



North Carolina
**WILDLIFE
FEDERATION**

Journal

WILD LIVES □ WILD PLACES

Spring 2021



A HIGH ROAD IN THE SMOKIES

Working for safe passage
for elk and other natives.

CONSERVATION AWARDS OPEN!

FLOUNDER FIASCO



Playing the Long Game

BY TIM GESTWICKI, NCWF CEO

Any business owner, regardless of the company's size, knows what ROI means and how critical it is to success. It means Return on Investment. A dollar spent brings what in return? How do you apply the old adage, "you have to spend money to make money?" For businesses, ROI is life or death. Smart money is used to invest in updated equipment and modernized technology to keep pace with competitors, to purchase supplies to be able to make whatever is sold, and to invest in employees for quality and a secure work force.

Similar choices are made in our daily lives, too, in ways both small and large. Do we keep patching a leaky roof and hope downpours don't ruin drywall or cause mold, or do we invest in long-term security by re-shingling a 40-year-old roof? Do we keep fixing a lemon of a car or invest in a new or newer used vehicle? Do we keep paying higher electricity bills or purchase a newer, more efficient hot water heater? Everyday choices. And these choices and decisions require that we balance immediate costs versus how much is saved over the course of our decisions. That's an ROI analysis. If we are savvy, and able to forecast with our calculations, usually the return we make saves us greatly in the long run.

As we put this *Journal* together the common theme is investments. Because investment works for conservation.

ROI business decisions are based on data, calculations, economics, and even science. In natural resource work, these are critical decision factors as well. Science, both economic and biological, provides us the data to make informed investments with finite dollars. Examples abound regarding wise spending decisions paying large dividends. Investing in clean water and healthy ecosystems are places where contributions now allowing reaping of long-term benefits. Fortunately, we are beginning to see proactive realizations by elected officials. Whether driven by the explosion of folks in parks, at boat ramps, and in campgrounds during the pandemic seeking outdoor respite, or the constant building back from constant hurricanes and storms, investing in natural resource infrastructure is taking hold.

Legislators are now taking seriously the need to invest in floodplain and wetland protections, flood area relocations, coastal habitat protections and climate resiliency programs. We applaud and will work to support legislation that will provide funding for flood resilience blueprints, local capacity, transportation resiliency, land and water conservation funding, and incentives for private landowners. These and other resilience tools and strategies will provide communities with the resources to plan for future flood events, pursue implementation funding, and deploy natural solutions to diminish the worsening impacts from severe events.

Investing in parks, gamelands, farmland, and lands for trails is smart business, too. Members of the legislature and the Governor are looking to invest significantly in these areas now. For every dollar invested into the state's natural resource funds, an additional three dollars is matched by granted land and water entities, as well as the ecological services and outdoor recreation dollars. That's an ROI we should all applaud.

Here at the North Carolina Wildlife Federation, we realize that the future of conservation resides with the next generations. That's why we investing heavily. Through our college scholarship program, now in its fifth decade, to our new outreach initiative called Academics Afield, and through our flagship youth engagement program, Great Outdoors University, we are putting in resources to ensure nature and wildlife have new, passionate voices.

We feature our collaborative work on wildlife crossings also in this *Journal* as we know those investments save wildlife and wild places. And as you'll read in our story on the Safe Passage initiative, they can save lives.

Nature cannot be controlled, but it can be harnessed in some ways, and in others left alone, to shore up its ability to perform valuable ecological services. A smart approach to investment ROI is to put nature to work, for our economy and our health and safety. We need to allow trees in the our public lands and elsewhere do their job sequestering carbon. Allow our river buffers and oyster beds to soak up sediment and pollutant runoff before it gets into our aquatic ecosystems. Allow freshwater mussels to filter out pollutants when vegetated buffers are overwhelmed. There are many examples of how supporting natural processes produces a fantastic ROI. Our wetlands and coastal marshes can soak up flood waters like a sponge. Sunlight can power our lives. Bees and butterflies will pollinate our crops. Given the stresses placed on nature by human populations, nature needs an assist.

This takes resources, but the cost of storm cleanup and rebuilding far exceeds the necessary funding of strategic expenditures that will make human and natural communities and recreational areas more resilient in the face of future storms. Additional investments simply bolster our natural resource infrastructure to the benefit of wildlife and humans alike.

Investing in the future of science-based wildlife conservation is a smart move, too. Your support and investment in our wildlife and habitat efforts returns healthy, diverse wildlife and habitats, now and for the future. One example of that is the recent recognition of the North Carolina Wildlife Federation as the recipient of The Wildlife Society's Achievement Award. You can read more about this honor in these pages, but it's another example of how your investment in the Federation is returning a fine dividend of hard work for the wildlife you love. **WE**

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

ABOUT THE COVER

Cover photograph: A black bear ventures out into the sun. / ©iStock.com / steverts. Contents photograph: Waiting for a bite / ©iStock.com / TonyLMoorePhoto. Other photos, unless noted, courtesy of NCWF.

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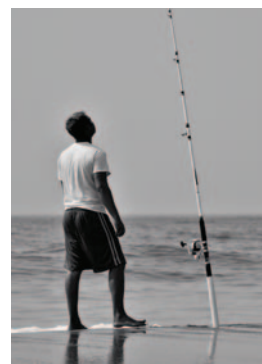
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North Carolina WILDLIFE FEDERATION **Journal** WILD LIVES □ WILD PLACES *Spring 2021*

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

FEATURES

- 2** 80,000 MILES OF DANGER
Wildlife run a gauntlet across North Carolina highways. Here's what conservationists are doing to help.
- 7** FLAT OUT WRONG
North Carolina's management of Southern Flounder is a failure and embarrassment.
- 8** GOVERNOR'S CONSERVATION ACHIEVEMENT AWARDS
Nominate a local hero!
- 12** SCHOOL OF THE WILD
A new twist on outdoor education.



DEPARTMENTS

INSIDE FRONT COVER / Pathways

PAGE 10 / Federation News

BACK COVER / The Season

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 healthy, bountiful and diverse flora and fauna that is valued by all its people, 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.

