



North Carolina  
Wildlife Federation

SUMMER 2024

# Journal



## THE SUPERPOWERS OF POLLEN

How bees, butterflies, and other pollinators support life as we know it.

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## FLOUNDERING ABOUT

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## LEAVING WETLANDS HIGH AND DRY

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## To Bee or Not to Bee

BY TIM GESTWICKI, NCWF CEO

I'm no Shakespeare scholar, nor is Elizabethan drama my kind of thing, but I wanted to make a point with this column title. Perhaps the most famous quote in perhaps the Bard's most famous play is the *Hamlet* line in which the eponymous Prince of Denmark says: "To be, or not to be, that is the question." When I read those words, I pick up an underlying theme of life and death and the often-unconsidered connections that make existence possible.

So, then, my headline. As I said: I am no Shakespeare scholar. But I yield to no one—how very Hamlet-ish, yes?—in my love and appreciation for bees. Bees and butterflies, bees and wasps, bees and beetles and all the other pollinators that make life on this planet possible. And delicious.

Instead of Shakespeare, I'd look to John Muir for an inspiring line when it comes to these undervalued citizens of the natural world. It was Muir who said, "When we try to pick out anything by itself, we find it hitched to everything else in the universe." Truer words were never spoken about bees.

As you will read in this *Journal*, bees are critical to wildlife survival as well as to the way of life of all of humanity. From hummingbirds and insects to butterflies and moths, pollinators in general serve invaluable functions. I don't want to be overly dramatic—another theatrical reference!—as Hamlet was, however, I can safely say that life does indeed depend on bees and their tribe of pollinators.

Farmers have long understood the value of bees for their pollinating prowess. Bees have evolved with tiny hairs covering their body, which help collect pollen as they feed from blossom to blossom in a wondrous nature-based cross-pollinating phenomenon. Bees are the cornerstone of worldwide food production, and provide the trickle-down foundation of our world for wildlife and people. As far as life and death goes, we should thank bees for also pollinating the trees, shrubs, and grasses that comprise the world's lungs, that literally clean the air and produce the oxygen required of human life.

The real quandary arises when we consider how human societies value and care for critical bee species. Unfortunately, as we do with most of our natural resources, we squander them, usually chasing short-term profit over the long-term sustainability and economic rewards that nature provides us. Pesticides, insecticides, and herbicides are lavishly applied for the purpose of killing pollinators, sterilizing the environment in Shakespearean tragic fashion.


Declines in bees should sound an alarm bell, as should other issues we cover in this *Journal*. In the ongoing saga of failed fisheries management in North Carolina, we report on the flounder fiasco which led to the first-ever cancellation of a public fishing harvest season in coastal waters.

Again, the shortsightedness of overharvesting is absolutely tragic. Hundreds of millions of young fishes too young to spawn or reproduce even a single time are killed by indiscriminate fisheries such as shrimp trawls in our juvenile fish habitats. These young fish are too small to be of any commercial or food value for current human use. Their primary value is to make more fish. For everyone. Animals that die before they reproduce are unable to contribute to their population numbers or to sustain healthy fish stocks of their species for all.

Our state is particularly vulnerable to natural disasters due to our low-lying coastal areas and the large numbers of east-flowing rivers that can overwhelm our estuaries, creeks and marsh areas. Tar Heel homeowners rank fourth in the country in terms of risk because of this. Wetlands are critical assets that provide drinking water, support fishing and other outdoor recreation, and are the lifeblood of many Carolina communities. However, as we covered in the last *Journal*, our wetlands are under siege as rampant development zeros in on wetland areas. We update on the progress of our legal actions to stave off even further weakening attempts to degrade wetland habitats.

We must ensure that North Carolina's natural resources don't wind up as a tragedy or a farce. Your North Carolina Wildlife Federation will keep working to let nature—in all its splendor and wonder—work. Letting our river buffers and oyster beds soak up sediment and pollutant runoff before it gets into our aquatic ecosystems, letting our freshwater mussels filter out pollutants when vegetated buffers are overwhelmed, letting nursery habitats spawn marine fish, letting wetlands and coastal marshes soak up flood waters like a sponge, letting sunlight power our lives, and letting bees and butterflies pollinate our crops. It's not rocket science. It's commonsense conservation. And it is required for the preservation of life.

As for bees, we can all make this play out in our favor. Plant native flowering plants. Curb usage of pesticides. Let's help them keep on buzzing around and doing their thing so we can all keep...beeing.

That's the kind of Shakespearean reference I can relate to. 

NCWF will keep working to let nature—in all its splendor and wonder—work.

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*Cover photograph* A yellow swallowtail on joe-pye weed is a sure sign of a pollinator's promise. Photo by Lynn Swafford / NCWF photo contest submission. Other photos, unless noted, courtesy of NCWF.

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North Carolina  
**Wildlife Federation**

SUMMER 2024

# Journal

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## FEATURES

- 2** IT'S THE LITTLE THINGS  
 Whether it's the food on your table, the flowers in your garden, or the clean air you breathe, pollinators do the heavy lifting.
- 6** LEFT FLAT  
 The closure of North Carolina's recreational flounder season in coastal waters should be a 5-alarm wakeup call.
- 8** ON THEIR OWN  
 Recent law changes have left wetlands without a defense.

