would like to get involved please contact Chris North, NCWF Conservation Coordinator, at 704-332-5696 or chris@ncwf.org. It is never too late to get involved, have fun, and help wildlife in your community. 

CHECK OUT OUR CHAPTERS! For more information on how you can participate, contact Christopher North at chris@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 Island Lake Wildlife Stewards



Mountain WILD



PACT (Protecting, Advocating and Conserving)



PAWC (Pamlico Albemarle Wildlife Conservationists)



PAWS (Gaston County Piedmont Area Wildlife Stewards)



River Hawks (Wake Forest)



South Wake Conservationists



The Albemarle Conservation and Wildlife Chapter



Red Wolf Scraps for Survival in North Carolina

The red wolf, *Canis rufus*, once abundant in the southeastern United States, was reduced in numbers and distribution by vigorous predator control activities and habitat loss and was declared extinct in the wild in 1980. Throughout the 1990s until the present, a vigorous reintroduction program has operated in the northeastern counties of North Carolina. Beset by substantial challenges, including interbreeding between red wolves and coyotes and high levels of gunshot mortality, the red wolf recovery program now has its back against a wall.

The U.S. Fish & Wildlife Service has issued its recommendations to significantly scale back the red wolf restoration program. The proposal is to reduce the project area to include only the Alligator National Wildlife Refuge in Dare County, to discontinue release of red wolves, to capture red wolves from the wild on private lands, place captured red wolves in the captive breeders program, and look for new restoration areas. The proposed decision and recommended action raised a high level of dissatisfaction and disappointment among wildlife conservation groups. The issue raised by conservationists is: "How can capturing all the red wolves on private lands and putting them in captivity advance the effort to restore the species to the wild?" Additionally, the search for new restoration areas where these captive animals may be released appears to be futile at best given the experience in North Carolina.

Most informed persons who have followed the program over the years conclude that this decision by the USFWS is a signal of the end to an innovative and preliminarily successful restoration effort. Some more dogged supporters view it as a negative phase, one that needs additional effort to rectify.

The USFWS is now preparing to publish its decision and proposed action in the Federal Register for public reaction as required by Federal administrative procedures. Conservationists, red wolf enthusiasts and detractors alike, and other interested parties will follow the outcome with interest. It has been a most fascinating journey to date in the realm of endangered species restoration and management.

JOHN AND KAREN HOLLINGSWORTH / USFWS



Little Tennessee River Snorkeling

Providing aquatic education experiences to young people is a focus area for the Little Tennessee River Native Fish Conservation Partnership. The North Carolina Wildlife Federation, through generous support from the state chapter of the American Fisheries Society and The Glass Foundation, provided funds to purchase 30 sets of snorkeling gear and associated cleaning materials. The snorkeling gear allowed the partnership to expand existing aquatic educational programs that include Fish in the Classroom and Kids in the Creek. The program is also open to adults. Snorkeling will allow participants to observe fishes, mussels, crustaceans and other aquatic life in their natural habitats.

This summer, participants were excited by the opportunity to look beneath the clear, clean streams of the Little Tennessee River Basin where there is an abundance and variety of fish and other aquatic organisms. We anticipate substantially greater participation next year as we publicize the program and participants tell their families and friends about their experiences. This program will raise public awareness of aquatic issues while opening eyes to the incredible abundance and diversity of aquatic organisms in the Little Tennessee River watershed.





Spreading Our Wings



NCWF's *Butterfly Highway* program was recognized by the Society for Conservation Biology with an international award presented at its North American Conference. The award, known as "the Brandy," recognizes unique contributions made in using marketing tools to increase public engagement and achieve conservation goals.

Angelique Hjarding, NCWF's director of pollinator and wildlife habitat programs, accepted the award and thanked Walker Marketing, Inc. out of Concord, N.C., for nominating the program. Kristine Goodyear, senior director of public relations and content services at Walker, stated "we were pleased and proud to nominate NCWF for this prestigious award and look forward to sharing the program's future successes."

Hjarding, as part of her doctoral research, established The Butterfly Highway as a community-based project in the underserved areas of Charlotte to address pollinator decline and build community engagement throughout a coalition of neighborhoods. The project, along with its original logo, was expanded as a state-wide conservation initiative to align with NCWF's other signature wildlife habitat programs and to highlight all pollinators, not just butterflies. Since being adopted by NCWF in early 2016, the program has grown from 50 backyard pollinator "pit stops" of Hjarding's research to more than 1,100 locations, including schools, businesses and public spaces.



DIOGO VERISSIMO, CO-CHAIR OF SCB'S CONSERVATION MARKETING AND ENGAGEMENT GROUP, AND ANGELIQUE HJARDING, NCWF'S DIRECTOR OF POLLINATOR AND WILDLIFE HABITAT PROGRAMS.