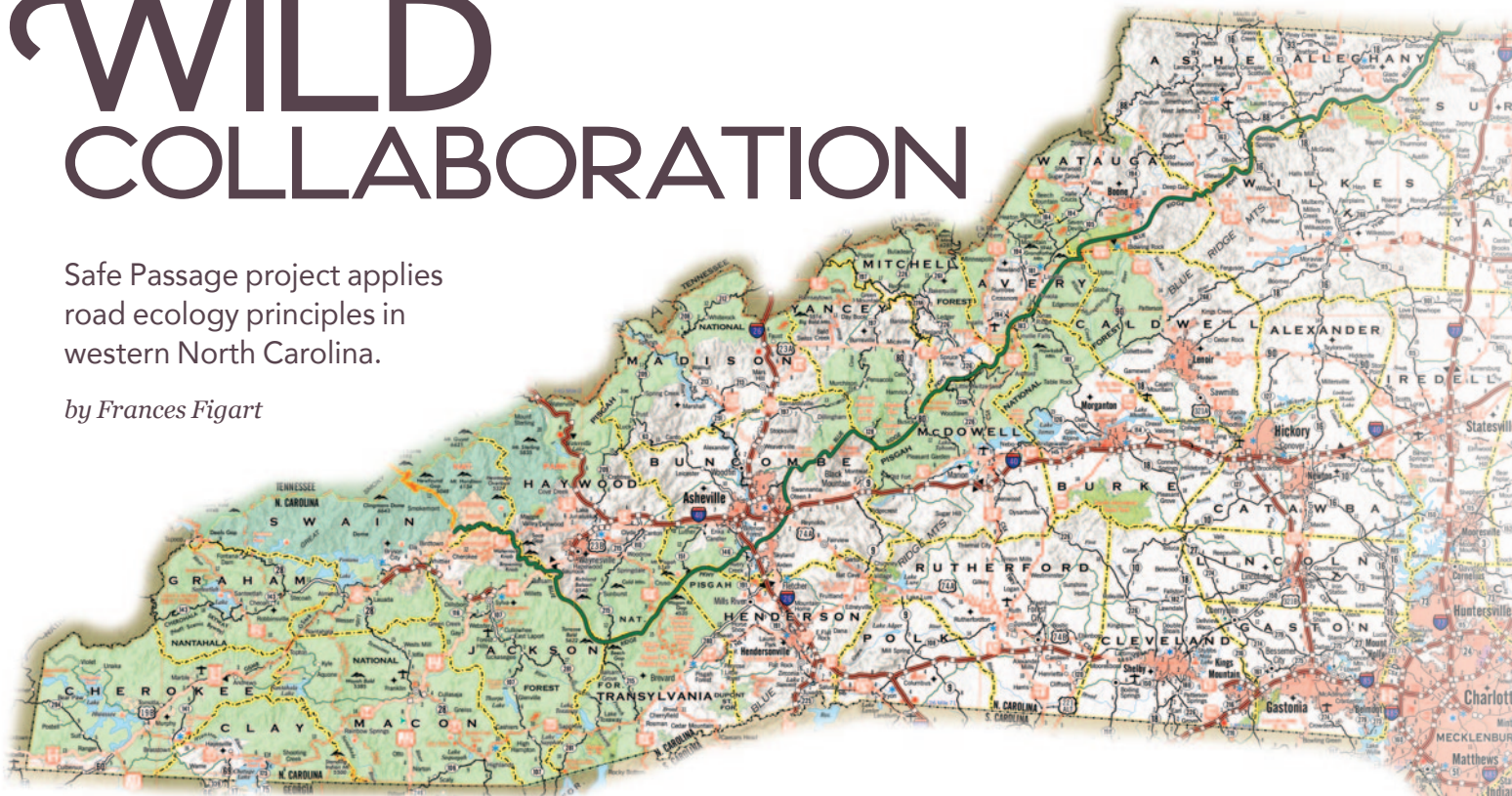
EXPERIENCE AND LEARN – Enhance and expand opportunities for youth and adults that foster awareness and appreciation of wildlife and the important role healthy habitat plays in sustaining wildlife and humanity.

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

WILD COLLABORATION

Safe Passage project applies road ecology principles in western North Carolina.

by Frances Figart

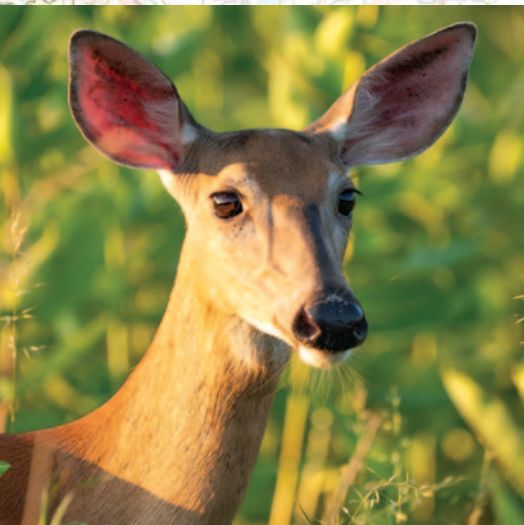


North Carolina wildlife survives and thrives despite having to contend with 80,000 miles of state-maintained highways. Roads crisscross the landscape where American black bear, white-tailed deer, and many other species still attempt to follow ancient wildlife corridors, imperiling both the animals and the humans who navigate them. According to a June 2020 N.C. Department of Transportation and Safety Division study, over the three-year period of 2017–2019, in North Carolina alone there were 56,868 wildlife-vehicle collisions, more than 2,800 human injuries, five human fatalities, and \$156.9 million in property damage.

In western North Carolina, roadkill of wildlife has reached a tipping point in a region where some 1,900 black bears and a dispersing herd of nearly 200 elk now move in and out of Great Smoky Mountains National Park, seeking mates, food, and shelter. To do so, they are often faced with a fraught decision: Where, when, and how to cross Interstate 40 in the Pigeon River Gorge. From September 2018 to December 2020, researchers tallied 140 elk, bear, and deer dead along the highway in the Pigeon River Gorge study area. That number is likely just the tip of the iceberg, as many animals hit on roads die far from the right-of-way and are never discovered.

“This highway was built during the 1960s without much consideration for wildlife or their movement patterns,” explains Dr. Liz Rutledge, director of wildlife resources at the North Carolina Wildlife Federation. “Development of wildlife-friendly solutions will require long-term strategizing and resources from departments of transportation, federal and state governments, and the public.”

A collaborative called *Safe Passage: The I-40 Pigeon River Gorge Wildlife Crossing Project* has been addressing the issue since early 2017. It’s a collection of nearly 20 federal, state, tribal, and non-governmental organizations specifically working to make this perilous 28-mile stretch of highway—20 miles in western North Carolina and eight miles in Tennessee—more permeable for wildlife and safer for drivers. NCWF plays a key role not only as a stakeholder, but also as one of six organizations comprising the Safe Passage Fund Coalition. These partners include The Conservation Fund, Defenders of Wildlife, Great Smoky Mountains Association, National Parks Conservation Association, and Wildlands Network.



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In the Pigeon River Gorge, NCWF partnered with Wildlands Network (WN) and National Parks Conservation Association (NPCA) to undertake two years of research funded by the Volgenau Foundation. Data are now being crunched from GPS collars used to track elk movements and 120 wildlife camera traps deployed over two years. That effort will allow scientists to make research-driven recommendations for North Carolina and Tennessee transportation officials as they improve several bridges on Interstate 40 over the next five years. Construction on the first of these bridge replacements may begin as early as fall of 2021 at the Harmon Den exit near the intersection with the Appalachian Trail. A herd of elk lives on both sides of the highway in this area.