## DEPARTMENTS

INSIDE FRONT COVER / Pathways  
 PAGE 10 / Chapters Update  
 PAGE 13 / Planned Giving  
 BACK COVER / The Season



NCWF PHOTO  
 CONTEST  
*Highlight*

**AMERICAN ALLIGATOR**  
 by Ralph Cooper

## NORTH CAROLINA WILDLIFE FEDERATION

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

**VISION** A North Carolina with healthy and diverse habitats and wildlife valued by all people and sustained for future generations.

**VALUES** Science-based decision making  
 Non-partisan approach to policy  
 Inclusive of broad interests and perspectives  
 Collaborative with diverse organizations and individuals  
 Committed to solutions and impact

More Than Just

*Butterflies*



## Native North Carolina Bees on NCWF's Butterfly Highway

by Alden Picard



North Carolina Wildlife Federation caught the buzz a long time ago: NCWF is all in on the Butterfly Highway. This statewide conservation initiative aims to restore native pollinator habitats in areas impacted by urbanization, land use change, and agriculture. At present, there are more than 3,000 registered pollinator pitstops in North Carolina. While most are less than an acre in size, they range from a handful of container plants adorning an urban lot to sprawling complexes that include more than 1,000 acres of habitat. And they're found from one end of the state to the other, as far west as Murphy, in Cherokee County, to Rodanthe on the Outer Banks.

Butterflies share these critical pollinator habitats, called "Pollinator Pitstops" on the Butterfly Highway, with native bees. You might even say that native bees occupy more lanes on the highway than butterflies do. Though they are certainly crucial pollinators, the pollinating power of butterflies pales in comparison to that of bees. Whereas North Carolina boasts around 177 different species of butterflies, there are some 500 species of native bees, a number more than twice that of butterflies. These insects range from the tiny sweat bee that measures barely a quarter-inch long, to the formidable eastern carpenter bee. On top of this numbers game, bees are specially adapted to better pollinate many of North Carolina's native plants. Butterflies have long skinny legs and a long tongue that makes it easier for them to draw nectar from long-stemmed flowers without coming into contact with pollen. They also lack the pollen collection structures that make bees the powerhouse pollinators they are.

Most female bees collect pollen with scopa on their abdomen or hind legs. The scopa is a group of dense, elongated hairs modified to brush and collect pollen from flowers. Bees such as bumble bees have a more sophisticated structure called a corbicula or "pollen basket" on their hind legs. This is a flattened area on the tibia surrounded by hairs where pollen is gathered and packed into a pellet for transport. Studies show that a bee can carry up to a third of their weight in pollen.

Nearly 90 percent of flowering plant species rely on pollinators for successful reproduction, which in turn supports ecosystem biodiversity and agriculture. Many important agricultural plants such as tomatoes and blueberries hold pollen extremely tightly, restricting access only to certain native bees that can "sonicate," or produce adequate vibrations to shake pollen free. In this case, the prized pollen can only be obtained by these specialized insects.

Pollinators are responsible for every third bite of food we consume, highlighting their essential contribution to our food supply. Moreover, pollinators sustain the plants that produce the oxygen we breathe. Beyond these critical ecosystem services, pollinating insects are critical in the creation of medicines derived from native plants, and facilitate the production of nearly half of the world's fibers, oils, and raw materials.

Research has shown that up to 60 percent of North American native bees feed on pollen from less than half our native plants. This group of bees are called "pollen specialists," as they restrict their pollen feeding to a small group of plant genera or species. The plants that feed these specialists are known as "keystone plants," a term that underscores their importance. Their removal could cause potential collapse of food webs and ecosystems.



# Packin' Pollen

As a bee flies, air friction creates a positive charge on the specialized body hairs that bristle its thorax and abdomen. It's the same principle as rubbing your hair with a balloon. When a positively charged bee visits a flower, negatively charged grains of pollen are attracted to the hairs of the bee, making them cling to the bee's body. Such an efficient collection and transfer strategy ensures the continuation of plant life and the resources they provide for human survival.

MARIA DE-BRUYN / NCWF PHOTO CONTEST SUBMISSION

## Evolution of a Pollinator

Bees evolved from wasps, developing the characteristic differences that set them apart today, such as vast changes in food requirements. Compared to wasps, bees have stout bodies covered in branched hairs with pollen-collecting structures on their abdomen or hind legs. Wasps have smooth, slim bodies that lack the complex hairs of bees. A notable carry-over from this evolutionary deviation, the closest relative to our native bees is a group of digger wasps that largely feed on thrips, a small species of insect. Compared to others, these wasps are considerably hairy and scan flowers in search of pollen-eating thrips to hunt and feed to their young.

Sometime during the Cretaceous period, around 128 million years ago, members of this group of wasps made an evolutionary shift from predator to herbivore. Instead of continuing the arduous task of hunting insects, they began feeding their young protein-dense pollen from the flowers themselves.

As bees continued to diversify, so did flowering plants. Flowers began producing sweet nectar to attract pollinators. Elaborate flower shapes evolved, and bees adapted strategies to retrieve these sweet goods. In this serendipitous co-evolution between bees and plants, the bees benefited by gaining an abundant food source (pollen and nectar) and flowers benefited from the pollination services bees unintentionally provided.