NCWF Fights to Preserve Public Beach Access

The North Carolina Wildlife Federation has joined a N.C. Supreme Court case as a "friend of the court" to present arguments that North Carolina beaches should remain open to public access. The case before the court involves a law suit filed in December, 2011, by several private property owners in the Town of Emerald Isle against the Town claiming that the Town deprived them of private property without just compensation in violation of the Taking Clause of the Fifth Amendment of the U.S. Constitution. The contested action of the Town is enactment of an ordinance prohibiting placement of beach equipment or barriers, temporary or permanent, on the dry sand beach in a 20-foot strip of land lying seaward from the foot of the forward sand dune to allow official vehicles to enter and move along the beach for emergency and other official purposes.

The case was tried in the Superior Court of Carteret County in August, 2014. Summary Judgment in favor of the Town was granted by the Court, after which one of the property owners appealed to the N.C. Court of Appeals (NCCOA). The NCCOA heard the case in August, 2015, and upheld



PHOTO COURTESY OF VISITNC.COM

by unanimous vote (3-0) the decision of the trial court. The plaintiff has now appealed to the N.C. Supreme. The final decision in this matter is critically important to protection and continuation of the public trust doctrine and public trust rights established by Common Law, the N.C. Constitution, state statutes, and traditional practices allowing public access to the beaches of North Carolina across the dry sand beach. For these reasons, the NCWF has provided evidence and testimony to the NCSC in support of the principle of public trust and the inclusion of public trust rights to freely access and use those lands.

NEW AND IMPROVED NCWF WEBSITE GOES LIVE

The new www.ncwf.org website features a cleaner design, improved functionality and several levels of navigation so visitors can access more information in just one or two clicks. We spotlighted some of our most visited pages, such as our programs and upcoming events, and reorganized and cleaned up pages that needed attention. One of the improvements we're most excited about is the mobile-friendly "responsive design" that adapts to whatever device you are using—desktop, tablet, iPhone, Smart TV—and adjusts the content to fit the width of your browser window. Now, you can clearly see all of our rich content and stunning photos without having to pinch and scroll. It's a one-stop destination where you can discover great outdoor recreational opportunities offered through NCWF's programs, learn about threats to our state's species and habitats, find out when your next local chapter meeting is and stay informed about NCWF's advocacy work and the many ways you can help support our efforts. Happy exploring!





NCWF's 2016 Scholarship Winners

MARK TURNER ▶ Mark is a rising senior at North Carolina State University studying Fisheries, Wildlife, and Conservation Biology. He aspires to work for a state agency as a private lands biologist. Mark is passionate about deer management and personally believes that the best way to create habitat for everything from butterflies to bobwhite is to teach landowners how to better manage habitat for deer.

MORIAH BOGGESS ▶ Moriah is a junior at North Carolina State University studying Fisheries, Wildlife, and Conservation Biology with a concentration in wildlife. He enjoys hunting and fishing and feels that it was these hobbies that led to his love for wildlife biology and management. His ideal career is one where he can affect many people while providing them with professional wildlife and habitat consultations.

MONICA WINEBARGER ▶ Monica is a graduate student at Appalachian State University studying ecology and evolution. She plans to get her Ph.D in Evolutionary Biology and ultimately become a research professor. Monica feels that as a professor she could reach a large number of students and help spread the message about conservation and taking care of the environment.

MADISON JUPITZ ▶ A graduate student at East Carolina University, Madison plans to pursue a career with the State of North Carolina in the Department of Environment and Natural Resources or the Division of Marine Fisheries. She wants to fulfill her passion for monitoring and managing the environment by increasing the knowledge base on environmental issues that impact and threaten North Carolina's waterways today.

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TARA EARLY ▶ Tara is a senior at Appalachian State University studying environmental science, chemistry and biology. She would like to work as an environmental biologist for a state or federal agency. Tara hopes to bring her knowledge of other scientific disciplines into her research to gain a more holistic understanding of human-ecosystem interactions.

ADELAIDE HARDWICK ▶ A junior at North Carolina State University with a major in environmental science and political science, Adelaide plans to pursue a career in environmental law and policy with a focus in renewable energies. She believes it is important to protect our planet and conserve our resources so that we can live sustainably on Earth. Her end goal is to make it easier to implement renewable energy into current society and expand the scope of renewables in the United States.

LAURA BELICA ▶ Laura is the recipient of our \$2,500 Conservation Leadership Scholarship. She is a graduate student at North Carolina State University in the Fisheries, Wildlife, and Conservation Biology program. Her work experiences in fisheries and watershed management throughout the U.S. have taught her that despite geographic differences in ecology, hydrology, and land use, the challenges of effectively managing land and water resources for fish and wildlife conservation are similar from place to place. She is looking forward to continuing to bridge the gaps and contribute to improving fish and wildlife conservation management through her career after earning her Ph.D. Laura grew up hunting, fishing, gathering, mountaineering, boating, and backpacking in an outdoors-oriented family. Now, in her spare time, she enjoys hiking, mountain biking, canoeing, camping, wildlife watching, and outdoor photography.