Bear, deer, and elk are the focal species of study in the gorge because they create the greatest safety hazards for motorists, but researchers are simultaneously studying where and how many smaller species are attempting to cross the roadway.

ROAD ECOLOGY 101

The Safe Passage research is an example of road ecology, the study of how life is altered for both plants and animals when roads are nearby. Besides the risk of dying in attempts to cross, individual animals are disturbed by noise, light, and air pollution from roads near their homes. But highways create more insidious issues detrimental to entire species.

"Collisions may be road ecology's most obvious concern, but fragmentation is roadkill's pernicious twin," wrote Ben Goldfarb in *The Atlantic*. He demonstrated how roads are one of the largest causes of habitat fragmentation around the world

due to the fact that they carve up large landscapes where wildlife corridors had previously been unimpeded for millions of years. Now working on a book about the environmental impacts of roads, Goldfarb described roadkill-obsessed biologists counting carcasses back when the automobile industry hit its stride in the 1920s. But it wasn't until the late 1990s that Harvard professor Richard Forman coined the term "road ecology," and researchers began to study effects like the increased heart and respiratory rates of American black bears sizing up their crossing options along the I-40 right-of-way in the Pigeon River Gorge.

"Besides the immediate needs to improve animal and human safety, road mitigation is important for the survival of entire species," says Steve Goodman, NPCA's Volgenau-funded wildlife biologist conducting research in the gorge. "The highways crisscrossing America are separating into jigsaw pieces what used to be one large piece of contiguous landscape where animals were free to roam and travel large distances in search of food, shelter, and mates. Wildlife is so stressed by crossing some busy highways that they will soon stop trying to cross altogether. When this happens, the result is the barrier effect, which means animals are subdivided into increasingly smaller isolated populations that can no longer interact. When species can no longer migrate across roads to reach the resources they need, their reproductive and survival rates plummet. Thus, the fragmentation of wildlife habitat eventually leads to extinction of species—a global problem."

The big picture is that wildlife crossings alone cannot solve the wildlife mortality problem. As our world warms, habitat must also be protected from development and fragmentation.

SAFE PASSAGE COMMITMENT

Although the Safe Passage project is relatively new, it builds on similar collaborative efforts between N.C. Department of Transportation and the N.C. Wildlife Resources Commission. A biologist with WRC's Habitat Conservation Division, **Travis W. Wilson** is the agency's Eastern Department of Transportation habitat conservation coordinator. That's a mouthful, but to put it more simply, his role is to assess impacts from transportation projects and their effects on the fish and wildlife resources of North Carolina. Those tasks specifically include working with NCDOT, regulatory agencies, and other stakeholders in the planning, design, construction, and maintenance of wildlife passage structures to address habitat fragmentation and highway permeability issues for aquatic and terrestrial wildlife passage. While Wilson is primarily focused on the eastern half of North Carolina, his vast experience with wildlife crossings makes him a perfect candidate for inclusion in planning and discussions for wildlife crossing projects statewide, and he is a key stakeholder in Safe Passage: The I-40 Pigeon River Gorge Wildlife Crossing Project.

Q
A

How did you come to be involved in the Safe Passage collaborative in western North Carolina?

I have had a fair amount of involvement on wildlife crossing projects in North Carolina. There are a lot of lessons learned, every situation has its unique challenges, and, with that experience, I was asked to participate—first presenting some of the highlights from my region and then remaining onboard to participate in design review and technical committees.

Q
A

What is NCDOT's history with wildlife crossings and road ecology generally?

The first project that recognized the need for a wildlife crossing in North Carolina was on a new section of I-26 in Madison County in the early to mid-1990s. But the first true comprehensive approach was in Washington County in eastern North Carolina on a proposed new section of U.S. 64. It was in the late 1990s, about the same time as the construction of I-26, but much earlier in the planning stages for the U.S. 64 project. This allowed biologists with NCWRC to field evaluate and identify specific locations for wildlife crossing structures. Ultimately, three locations were identified, and the agreed-upon structures were designed to be similar to the underpass structures on I-75 in Florida. Construction began in the early 2000s and was completed in 2006.

Since that time, planning design and construction has resulted in several additional wildlife crossing structures: Three wildlife underpasses along I-140 in Brunswick County; one structure designed for reptiles and amphibian passage on a new location roadway that bisected two Carolina bays also in Brunswick County; and the newly constructed underpass on U.S. 17 in Jones County completed in 2020.

It is also important to note the next phase of U.S. 64 widening in Tyrell and Dare counties already has an agreed-on wildlife crossing plan. It was developed through years of collaboration and research funding from NCDOT to identify highway permeability needs and wildlife crossing structures including 11 overpasses and dozens of smaller structures. This highway project is currently not funded, but the groundwork has been completed for what would be the most comprehensive wildlife crossing project in North Carolina.

Q
A

What are some examples of North Carolina roads on which the wildlife mortality and the chance for safer crossings has already been analyzed and completed?

We have some monitoring research for U.S. 64 that was completed immediately post construction and we just completed one year of monitoring these same crossings.

That monitoring effort is still ongoing. Through that effort, however, we captured thousands of pictures documenting use by a wide range of species including black bear, white-tailed deer, bobcat, and several species of small mammals.

The U.S. 64 research funded by NCDOT in Tyrell and Dare counties highlighted wildlife mortality along that corridor, but that is just one side of the study and those crossings have not been constructed. In our earlier coordination with NCDOT, there is a plan to conduct post-construction monitoring of these crossings.

Q
A

As North Carolina continues to grow as a state, why is it important to make wildlife crossing work and road ecology considerations more and more commonplace?

As we know, the important part is "continues to grow." Taking off the biologist hat for a minute, a healthy economy and good quality of life will always be a primary desire for the citizens of North Carolina and a draw to those that are looking to move into the state. From the mountains to the coast, we have the most visited national park and a wildlife refuge with one of the highest black bear densities on the East Coast, with large river systems, state parks, and public lands in between. These natural resources are not just important to us as biologists but are also enjoyed by the public.

As the population grows, so does the need to expand infrastructure. New roads are needed; old roads need to be widened. At the same time, private land is developed, and habitat is lost or degraded. Without incorporating road ecology into a planning framework, wildlife corridors can be severed, leaving remnant fragments of habitat and increasing wildlife mortality. One issue I like to push on this topic is how important it is to preserve those habitats and corridors now, not after a road goes through them or is widened.