# Bumble Bee Survey

Under the supervision of North Carolina Wildlife Federation staff, Pocosin Lakes National Wildlife Refuge's summer interns conduct bumble bee surveys for the Southeast Bumble Bee Atlas in two adopted blocks on the refuge. The blocks are located on the refuge's Pungo Unit and in Columbia's Millennium Forest and Red Wolf Center. During their first survey in mid-July, the interns surveyed 12 bumble bees. They proposed the identifications for one brown-belted bumble bee and 11 common Eastern bumble bees and completed a habitat analysis of the survey area. Through this community science project, data will be submitted to Bumble Bee Watch where scientists will verify the species and use this information to analyze bumble bee habitat and population changes over time.



LAURA FRAZIER



## THE NCWF Pollinator Pledge

“ I will provide and maintain insecticide-free habitat for pollinators that meets the basic needs of wildlife including native plants, food, water, shelter, and places to bear young and nurture offspring. ”



ISTOCK.COM / COURTNEYM

## Planting for the Future = Planning for the Future

Supporting essential native bee species requires establishing habitat that provides them with the flowering plant species that sustain them. The pollen produced by these plants has led to highly interdependent relationships with their specialist bee pollinators. In addition, they also support our generalist bee species. By installing these plant genera in your pollinator habitats, you can support the vast majority of our 500 native bee species. Be intentional about planting bee host plants as much as planting butterfly host plants. You'll find that many of them support butterflies, as well. Goldenrod is also a host to more than 100 species of butterflies and moths. Aster isn't far behind. Some of the most important native plant species for specialist bees belong to the following genera:

*Helianthus* (sunflower) supports 50 pollen specialist bee species

*Solidago* (goldenrod) supports 42 pollen specialist bee species

*Symphotrichum* (aster) supports 33 pollen specialist bee species

*Rudbeckia* (black eyed Susan) supports 29 pollen specialist bee species

*Coreopsis* (tickseed) supports 22 pollen specialist bee species

# Flounder FIASCO

**NCWF renews call for end to inshore shrimp trawling after 2024 recreational flounder season in coastal waters canceled.**

On May 23, 2024, the N.C. Division of Marine Fisheries announced to the N.C. Marine Fisheries Commission that the 2024 recreational flounder season in coastal waters would be canceled in order to preserve the state's southern flounder resource. While this was the first time the season has been closed for recreational anglers in coastal waters, the writing has been on the wall for a long time due to chronic failed management. Southern flounder and other important fisheries in North Carolina are in dire condition and strong action is needed now to save them.