New Chair Takes Reins of Federation Board



Dr. Robert Brown has assumed the chairmanship of the NCWF board, succeeding the accomplishment-rich tenure of John Robbins from Concord. The retired dean of the College of Natural Resources at N.C. State University, Brown has served as Southwest Section Representative and later as national president of The Wildlife Society. He served as a member and later chair of the Sustainable Forestry Initiative, the National Association of University Fish and Wildlife Programs, the Natural Resources Section of the National Association of State Universities and Land Grant Colleges, and Coordinator of the Gulf Coast Cooperative Ecosystem Studies Unit. Brown is a retired Lt. Col. in the Marine Corps Reserve with 24 years of service, including active duty during Vietnam and Desert Storm. He has over 20 years of experience as an Adult Scout Leader and is currently a member of the Oconeechee Council of the Boy Scouts of America.

"We have an exceptionally talented, diverse and dedicated Board, and it will be a pleasure to serve with them," Brown said. "It is certainly easy for conservationists to become frustrated these days. Our wildlife resources face threats from habitat loss due to expanding development, climate change, and legislative deregulation. As Aldo Leopold once said, 'We live in a world of wounds.'

But our job in the NCWF is to help to heal those wounds and to deflect further ones. Fortunately, we are well poised to do just that in North Carolina and I look forward to it."



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

for Wildlife

Here are four simple ways you can leave a lasting legacy.

- Make a bequest to NCWF in your will or trust. Find out how easy it is to put wildlife in your plans.
- Realize the value of your retirement plan by making NCWF a beneficiary. You can consider full, partial or percentage options to benefit wildlife.
- Consider a gift of life insurance that your family has "outgrown" or making NCWF a partial or full beneficiary of your plan.
- Build your gift by using real estate and personal property.

If you or your attorney have questions, or would like NCWF to provide you with sample customized language for your will that is specific to your goal and interest, please contact NCWF's Development Director, Dom Canavarro. All inquiries are confidential. He can be reached at 919-833-1923, or drop him a note at 1024 Washington St., Raleigh, NC 27605.

Charlie Shaw Society



NCWRC

John Robbins, owner of Greathorn Properties in Concord, and a long-time philanthropist and sportsman is the current chair of the Charlie Shaw Society. He encourages others to join him in support of the North Carolina Wildlife Federation.



Current Members

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.

To learn more about the Charlie Shaw Society and benefits of membership, please visit our website at www.ncwf.org, or Dom Canavarro, Development and Operations Director, at (919) 833-1923; dom@ncwf.org.

Jennifer Alligood
Tom Angelo
Ben Barker
Avery Bates
John Benbow
Robert Berton
John Bishop
Frank Bragg
Robert Brown
Mollie Brugh
Pinkney Bynum
Susan Cameron
Glenn Campbell
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DECEMBER

December 10: Hummingbirds seen in North Carolina during winter are often vagrant individuals of species other than our usual ruby-throats. The rufous hummingbird is the species most often seen, but others turn up as well. Report fall and winter hummingbird sightings to susan@ncaves.com or 910-949-3207.

December 13-14: Geminid meteor shower peaks in the wee hours of the morning, but a full moon may make viewing meteors difficult.

December 14-January 5: Annual Christmas Bird Counts are held 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 Mabey'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, bears may stay active virtually all winter.

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

December 21: Winter is here! Solstice is at 5:44 a.m. Eastern Standard Time (10:44 Coordinated Universal Time).

December 25: Most herbaceous plants have been killed by frost, but the fronds of Christmas fern add a bright green holiday touch to the forest floor.

December 29: The fishing is good for striped bass in the large reservoirs like Kerr Reservoir and Lake Gaston.

December 31: Big flocks of yellow-rumped warblers can be seen in the red-cedar and wax-myrtle thickets along our coast. Besides being a spectacle themselves, it pays to check the flocks carefully for occasional overwintering warblers of other species.

JANUARY

January 1: New Year's resolutions? How about spending 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 the monarch, common buckeye, red admiral, American lady, and variegated fritillary, may be seen.

January 3-4: Quadrantid meteor shower peaks in predawn hours. This should be a good shower if the sky is clear—bundle up and find a dark beach or open field for the show.

January 5: Watch for rare visits from winter finches like red crossbills 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 9: Some small mammals sleep most of the winter, but shrews will be active in underground tunnels or beneath the snow. Their high metabolism requires that these tiny predators eat 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 14: Barred owls begin nesting.

January 16: Mourning doves are beginning their courtship flights.

January 17: Black bear cubs are being born.

January 18: Buck white-tailed deer are shedding their antlers.

January 20: Most flycatchers and other heavily insectivorous birds winter in the tropics, but the eastern phoebe hangs around all year, switching its winter diet to berries along with whatever winter insects it can find.

January 21: The enormous flocks of red-winged blackbirds and other blackbirds overwintering along our coast are an impressive sight. The 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 27-28: The Carolina Bird Club will hold its winter meeting in Nags Head. For more information, visit www.carolinabirdclub.org.

January 30: Wood frogs breed during winter rains. Like many winter-breeding amphibians, these handsome frogs of our Mountains and Foothills 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: Groundhogs are normally still hibernating, so you probably won't see one out looking for its shadow (but it is possible on a warm day).

February 3: Spring waterfowl migrations begin.

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

February 5: The Neuse River waterdog, a large, permanently aquatic salamander endemic to 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 mating season; males are moving in search of females.

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

February 12: Eastern gray squirrels are bearing their spring litters.