“Interstate 40 cuts Great Smoky Mountains National Park off from large public lands such as the Cherokee and Pisgah National Forests to the northeast,” says Christine Laporte, eastern program director of Wildlands Network. Laporte helps steer the Safe Passage Fund Coalition. “Projected movements of climate-driven species suggest there will eventually be a high concentration of animals migrating northward into the Appalachians from further south. Securing habitat and safe passage across roadways is imperative here in the Southern Appalachian Mountains and throughout the Eastern Wildway—an extensive wildlife corridor linking eastern Canada to the Gulf of Mexico.”

WN’s chief scientist, Ron Sutherland, began to strategize for ways to address the problem in the Pigeon River Gorge back in 2015, and now partners with NPCA to direct the gorge research. He defines habitat connectivity as the degree to which organisms are able to move freely across the landscape. “A wildlife corridor is the term we use for a defined movement pathway that—if protected or restored—would provide essential habitat connectivity for one or more species,” he says. “Naturally one of the best places to put wildlife crossings is where you have a wildlife corridor that gets cut off by a highway.”

Forest birds, reptiles, amphibians and small mammals are all at risk from vehicle collisions and the habitat fragmentation caused by roads. But colliding with a white-tailed deer, black bear, or elk causes the most property damage and safety risk for motorists. The cost of a deer-vehicle collision averages around \$6,000; running into an elk can cost upwards of \$17,000. Collision-related costs include not only those associated with vehicle damage and insurance but also dollars spent on human injury, illness, and mortality resulting from collisions, as well as costs related to highway delays and the lost value of wildlife associated with hunting. All these add up to roughly \$12 billion in the U.S. annually.

And those costs, points out NCWF’s Rutledge, “are mostly based on human safety parameters and do not begin to touch on the high values associated with biological conservation or the economic value of wildlife to a local or regional economy.”

Road ecologists, conservation biologists, and wildlife managers prescribe a buffet of wildlife crossing structures coupled with roadside fencing as the best method of increasing road permeability and habitat connectivity as well as decreasing collisions. But in the steep vertical terrain of the Pigeon River Gorge, the best solution is not always as obvious or as easy to implement as in more open landscapes.

“Compared to out West, there is a relatively small amount of federally protected land in the East, and the Smokies and surrounding National Forest lands make up a substantial portion of it,” says NPCA’s Goodman. “Because of high-quality habitats and protections in the park, core populations of black bear and elk—and many other species—serve as source populations for dispersal into surrounding lands. Regionally and nationally, this area is widely considered to be of high conservation value and comprised of key habitat corridors and associated hubs that are critical for the long-term flow of

BY THE NUMBERS



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\$6,000 average cost of a deer-vehicle collision



56,868
number of reported
North Carolina
wildlife-vehicle
collisions (2017-2019)

26,000
annual human
injuries due to
wildlife collisions
on U.S. roads



1 to 2 million
large animals killed annually on U.S. roads



\$12 billion annual
property damage due
to wildlife collisions on
U.S. roads

200 annual human
fatalities due to wildlife
collisions on U.S. roads



both plants and animals. In addition to reducing wildlife road mortality and improving public safety, our work will help ensure ecosystem resiliency across the broader landscape, particularly in the face of environmental changes and increased fluctuations due to climate change. Thus, another justification, and perhaps the most important for our work, is its eventual value of improving wildlife connectivity across the larger fragmented landscape.”

Bill Holman, North Carolina’s state director of The Conservation Fund, says the Safe Passage project dovetails with his organization’s long-term work on fragmentation issues in western North Carolina. “The Fund has worked closely with the North Carolina Wildlife Resources Commission to create a new wildlife management area for elk and other wildlife in Haywood County that adjoins the park,” he says. “Our watershed protection work in Maggie Valley also provides a corridor for elk to move from the Smokies into the Plott Balsams and Great Balsams to the south. We’re also able to acquire key properties in North Carolina and Tennessee that wildlife can use to migrate from the Smokies across the Pigeon River Gorge; we handed off one conservation acquisition at Wilkins Creek to Southern Appalachian Highlands Conservancy a couple of years ago. Having healthy populations of elk, bear, and other wildlife draws visitors to western North Carolina and east Tennessee and sustains local economies.”

COMING SOON TO NC?

Successful wildlife crossings have been built in France, the Netherlands, Switzerland, and Germany. They’ve been built along the Trans-Canada Highway in Banff, Alberta, and in various connected lands throughout Montana, Massachusetts, Florida, and Southern California. Texas and Utah recently joined many other states where species large and small enjoy safe passage over busy highways via land bridges that can, in themselves, become tourism draws.

Will North Carolina be next? It’s a question on the minds of many now that Safe Passage: The I-40 Pigeon River Gorge Wildlife Crossing Project is becoming known.

“As habitat fragmentation continues and vehicle traffic increases, it becomes increasingly important to prioritize connectivity for wildlife to safely traverse roadways to fulfill their biological needs and reduce risk to drivers associated with wildlife–vehicle collisions,” says Rutledge. “The Safe Passage project’s focus on larger species creates educational opportunities to discuss the effects that both fragmentation and roadways have on smaller species, including aquatics, so we know that numerous other species will benefit from this collaborative work as well.”

Potential solutions to the problem of wildlife mortality in western North Carolina might include new box culverts designed for wildlife, open-span bridges, bridge extensions, or underpasses to help large ungulates such as elk cross more easily. Vegetated wildlife overpasses that, when used in combination with nine-foot-tall fencing, have proven to help the greatest variety of species cross safely and to drastically reduce wildlife–vehicle collisions.

“Safe Passage is a bold initiative to provide just that—safe passage—for people and wildlife across an iconic Appalachian landscape,” said Ben Prater, southeast program director for Defenders of Wildlife. “It addresses a critical need for safe transportation and animal welfare. It’s our challenge to find the financial resources, meet the logistical challenges of construction, secure community buy-in, and attract the political goodwill to make it a success.”

Increasing highway permeability in the Pigeon River Gorge will be a giant step toward improving animal population health. But this effort will represent only the first project in a series of much-needed regional mitigation efforts. The I-40 corridor could serve as a model for other interstate highways that also disrupt the Southern and Central Appalachian corridor as well as the Eastern Wildway.

“It is only in the last few years that changing attitudes have allowed room for acceptance of designs and expense to facilitate wildlife movement,” says The Wilderness Society’s Hugh Irwin. “This highlights the importance of the long view—it takes time for the right climate to exist for grand and ambitious plans like Safe Passage to find the right environment to thrive.” **WF**

Frances Figart is the editor of Smokies Life magazine and creative services director for the Great Smoky Mountains Association. She also chairs the Outreach Committee of the Safe Passage Fund Coalition. Find her new book A Search for Safe Passage at SmokiesInformation.org.



VISIT SmokiesSafePassage.org
to learn more about the Safe Passage
project or make a donation to fund
wildlife-crossing structures and fencing
in the Pigeon River Gorge.