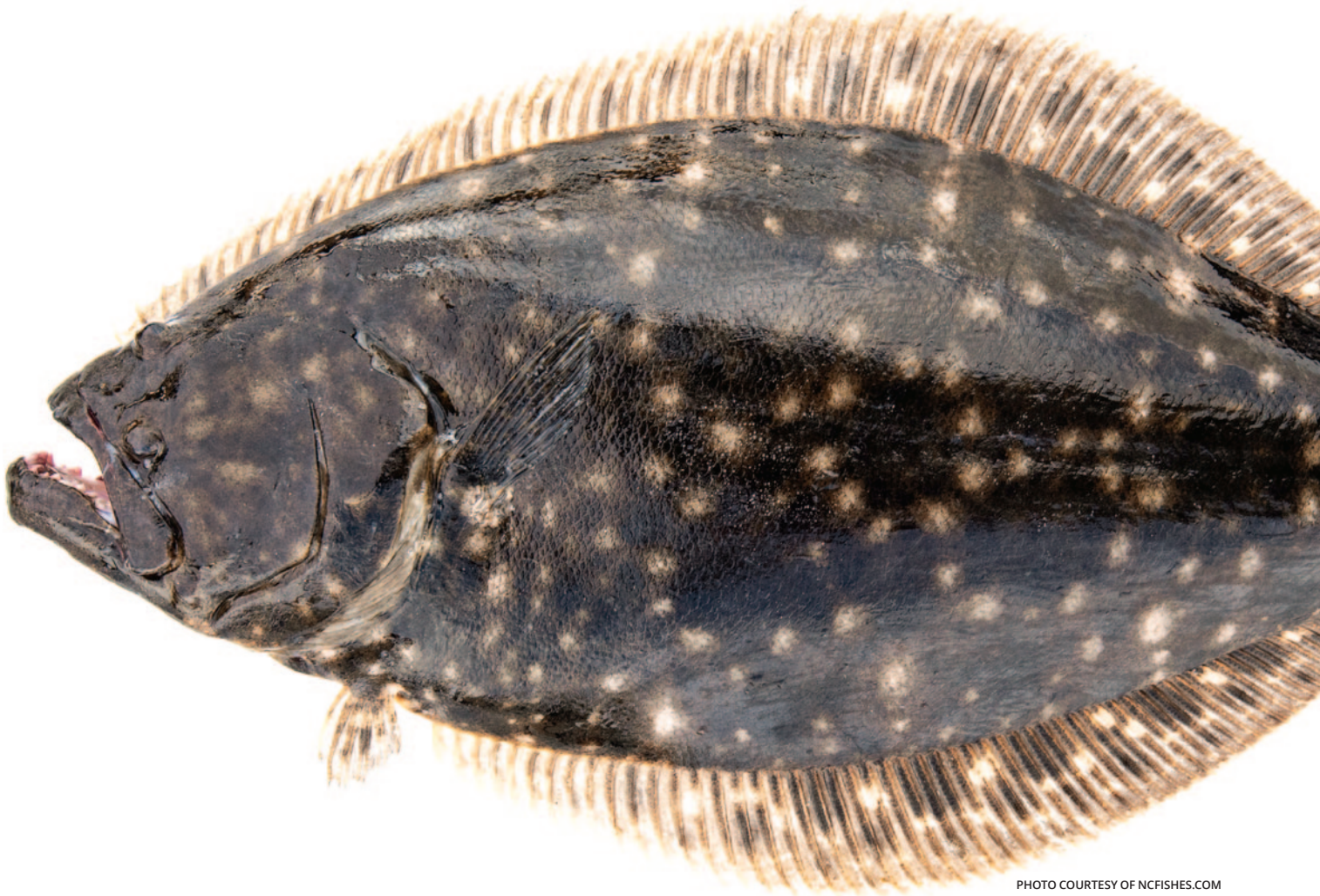


PHOTO COURTESY OF NCFISHES.COM





For every pound of shrimp harvested in North Carolina's waters, at least four pounds of non-target catch, mostly juvenile finfish such as southern flounder, are discarded as waste.

ISTOCK.COM / BALASHARK

While there are many reasons why southern flounder and other fisheries fall under overfished and overfishing status, one of the most significant contributing factors is bycatch from inshore shrimp trawling. For that reason, allowing this practice in our sounds must stop now and shrimp trawling should only take place in coastal ocean waters.

Bycatch is the unintended portion of a catch taken because of the non-selective nature of the fishing gear used—in this case, shrimp trawls. The most reliable bycatch study to date shows that for every pound of shrimp harvested in North Carolina's waters (most of which are caught by otter trawls used for shrimp trawling), at least four pounds of non-target catch, mostly juvenile finfish such as southern flounder, are discarded as waste.

“Regulatory discards” refers to caught fish that are below the minimum size limit. These fish must immediately be returned to the water because, according to the Division of Marine Fisheries, many of them die due to “physical injury associated with capture and indirect predation from birds, sharks, and dolphins.” Inshore trawling is estimated to account for tens of millions of pounds of dead juvenile finfish of commercial and recreational importance each year. This equates to hundreds

of millions of juvenile fish and other marine life being killed before they have a chance to reproduce.

North Carolina is the only state that still allows large-scale shrimp trawling in its estuaries. It is not a coincidence that we are also currently facing a high level of threat to flounder and some of our other most important fisheries such as weakfish, spot, croaker, and blue crab. States to the south, including South Carolina, Georgia, and Florida, stopped allowing this type of inshore shrimp trawling decades ago and have become a preferred destination for many anglers.

**While the North Carolina recreational season for flounder is closed in coastal waters, the fishery in South Carolina is open year-round with a five-fish limit per person.**

Ending the practice of inshore shrimp trawling isn't the only step that should be taken to address our declining fisheries, but it is one of the most immediately impactful. That's why the North Carolina Wildlife Federation is calling on our state legislators to put a stop to inshore shrimp trawling now. As we've seen with the unprecedented cancellation of the 2024 public flounder season in coastal waters, North Carolina's most vulnerable fisheries cannot wait.

# THE Continued Legal Defense FOR

Many do not realize the critical importance of wetlands to our state's wildlife populations. In addition to providing food sources and nesting grounds to a vast majority of North Carolina wildlife, more than 70 percent of the North Carolina species listed as endangered, threatened, or of special concern depend on wetlands for survival.

As we reported in the last *Journal*, NCWF has intervened in a lawsuit in eastern North Carolina that seeks to advance an overly narrow reading of federal wetlands protections. The Elizabeth City landowner who brought the case is represented by the same attorneys who represented the plaintiffs in *Sackett v. EPA*, the 2023 Supreme Court case that severely curtailed federal protections for wetlands. "Wildlife needs clean water just as people do," says Manley Fuller, vice president of conservation policy for the Federation. "Folks who love our streams, rivers, and wetlands deserve better, which is why we are fighting for strong, clear, science-based national clean water protections in court."

The landowner asked the court to issue a preliminary injunction prohibiting the government from enforcing the protection rules as to him and his properties while the case proceeds, arguing that wetlands are covered by the Clean

Wetlands are home to **40 percent** of the world's species. Healthy wetlands are economically critical to North Carolina's recreational and commercial fishing industries, providing homes for countless fish and shellfish species during different stages of life.

Recent changes in federal and state policy have removed protections for vital wetlands in North Carolina. A recent assessment of the new policy landscape shows that up to **3.6 million acres** of wetlands in North Carolina may no longer benefit from policy protections.

Water Act only where they are "indistinguishable" from the lakes, rivers, and large streams that they border. This point was contested by attorneys for North Carolina Wildlife Federation at a June hearing, arguing that this reading of the law went far beyond what the Supreme Court has held and, if courts adopted it, could remove federal protections from most wetlands, with potentially devastating effects on waters throughout the Southeast and the nation.

In mid-June, a favorable decision in the case was received when the court rejected the landowner's argument and denied his motion for a preliminary injunction. The court found that the government's reading of the law was correct and declined to adopt the landowner's proposed reading. However, the landowner has appealed this ruling against the preliminary injunction.