WILDLANDS NETWORK AND NATIONAL PARKS CONSERVATION ASSOCIATION

TOTAL FAILURE



The (mis)management of Southern Flounder in North Carolina has eviscerated populations of one of the coast's most iconic fish.

North Carolina's management of its Southern Flounder populations has failed. This iconic fish—beloved for its sporting properties on hook and line, and its classic appearance on fried seafood plates for decades—is in a near freefall. Conflicts of interest have stonewalled science-based remedies to achieve sustainable harvests for all sectors, commercial anglers and recreational fishers alike. Now, the unwieldy management process includes a hierarchical chain-of-command procedure between the Department of Environmental Quality (DEQ) to the Division of Marine Fisheries (DMF) to the Marine Fisheries Commission (MFC) that has inherent delays built into the administrative structure. The sad, yet entirely avoidable, result: North Carolina's Southern Flounder is the poster fish for failed management.

The Fisheries Reform Act of 1997 (FRA) requires the creation and implementation of fishery management plans (FMPs) to manage and protect stocks of important species. The FRA requires that an FMP for a species such as Southern Flounder end overfishing of that species within two years, and achieve a sustainable harvest within 10 years, but does not include any consequences for failure to meet those timelines.

And that's why we are where we are.

STEP-BY-STEP: A TIMELINE OF FAILURE

2005: Southern Flounder FMP adopted with a goal to rebuild the Spawning Stock Biomass to the target biomass in 10 years and achieve sustainable harvest as required under the FRA.

Four years later...

2009: DMF determines the stock is still overfished and the original FMP has failed. *Four years later...*

2013: Amendment 1 to the FMP approved by MFC. Target reductions in the commercial fishery remain unmet and Amendment 1 fails to end overfishing or achieve sustainable harvest. *One year later...*

2014: New stock assessment shows even worse mortality rates for the Southern Flounder fishery, indicating no progress in rebuilding the stocks since 2005. *One year later...*

2015: MFC votes to develop a supplement to the FMP to further reduce harvest up to 60 percent. Having fallen short of achieving sustainable harvest by 2015, the 10-year-old FMP fails. *One year later...*

2016: In October, N.C. Fisheries Association files a lawsuit, and a judge orders a temporary injunction to any new regulations until a new Amendment is developed. *Two years later...*

2019: Amendment 2 to the FMP is developed to again phase-in an end to overfishing and achieve sustainable harvest by a new Department of Environmental Quality-extended deadline of 2028. DMF recommends a 62 percent reduction, inconsistent with the stock assessment. *One year later...*

2020: MFC adopts a 72 percent reduction. The harvest reduction in 2019 was only 34 percent, failing to meet the required reductions. Amendment 2 fails in the same way as Amendment 1 failed to end overfishing or achieve a sustainable harvest.

SIXTEEN YEARS LATER AND HERE WE ARE AGAIN

Amendment 3 is now being developed, but has excluded best management principles with ineffective measures being contemplated.

The original FMP for Southern Flounder was adopted in 2005 and amended twice—in 2013 and 2019—but landings from this fishery have continued to decline for half a decade past the original deadline for a sustainable harvest in 2015 set by the FRA. The 80 percent reduction in commercial landings from 1997 to 2019 doesn't take into account bycatch mortality from trawling, use of nets, and releases, and therefore indicates that the North Carolina Southern Flounder fishery is in crisis. The FMP for this species has been an abject failure, necessitating immediate biological remedies, comprehensive data analysis, and accountability to save this fishery for all. **NC**

2021 GOVERNOR'S CONSERVATION ACHIEVEMENT AWARDS

WE'RE LOOKING FOR CONSERVATION HEROES!



North Carolina **WILDLIFE FEDERATION**

Each year the North Carolina Wildlife Federation presents the prestigious Governor's Conservation Achievement Awards, an effort to honor individuals, governmental bodies, organizations, and others who have exhibited an unwavering commitment to conservation in North Carolina. These are the highest natural resource honors given in the state. By recognizing, publicizing, and honoring these conservation leaders— young and old, professional and volunteer—the North Carolina Wildlife Federation hopes to inspire all North Carolinians to take a more active role in protecting the natural resources of our state.

The nomination period for the Governor's Conservation Achievement Awards is open through July 5, 2021. These awards are presented each year at a gala banquet. Award recipients receive a handsome statuette and certificate. On the opposite page is the official nomination blank. Additional forms are available by request. For more details or to download a form, go to www.ncwf.org/programs/awards.

CONSERVATIONIST *of the Year*

Overall outstanding effort and achievement in any field of natural resources conservation.

WILDLIFE CONSERVATIONIST *of the Year*

Accomplishments in the management, study, or restoration of wildlife, fisheries, or habitat.

SPORTSMAN OR SPORTSWOMAN *of the Year*

Exemplary efforts by an individual to encourage good sportsmanship and/or outdoor ethics.

LAND CONSERVATIONIST *of the Year*

Outstanding effort by individual, organization, or agency in the arena of land conservation, such as private or public land acquisitions, management, or conservation.

WATER CONSERVATIONIST *of the Year*

Outstanding effort by individual, organization, or agency in the arena of water conservation, such as water pollution control, stream/river protections, wetlands and/or estuarine protections, or aquatic wildlife conservation.

FOREST CONSERVATIONIST *of the Year*

Outstanding effort by individual, organization, or agency in the arena of forest conservation or the conservation of forest wildlife. marine resources conservationist of the Year Outstanding effort by individual, organization, or agency in the conservation of marine resources.

ENVIRONMENTAL EDUCATOR *of the Year*

Outstanding effort by individual or organization to advance environmental education in the classroom or the public sphere.

YOUTH CONSERVATIONIST *of the Year*

Outstanding conservation effort by a person under the age of 18.

CONSERVATION ORGANIZATION *of the Year*

Outstanding accomplishment by an organization in affecting a particular issue during the year, or for raising awareness about conservation and/or wildlife habitat.

LEGISLATOR *of the Year*

Outstanding effort by a member of the North Carolina legislature in support of conservation.

BUSINESS CONSERVATIONIST *of the Year*

Outstanding effort by any firm, business, or industry that has displayed an unwavering commitment to conservation or the public's ability to enjoy natural resources.

NATURAL RESOURCES AGENCY OR SCIENTIST *of the Year*

Outstanding effort by any local, state, or national agency responsible for managing natural resources, OR by an individual working for governmental agencies, educational institutions, or related enterprise.

WILDLIFE VOLUNTEER *of the Year*

Outstanding effort by a citizen volunteer in the service of North Carolina's wildlife and wild places.

PUBLIC LANDS CONSERVATIONIST *of the Year*

Outstanding effort by a citizen volunteer or non-profit organization in the service or protection of North Carolina's public lands.

NCWF CHAPTER *of the Year*

Outstanding effort by member chapter in one or more of the following areas: wildlife habitat, environmental education, youth participation, and/or community involvement in conservation issues.

AFFILIATE *of the Year*

Outstanding support effort by NCWF affiliate.

OFFICIAL NOMINATION FORM

To make a nomination, send one copy of this form, with all supporting attachments and a resume of achievements by e-mail attachment to awards@ncwf.org along with supporting documentation or submit a hard copy by mail to North Carolina Wildlife Federation, ATTN: Awards Committee, P.O. Box 10626, Raleigh, NC 27605. Deadline for receiving applications is July 5, 2021. Please print or type all data below. This form may be duplicated.

Nominee _____

Complete address _____

Daytime phone number _____ Email address _____

Award category* _____

(Nominees may be nominated for more than one category, but send a separate nomination blank for each award category. Multiple copies of supporting materials are not necessary.)

Nomination made by _____

Complete address _____

Daytime phone number _____

NOMINATION INSTRUCTIONS

1. Fill out Official Nomination Form completely.
2. Attach a resume of achievements or nomination essay explaining why the nominee deserves the award. Attach nominee's resume if available, and information about the nominee's affiliations, past recognitions, and other references for substantiation. Full documentation is needed by the Awards Committee—the only information the Awards Committee will have is what you provide. Please be particular about the specific acts on which the nomination is based.
3. Deadline for receiving nominations is July 5, 2021.

*The Awards Committee reserves the right to place nominations in the appropriate categories as the case may arise. In the case of insufficient nominations in any category the Awards Committee reserves the right not to name a category winner.



Oh, Snap!



2020 SCENES OF NC WINNER / KATHRYN GREVEN

CALLING ALL AMATEUR PHOTOGRAPHERS! The Federation is sponsoring its third annual Wildlife Photography Contest, with open submissions from May 1 to July 31. Did you catch an Eastern tiger swallowtail on a tulip tree or an osprey diving over the water to catch its meal? How about a memorable sunset vista in the Blue Ridge Mountains or a picturesque sunrise on Cape Hatteras? Maybe you caught a wow-worthy photo of

your child while fly-fishing in a local stream? Submit these memorable photos to share with North Carolinians and be one of five winners in our highly popular contest.

Images should highlight the beauty of North Carolina's nature and wildlife, whether you find that in your own backyard or the larger backyard of North Carolina's natural landscapes and creatures. Categories include "Carolina Critters," "People in Nature," and "Scenes of North Carolina." And new this year is a "Trail Camera" category to submit images taken from your stationary camera traps.

Entry donations start at \$15 for 12 photos (3 images maximum per category) and all proceeds support wildlife habitat conservation and restoration in North Carolina. Photographs submitted in 2019 and 2020 have been featured on NCWF's website, social media accounts, quarterly journals, postcards, bookmarks and more.

Visit ncwf.org to submit your photos electronically. There will be one adult winner per category plus one overall youth winner (13 years of age and younger). Good luck and get snapping!

3rd annual
photo
contest

SUBMIT YOUR ENTRIES

May 1 to July 31



Scholarship Nominations Open

FOR MORE THAN 50 YEARS, the NCWF scholarship program has helped North Carolina students pursue their dreams of studying and working in the conservation field. Many award recipients go on to achieve significant success in the field, making a difference for wildlife and habitat.

Qualifying students who are committed to environmental and natural resource conservation or management are encouraged to apply. The Federation's scholarships are highly sought after, and always competitive, with candidates at every level of higher education.

To qualify, one must be enrolled full-time at an accredited North Carolina college or university in a two- or four-year program with a major in the areas of wildlife, fisheries, forestry, conservation, or environmental studies. NCWF will provide up to seven grants, which may include one \$2,500 Conservation Leadership grant for a student of exemplary merit.

Scholarship applications and supporting documents must be submitted online by June 28, 2021 to be considered. Visit ncwf.org/scholarships to learn more or apply. Applications with required documentation and inquiries may be directed to Sarah Hollis at sarah@ncwf.org.

North Carolina Wildlife Federation Recognized with National Award

NCWF HAS RECEIVED one of the highest honors awarded to organizations dedicated to wildlife and conservation. The Wildlife Society (TWS) recently notified NCWF that it had been selected as this year's recipient of The Wildlife Society's Group Achievement Award. "This award recognizes an organization or group that accomplishes outstanding achievements to benefit wildlife consistent with advancing the objectives of The Wildlife Society," said The Wildlife Society's CEO, Ed Thompson. "Congratulations!"

The Federation has worked to protect, conserve and restore North Carolina wildlife and habitat since 1945 using science to guide its policy and programmatic work. Science is the basis for TWS, as well. Founded in 1937, the international network of nearly 10,000 leaders in wildlife science, management, and

conservation is dedicated to excellence in wildlife stewardship that works to inspire, empower, and enable wildlife professionals to sustain wildlife populations and habitats through science-based management and conservation.

"This honor is particularly special as it comes from the professional association of wildlife scientists and biologists," states NCWF chairman, John Hairr. "We are proud of our science-based work and rightly share this award with our wildlife team of volunteers, supporters, community wildlife chapters, board and staff."

Whether the target is marine fisheries, pollinators, wildlife disease, habitat restoration, endangered species, climate change, or sustainability of all natural resources, science has been the guiding

force for NCWF's work. Viewed as a reliable, credible resource for elected officials, agency partners, other non-profit groups, and natural resource commissions, NCWF maintains a data-based approach to meeting its conservation objectives and finding solutions to complex issues.

"As a former national president of TWS, I know how competitive this award can be, and the prestige it carries," says Dr. Bob Brown a former chair and board member of NCWF. "I am particularly pleased we received this well-deserved recognition and know it will buoy our organization to double down further on science as its needed now more than ever."

NCWF will receive its award at TWS's annual conference in November.

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



ALBEMARLE CONSERVATION
AND WILDLIFE CHAPTER



BULL CITY
TRAILBLAZERS



CATAWBA RIVER
WILDLIFE COALITION



CHARLOTTE
WILDLIFE STEWARDS



CONCORD WILDLIFE
ALLIANCE



EEDRC (ENFIELD ECONOMIC
DEVELOPMENT AND
REVITALIZATION COMMISSION)



HAWK (HABITAT AND
WILDLIFE KEEPERS)



INNER BANKS
WILDLIFE



ISLAND WILDLIFE



LAKE JAMES AREA WILDLIFE
AND NATURE SOCIETY



LAKE NORMAN WILDLIFE
CONSERVATIONISTS



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



MOUNTAIN WILD!