In the meantime, attorneys on behalf of NCWF also filed an amicus (or "friend-of-the-court") brief in the related Clean Water Act enforcement action against the landowner that is also pending in court. In line with what was argued in the rule challenge, the brief would communicate the following:

1. Wetlands are critically important, particularly in eastern North Carolina;
2. *Sackett v. EPA* requires only that wetlands have a continuous surface connection to an otherwise covered water to be considered waters of the United States;
3. The opposing contrary view has no support in the law and, if adopted more broadly, could do serious harm to waters in eastern North Carolina and beyond.

# Wetlands

Wetlands absorb excess nutrients that cause dead zones and fish kills in rivers and estuaries. On average, wetlands help retain as much as **1.5 million gallons** of flood water per acre, helping to manage flood waters on the landscape and reducing flood impacts to our cities, towns, communities, and working lands.



MATT ROBINSON / NCWF PHOTO CONTEST SUBMISSION



LYNN SWAFFORD / NCWF PHOTO CONTEST SUBMISSION

As flood risk rises, so will the cost of flood insurance for North Carolinians under FEMA's new risk-based premium system. Wetlands provide **vital habitat** for North Carolina wildlife and play a central role in supporting North Carolina's rich hunting, fishing, and outdoor recreation economy.



HEATHER RUSSELL / NCWF PHOTO CONTEST SUBMISSION



### NEW NCWF CHAPTER CHARTERED IN NORTHEASTERN NC

Nestled in one of the most ecologically unique corners of North Carolina, NCWF Wildlife Habitat Stewards of Northeastern NC Chapter has taken on the task of educating, inspiring, and engaging community members to safeguard the future for wildlife in the most downstream portions of the Albemarle Pamlico watershed. Since the end of 2023, members have created close relationships with multiple local partners, restoring habitat all the way up to Great Dismal Swamp State Park, down to the Elizabeth City area, and bringing educational programming to the Outer Banks. Grit and determination have resulted in the removal of thousands of pounds of litter from the landscape that was well on its way to the ocean, and the planting of serviceberry trees at the Camden County Library to create wildlife passage connectivity and provide educational opportunities for community members of all ages. The chapter has worked with Pocosin Lake National Wildlife Refuge and the Red Wolf Center in improving pollinator habitat on their properties, and has volunteered with U.S. Fish and Wildlife Service in the huge effort to restore Atlantic white cedar which supports a myriad of species including the Hessel's hairstreak butterfly. Volunteers with the Wildlife Habitat Stewards of Northeastern NC are key figures in four upcoming projects to restore wetlands and pollinator habitat in the Albemarle-Pamlico peninsula. On June 4, 2024, NCWF staff and board members were present at Merchants Millpond State Park for the official charter signing, welcoming this incredible group into the chapter network.

### LOOKING FORWARD TO THE FUTURE

Ashe and Watauga County residents – stay tuned for more information as our Outreach Team is working with a group of passionate and dedicated folks to create a community wildlife chapter in your area. For more information email [natalie@ncwf.org](mailto:natalie@ncwf.org)

### NCWF CHAPTER IMPACT BY THE NUMBERS

For the first half of 2024, NCWF volunteers and staff made a difference for wildlife.



Planted 7,344 shrubs and pollinator plants



Picked up 14,111 lbs of trash



Reached 3,850 adults through NCWF programming



Planted 1,863 trees



A VOLUNTEER PARTICIPATES IN ONE OF 18 LITTER CLEAN UPS HELD THROUGHOUT THE STATE. SO FAR IN 2024, APPROXIMATELY 14,111 LBS OF TRASH HAVE BEEN PICKED UP.



APPROXIMATELY 60 PEOPLE PARTICIPATED IN HAWK'S RIVER CRITTERS AND POND PALS STREAM-EXPLORATION WITH DR. ERIKA YOUNG, THE COASTAL AND MARINE EDUCATION SPECIALIST FOR NORTH CAROLINA SEA GRANT.



SOUTH WAKE CONSERVATIONISTS KIDS IN NATURE DAY COLLAGES, ON MAY 5TH, 2024, 424 PEOPLE WERE CONNECTED WITH NATURE THROUGH A WIDE VARIETY OF FUN, INTERACTIVE ACTIVITIES.



(ABOVE) EARTHSHARE PARTICIPANTS FROM CRESCENT COMMUNITIES INSTALLED TWO BAT ROOSTING BOXES SUPPORTING THREE DIFFERENT SPECIES OF BATS THAT FREQUENT CHARLOTTE'S CHANTILLY ECOLOGICAL SANCTUARY, THE MEXICAN FREE-TAILED BAT, THE BIG BROWN BAT AND THE LITTLE BROWN BAT.

(LEFT) PARTICIPANTS EXAMINED VARIOUS SPECIES OF FRESH-WATER MACROINVERTEBRATES, SALAMANDERS AND FISH DURING THE STREAM EXPLORATION.

## CHECK OUT OUR CHAPTERS!

For more information on how you can participate, email [natalie@ncwf.org](mailto:natalie@ncwf.org).



ALBEMARLE CONSERVATION AND WILDLIFE CHAPTER (Elizabeth City)



CHARLOTTE WILDLIFE STEWARDS



CONCORD WILDLIFE ALLIANCE



HAWK (HABITAT AND WILDLIFE KEEPERS) (Matthews)



INNER BANKS WILDLIFE (Washington)



LAKE JAMES AREA WILDLIFE AND NATURE SOCIETY (Nebo)



LAKE NORMAN WILDLIFE CONSERVATIONISTS



LOWER CAPE FEAR WILDLIFE



MARSH (MARVIN AREA FOR THE RESTORATION AND SUSTAINABILITY OF WILDLIFE HABITAT)



MOUNTAIN WILD! (Asheville)



NEUSE RIVER HAWKS CONSERVATIONISTS (Wake Forest)



NEW BERN WILDLIFE CHAPTER



PAWS (GASTON COUNTY PIEDMONT AREA WILDLIFE STEWARDS)



SOUTHEASTERN SWAMP STEWARDS (Whiteville)



SOUTH WAKE CONSERVATIONISTS (Fuquay-Varina, Raleigh)



TRIAD WILD (Greensboro)



TRI-COUNTY CONSERVATIONISTS (Chapel Hill)



UNION COUNTY WILDLIFE CHAPTER



WILDLIFE HABITAT STEWARDS (Northeastern NC)

## NCWF and Duke University Survey Hunter Knowledge about Lead Exposure in Humans

LEAD AMMUNITION IS WIDELY USED within the hunting community. Unfortunately, this soft metal can fragment more than other types of ammunition, potentially increasing lead exposure to hunters and their families. Hunters also can be exposed to lead via inhalation from gunpowder emitted when shooting a firearm and ingestion from consumption of fragments in game meat. Once lead enters the body, this metal can bind to proteins and move to virtually every organ system and can be stored in bone for decades.

To address these health concerns, Duke University researchers partnered with NCWF to survey 20,000 deer and bear hunters to examine their knowledge about the impacts of lead on human and

ecosystem health. Preliminary results suggest that hunters who know more about lead tend to take more precautionary measures which may limit their exposure to lead, like removing residue from harvested game, cleaning their hands, and wearing eye protection. Additionally, those who use non-lead ammunition tend to be more concerned about lead exposure, agree more with statements posed regarding the impact of lead on the ecosystem, and are less likely to think that lead is the most effective projectile, jacket, and/or shot type. More detailed results are to come as the survey data are analyzed in more depth as well as further research to evaluate whether these types of hunter

beliefs are associated with the level of lead in human blood or bone.

Another important step of this ongoing research is to evaluate potential alternatives to lead ammunition and programs hunters can voluntarily participate in to reduce their exposure to lead, and their impact on wildlife. While some technological improvements have been made to non-lead ammunition, availability and cost remain factors in hunter preference as well.

NCWF is strongly committed to working with researchers and the hunting community to eliminate unnecessary wildlife mortality from lead ammunition and safeguard human health when participating in outdoor recreation.

### NCWF's Sixth Annual Photo Contest is Open for Submissions

Capture the moment and tell the story of North Carolina's wildlife through the lens of your camera. Join hundreds of photographers in NCWF's Sixth Annual Wildlife Photo Contest and submit your best photos by September 1 across categories including Carolina Critters, People in Nature, and Scenes of North Carolina. Whether you're a professional, amateur, or youth photographer, your entry supports wildlife conservation efforts across the state.

For just a \$15 donation, submit up to 12 photos. Don't miss your chance to win and have your photos featured in NCWF's publications and online platforms. For more information, visit [ncwf.org/photo-contest/](http://ncwf.org/photo-contest/)

STEVEN GENKINS / NCWF PHOTO CONTEST SUBMISSION

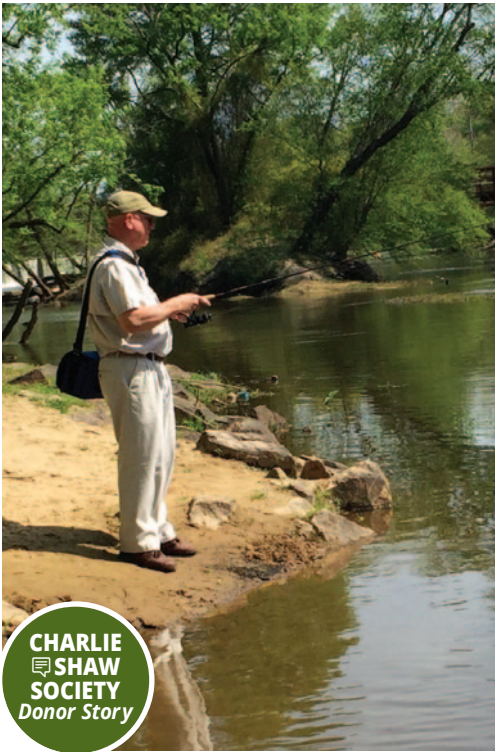


## A Catch of a Lifetime!



Facilitated by the North Carolina Wildlife Resources Commission and partners, Fayetteville's annual Fin-Tastic Fishing Festival provides the Fayetteville community with an outstanding event to enjoy and learn more about fishing. This year, North Carolina Wildlife Federation sponsored a raffle for children 15 years old and younger, offering a chance to receive a lifetime North Carolina fishing license. Kimberleigh Hedgepeth of Rocky Mount, pictured here with family and NCWF Wildlife Resource Specialist Fred Harris, was drawn as the lucky winner, guaranteeing her a lifetime of access to the wonderful fishing resources and engagement our state has to offer.