NEUSE RIVER HAWKS
(WAKE FOREST)



NEW BERN
WILDLIFE CHAPTER



PAWS (GASTON COUNTY
PIEDMONT AREA
WILDLIFE STEWARDS)



SOUTH WAKE
CONSERVATIONISTS



SOUTHWEST RENEWAL
FOUNDATION



UNION COUNTY
WILDLIFE CHAPTER

What's the Butterfly Highway Buzz?

The perils facing pollinators are not a secret. For years, scientists have documented a decline in pollinators as a result of habitat loss, pesticide use, climate change, and more. The Butterfly Highway is a statewide conservation restoration initiative of the North Carolina Wildlife Federation that aims to restore and conserve native pollinator habitats. From a balcony to a several acre field, there is an opportunity to support pollinators near you.

The most common pollinators in North Carolina are bees, butterflies, moths, wasps, flies, beetles, and hummingbirds. Despite the varying types of pollinators, they all need the same things that humans need in order to survive: food, water, cover, and places to raise young.

From a container garden to farmland, some of the easiest native plants to grow for pollinators are native flowers. Black-eyed Susan (*Rudbeckia spp.*), milkweed (*Asclepias spp.*), goldenrod (*Solidago spp.*) and asters (*Symphyotrichum spp.*) are among some of the best plants for pollinators and the easiest to grow. Not only do they provide floral resources, but many pollinators use these plants as larval host plants.

Whether you have full sun or full shade, there is a native plant that can provide habitat for pollinators. Our native redbud (*Cercis canadensis*) naturally grows in partial shade, but will also provide a plethora of nectar for early emerging pollinators in the spring and is the host plant for as many as 12 different butterfly and moth species.

Become part of the Butterfly Highway today by taking the free pledge to support pollinators at ncwf.org. If you feel inspired to start your own butterfly garden, a native seed packet is available for purchase on our website and is filled with milkweed, black-eyed Susan, coneflower, and more. Education is vital to saving pollinators. You can purchase an educational sign to put up in your registered Butterfly Highway site for your friends and neighbors to read and learn how to support pollinators in their own backyard.

NEUSE RIVER HAWKS AT
THE HOLDING PARK RAIN
GARDEN IN WAKE FOREST,
SITE OF A LARGE MILKWEED
RESTORATION PLOT. ►



◀ SOUTH WAKE CONSERVATIONISTS PLANTING HUNDREDS OF NATIVE TREES, SHRUBS AND POLLINATOR PLANTS



started in a safe way. I always supported hunting for conservation purposes. I love the outdoors and wildlife. As someone who works with livestock and has taken meat science classes, I appreciate how animals are used for protein. I want to learn how to hunt and process the animals I hunt so I can use them for food and other products. I aspire to be a rural veterinarian and I think learning how to hunt and use a gun are valuable skills for the setting I wish to live in one day. Additionally, I wish to find an outlet where I can go outside beyond the work I do at farms. I think it would be good for me physically and emotionally. Seeing that programs like these exists has really sparked me to finally pursue an interest I've never had the resources or knowledge to pursue before."

Academics Afield helps bridge the gap between students who have a heritage and history of hunting, and those who don't. "I have

NCFW is partnering with N.C. State University, the N.C. Wildlife Resources Commission, and other conservation groups and Wake County Wildlife Club to launch Academics Afield in North Carolina. Academics Afield was founded by Georgia Wildlife Federation in 2019 to build upon current Recruitment, Retention, and Reactivation (R3) programming and introduce college students from nontraditional backgrounds to hunting and shooting sports. Research shows that many people are sorely disconnected from nature. A recent national study found that, although many people have an enduring interest in nature, their ability and opportunities to pursue those nature-based interests are increasingly limited and inadequate. In a college setting, program participants are more likely to come from non-hunting backgrounds and fall outside of the current demographics of hunters than participants from other hunter recruitment programs. The year-long Academics Afield program offers R3 wildlife-related curriculum and quality mentored hunting and shooting sports opportunities to participants, while evaluating their experiences. Academics Afield reduces barriers for college students from these non-traditional backgrounds and many of the participants have unique reasons for getting involved.

"Upon coming to college and studying animal science as well as interning in rural areas, I am now very interested in learning how to hunt," says Maddie Kuwada. "But I don't know how to get

always had a really deep connection with nature and a strong interest in wildlife conservation," says Tanner Hamerling. "I've always been the one to pick up and investigate any strange animal bones that were found. I firmly believe in the importance of hunters, and a lot of people in the College of Agriculture and Life Sciences have a strong passion for hunting. I would love to be able to relate to them more. Additionally, the program would be a great way for me learn about all the intricacies of hunting and tracking. I'm from a disadvantaged background in terms of demographics. I grew up in Miami, Florida, and was never able to see much of the 'Great Outdoors.' Even though I had this huge passion for exploring and seeing nature, I was limited by my surroundings and coming from a place that did not have many hunters. I have this huge interest in hunting and learning more about wildlife conservation, but I have never had the opportunity until now to harness it. I would be grate-

ful to have the opportunity to participate in this program and would love to be a part of a new first generation of hunters."

Participants will gain extensive safety training and shooting experience, and will learn why hunting, conservation, and ethics matter. They will be provided in-field, mentored hunting experiences by peer instructors, which will continue into 2022. If you

would like to learn more, contact

Dr. Liz Rutledge, NCWF Director of
Wildlife Resources liz@ncwf.org



POSITIVE CHANGE STARTS *with* ONE PERSON

Charlotte resident, Bill Staton, used to see a man with his dog on their daily walks, picking up trash. “He never made a fuss about it,” Bill said.

This one man’s actions had a lasting impact on Bill. For the past 27 years, Bill has picked up trash during his walks in the morning and when he comes home. “My goal is to pick up at least 3 ounces of debris on each walk. Some days I don’t get much of anything but most days there’s trash bags and beer bottles everywhere. I’ll bring it home and recycle what I can,” Bill said.

Doing a good deed daily has been a motto Bill has prescribed to since his days as a Boy Scout. However, it is also just part of his DNA. Bill has always found joy in helping people and doesn’t shy away from risky situations. He has saved lives using the Heimlich and CPR more than once. He doesn’t see himself as a hero though, just a guy who wants to make a difference. “The whole point is to do little things for people because it goes a long way,” Bill said.

This past year, with the global pandemic and its far-reaching impacts, Bill and Mary Staton, realized that life is precious. “We really have to be good stewards of it and nature is part of that life,” Bill said. Therefore, he supports NCWF.

“Mary and I give to causes that we believe in,” Bill said. Through the money management firm, Novare Capital Management, Bill and Mary, are matching a grant from the Appalachian Trail Conservancy to clean-up litter on and around Fontana Lake. With their support, 100 volunteers will come together over three days to remove 50,000 pounds of litter and trash from the lake and its islands.