# One *Very* Happy Accident



CHARLIE SHAW SOCIETY Donor Story

THE TRAJECTORY OF OUR LIVES can be redirected in surprising ways—through the people we meet, the places we live, and the unforeseen events life throws our way. For NCWF Shaw Society and Board of Directors member Wilson Laney, this life redirection came through a fall into a creek as a child.

“My mother took me to Wilson’s Creek at Brown Mountain Beach near Morganton, North Carolina,” Laney recalls. I stepped in a deep hole in the creek bottom, and I remember opening my eyes under the water and seeing all these little fishes swimming around over the cobbled bottom of the stream and thinking ‘Wow, this is neat.’”

Despite Laney’s mother frantically pulling her son out of the creek, there was no pulling him away from a lifetime of wildlife and fisheries conservation that followed.

Inspired by a marine biology class in high school, he pursued an undergraduate degree at Mars Hill University, where his major professor secured him a National Science Foundation Undergraduate Research Participation Grant, and later an NSF Fellowship, to study under the late Dr. Eugene Hester. He received a NCWF scholarship, as well, while at North Carolina State University in 1972.

Upon graduation, Wilson worked for the U.S. Fish and Wildlife Service for nearly 40 years, first as a wetlands ecologist, participating in a number of wide-reaching policy and habitat improvement related projects across the state, and then moving into the USFWS fisheries program with a particular focus in anadromous fish species. This work led him to work alongside organizations including the Atlantic States Marine Fisheries Commission, the South Atlantic Fishery Management Council, the Atlantic Coastal Fish Habitat Partnership, and the North Carolina Coastal Federation.

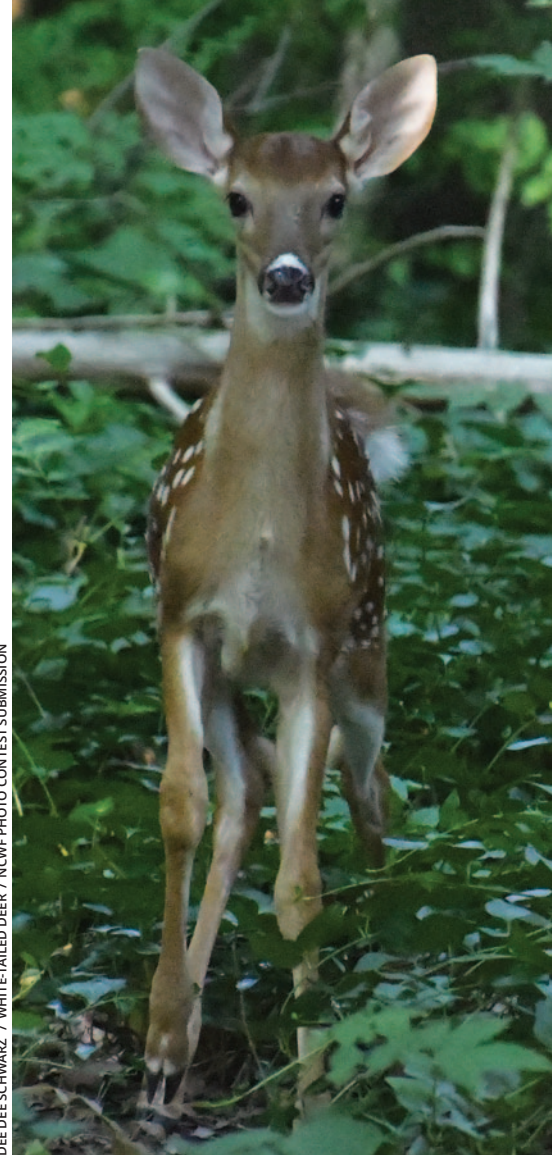
His experience led to his appointment as a member of NCWF’s Board of Directors and his joining NCWF’s Shaw Society. Laney particularly appreciates NCWF’s approach to nonpartisan and commonsense conservation, supported by science.

“What I think is distinctive about NCWF is our commitment to work with anybody who has an interest in conservation issues and to be nonpartisan about it,” Laney says. “I think that’s something that’s very different about NCWF, and something that’s not necessarily the case among other conservation organizations.”

NCWF’s mission to protect, conserve, and restore wildlife and habitat resonates with Laney, particularly through initiatives like Save Our Sounds, which aims to protect coastal habitats and fisheries from overfishing and unacceptable fishery impacts.

“I think if we want a sustainable North Carolina and a sustainable planet, we have to be concerned about all living things that occupy the planet with us. And that includes plants, and habitats,” says Laney. “To me, all of that is tied together with a healthy ecology, as well as a healthy economy and a healthy culture.”

You can join Wilson and other NCWF donors in the Shaw Society by donating \$1,000 or more in a calendar year. Some people prefer to give a single gift in a year, others like to give monthly, and some give through stock, their IRA, donor-advised fund, or estate plan. To learn about all the ways you can join the Shaw Society and support wildlife and habitat in North Carolina today and for future generations, contact NCWF VP of Philanthropy Kate Greiner at [kate@ncwf.org](mailto:kate@ncwf.org).



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# The Season

Jeff Beane's GUIDE TO  
NATURAL NORTH CAROLINA

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## SEPTEMBER

**September 2:** Bull elk are bugling in Cataloochee Valley. That impressive and unmistakable sound was long absent from North Carolina but has now returned, and should be heard by everyone.

**September 3:** Peak birthing time for the copperhead, our most common and widely distributed venomous snake.

**September 4:** Stick insects (walkingsticks) are mating. Kidneyleaf grass-of-Parnassus is blooming.

**September 5:** The planet Mercury reaches its greatest western elongation from the Sun. This is the best time to view the Swift Planet; look for it low in the eastern sky just before sunrise.

**September 6:** Hellbenders are breeding in our Mountain rivers. Unlike most salamanders, these increasingly rare Appalachian giants spawn in the same manner as most fishes. A male prepares a breeding chamber under a large rock, defending it against rival males. If he convinces a female to deposit her eggs beneath his rock, he fertilizes them externally and guards them until they hatch. Never move large rocks in hellbender streams; it damages their homes and breeding habitat!

**September 7:** Peak abundance for the little metalmark, an uncommon butterfly of our southeastern Coastal Plain.

**September 9:** Wild muscadine grapes are ripening. Summer farewell is in bloom.

**September 10:** Peak flight periods for several common and uncommon butterflies, including cloudless sulphur; little yellow; Gulf fritillary; and Aaron's, Dion, long-tailed, and Yehl skippers.

**September 11:** American beautyberry is fruiting—don't miss its uniquely beautiful color display.

**September 15:** September is usually excellent for butterfly watching. Monarchs have declined in recent years, but their migrations can still sometimes be spectacular. The Blue Ridge Parkway is a good place to watch for monarchs. Tunnel Gap at milepost 415.6 is an especially good spot.

**September 16:** Blue-winged teal are returning. Possumhaw berries are ripe and will persist through the winter. Balsam Mountain gentian—a North Carolina endemic occurring in only a few counties in our southwestern Mountains—is in bloom.

**September 17:** The Diana fritillary—a rare butterfly found only in our Mountains and Foothills—is flying, after its summer diapause.

**September 18:** Female green lynx spiders are guarding their egg sacs. Tickseed sunflower and showy rattlebox are in bloom.

**September 19:** Threadleaf false foxglove is in bloom. Flowering dogwood berries are ripe—watch trees for migrating scarlet tanagers, rose-breasted grosbeaks, and other birds that relish these berries.

**September 21:** Hawk migration is peaking. Thousands of broad-winged hawks and other species may be seen migrating this time of year. Mahogany Rock in Doughton Park along the Blue Ridge Parkway is an especially good spot to witness this spectacle. The Carolina Bird Club will hold its annual fall meeting at several different locations this year—a new meeting concept. For more information, visit [www.carolinabirdclub.org](http://www.carolinabirdclub.org).

**September 22:** It's fall, all y'all (officially, that is). Autumnal equinox is at 8:43 a.m. EDT (12:43 Universal Coordinated Time).

**September 23:** In the Sandhills, pine snake nests are hatching and Sandhills blazing-star is blooming.

**September 24:** Cottonleaf golden-aster is blooming.

**September 25:** Bog turtle nests are hatching in the Mountains and Foothills. Fern-leaf false foxglove is in bloom in the Coastal Plain.

**September 28:** It's National Hunting and Fishing Day and National Public Lands Day. Visit your favorite public lands, and/or take a kid (or adult) hunting or fishing. And watch the trees for an exercise in challenging birding—fall warblers and other migrants are moving through.

**September 29:** The first frosts may be expected any time now in the Mountains.

**September 30:** The nests of most turtle species will have hatched, but in some species, including sliders, cooters, painted turtles, and box turtles, hatchlings may sometimes overwinter in the nest, not emerging until spring.

## OCTOBER

**October 1:** In the Coastal Plain and eastern Piedmont, Brunner's mantids (aka walkingstick mantids) are active and depositing their oothecae. These unusual flightless native mantids reproduce by parthenogenesis; only females are known.

**October 2:** The last of the season's loggerhead sea turtle nests are hatching. Nodding ladies' tresses are in bloom.

**October 3:** Autumn tiger beetles are mating. This rare, typically bright blue-green species is known from only a few sites in our Sandhills region. Our other tiger beetle species breed in spring.

**October 5:** Pine Barrens gentian is in bloom. Fall runs of bluefish and red drum can provide good surf-fishing opportunities.

**October 7:** Draconids meteor shower peaks. Best viewing will be early evening from a dark location.

**October 8:** Peak migration for many sea duck species.

**October 10:** Tail end of migration peak for many shorebird species.

**October 11:** Most ruby-throated hummingbirds are leaving for Central and South America (a few overwinter along our coast). Hummingbird feeders may be taken down and cleaned thoroughly for next year.

**October 12:** Surface activity peaks for the mimic glass lizard, a rare legless lizard associated with large pine flatwood tracts in our southeastern Coastal Plain.

**October 13-19:** National Wildlife Refuge Week. Visit a refuge you've never been to before, or contact your favorite one for listings of activities.

**October 14:** Yellow-bellied sapsuckers and other winter resident birds are returning to the Piedmont and Coastal Plain.

**October 15:** October-flower is in bloom.

**October 16:** Eastern red bats are mating. These common, solitary, tree-roosting bats typically mate on the ground.

**October 17:** Chicken turtles and eastern mud turtles begin hibernating.