Bill has always appreciated nature but respects it even more now because of all the waste and destruction he sees happening all around him. “Our country just wastes so much,” Bill said, and many buy more than they can use. “It impacts everything, especially the environment. A little bit of rethinking, we can make our lives a little simpler and have positive impact on the planet.”

This goes back to why he picks up trash on his walks and hopes others will join him. “Every time you take a walk, take a plastic bag with you and you will almost invariably see litter,” Bill said, and unfortunately, you don’t have to go out of your way to do so. “It is not that difficult to find. People are throwing it out of car windows. But if everybody picks up a little bit, it can make a huge dent.”



“A little bit of rethinking, we can make our lives a little simpler and have positive impact on the planet.”

—BILL STATON

GINGER BARGER



Your Legacy protects their future.

Having a will is important to ensure your wishes are fulfilled as well as to care for that which you love — family, friends, pets, and even conservation. We want to make it easy for you to take action and have partnered with FreeWill to give you a free, online tool to help you write your will in 20 minutes or less. This is the most powerful way to protect the people you love, and can even be a bold step to ensure your legacy continues to protect, conserve, and restore wildlife and habitat of North Carolina—without spending a cent today.

Get started at FreeWill.com/NCWF or contact Dom Canavarro, NCWF Director of Development, at (919) 239-3361 or dom@ncwf.org, and he’ll walk you through the process and answer any questions you have. Already have a will and committed a gift to NCWF? We’d love to know, would enjoy thanking you, and ensuring your wishes are acted upon.



THE Season

Jeff Beane's GUIDE TO
NATURAL NORTH CAROLINA

North Carolina Wildlife Federation
1024 Washington Street
Raleigh, NC 27605

Non-Profit Org.
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PPCO

MAY

May 23: World Turtle Day—a great day for celebrating North Carolina's 21 native species! Purple pitcher-plants are in bloom.

May 25: Brood X of periodical cicadas will be emerging in a few of our western counties, including most likely Cherokee, Surry, and Wilkes. Spider lilies are in bloom in the Coastal Plain.

May 25: Coal skinks are nesting in the Mountains and Foothills. Like most of our skinks, these uncommon and poorly known lizards attend their eggs during incubation.

May 26: The second Supermoon of the year appears tonight. This full moon was known by early Native Americans as the Flower Moon, Corn Planting Moon, or Milk Moon. Loggerhead sea turtles have begun nesting.

May 28: Snapping turtles are nesting. Larvae of our official state salamander—the marbled salamander—are transforming; juveniles disperse from ephemeral wetlands into terrestrial habitats on rainy nights.

May 29: National Learn About Composting Day. Cecropia moths are emerging and mating. This single-brooded species is our largest moth. Fragrant white water-lily is in bloom.

May 30: Wild turkey and ruffed grouse eggs are hatching.

May 31: Our state reptile—the eastern box turtle—has begun nesting. Some females may nest more than once in a season. Several dusky salamander species are also nesting. Mountain laurel is in bloom.

JUNE

June 1: Venus flytraps are in bloom in the southeastern Coastal Plain.

June 2: Galax is in bloom in the Mountains and western Piedmont.

June 4: Flame azalea, columbine, and fire pink are in bloom in the Mountains. Peak flight period for Belle's Sanddragon—one of our rarer dragonflies—so far, known only from a few of the large Carolina bay lakes in Bladen County.

June 5: World Environment Day—a day to be especially aware of critical environmental issues (there are many).

June 6: Great-spangled fritillaries are flying. Sampson's snakeroot is blooming.

June 7: Grass pink orchid and orange milkwort are in bloom in Coastal Plain savannas.

June 8: Rosy maple moths are flying.

June 11: Peak flight period for King's hairstreak, an uncommon butterfly found mostly in our Sandhills and southern Coastal Plain.

June 12: Japanese beetles are emerging.

June 13: Bluehead chubs are spawning. The large nests of piled-up stones constructed by these abundant, stream-dwelling minnows are used by several other minnow species.

June 14: Rosinweed is in bloom. Ten-lined June beetles are flying.

June 15: Spotted salamander larvae are transforming; juveniles disperse into terrestrial habitats on rainy nights.

June 16: Gray's lilies are in bloom in the Mountains. Carolina gopher frog tadpoles and tiger salamander larvae are transforming in the Sandhills and Coastal Plain.

June 17: Five-lined, southeastern five-lined, and broadhead skinks are nesting. Unlike most reptiles, these lizards remain with their eggs, guarding them until they hatch.

June 19: Peak bloom for rhododendron and mountain laurel in the Mountains. Good places to admire this floral show include Roan Mountain in Mitchell County and Craggy Gardens on the Blue Ridge Parkway in Buncombe County.

June 22: Sourwood is in bloom.

June 23: Eastern box turtle nesting peaks. Sandhills thistle, Appalachian mountain-mint, and Nash's meadow-beauty are in bloom.

June 24: Sticky false-foxglove, sandhill dayflower, and spurred butterfly pea are blooming. Lark sparrows are nesting. These sparrows are rare and occasional breeders in our state; most breeding records are from military drop zones and other large, grassy areas in the Sandhills, where they nest on the ground.

June 25: National Catfish Day—North Carolina has nearly 20 species to celebrate. Chickasaw plums are ripe. Redlip shiners and mountain redbelly dace are spawning in mountain streams. Eastern milkpea is in bloom. Loggerhead shrikes are fledging.

June 26: National Wildlife Federation's Great American Backyard Campout. Take a kid (or adult) camping! Visit <http://www.nwf.org/Great-American-Campout.aspx> for more information. It's also National Canoe Day—get a canoe onto your favorite stream or pond if you can.

June 27: Green June beetles begin to emerge. Large emergences usually follow a rain that softens the soil so that the adults can dig their way to the surface.

June 29: Green salamanders are nesting.

JULY

July 1: Black skimmers are nesting on our more remote beaches and barrier islands. Fringed meadow-beauty is blooming.

July 2: Ox beetles are flying.

July 3: Northern bobwhite eggs are hatching.

July 4: St. John's wort is in bloom. Blackberries are ripe. Celebrate our country's birthday with a cobbler (but leave some berries for all the wild things that need them).

July 5: Velvet ants, also known as cow-killers, are mating. These colorful insects are not true ants, but terrestrial wasps. The wingless females have very potent stings, but sting only if handled (as many a curious child has learned the hard way).

July 6: Eastern cicada killers are mating. These large, impressive wasps are often needlessly feared, especially during their mating aggregations, but they are harmless to humans (although not to cicadas) unless handled.

July 7: Summer runs of white perch make for good fishing on the Chowan River. Fourangle rose gentian is in bloom.

July 8: Bog turtles are nesting in mountain and foothill wetlands. Unlike most turtles, this rare species does not excavate a nest in soil, but conceals its small egg clutch in a moss, grass, or sedge tussock.