



North Carolina  
**WILDLIFE  
FEDERATION**

# Journal

WILD LIVES □ WILD PLACES

Spring 2016



## **BUTTERFLY HIGHWAY** The WILDEST Road Trip in North Carolina

### **Nominate a Hero**



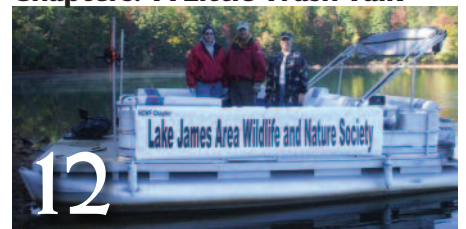
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## MY North Carolina! YOUR North Carolina?

BY TIM GESTWICKI, NCWF CEO

I really appreciate this *Journal*, as it is packed full of positive news about the proactive work accomplished by your North Carolina Wildlife Federation. Within these pages we show how each of us can contribute to the greater good, and there are tons of options. Our exciting Butterfly Highway is addressing the tragic declines of monarch butterfly and other pollinating species and offering ways for each of us to help support these elements of our shared wildlife heritage. You'll also read about the public-private partnership that will address the sicklefin redhorse species as it rebounds in North Carolina, another hands-on, real-time, real-world conservation success we're excited to begin. And there are student scholarships to award and nominations for conservation heroes to work through and recent successes in coastal Carolina to celebrate. So you bet I'm excited about the news in this report. There is much to applaud and much to latch onto for furthering the conservation work to which we are committed.

While sitting in my turkey blind this spring, I looked around at all the early blooming wildflowers and the movements of squirrels and butterflies, and to be honest, I nearly forget to keep an eye peeled for wild turkeys. It's been this way all my life.

My childhood was spent playing in the creek and coming home at dark for supper. I loved Daylight Savings when I could bound back out for more playtime outdoors. I actually used to catch crayfish in my backyard Charlotte creek, and bless my parents, we'd cook them up in the kitchen! I recall fishing at the coast and catching tons of spot and croaker. We just knew our beach trips would end with a fish dinner. I grew up fishing and being able to eat the fish I caught in Piedmont reservoirs and farm ponds.

And now, as an adult, I realize that none of this happened by accident. This was all possible because there were leaders and unencumbered agencies looking out for the best interests of the State and its citizens, rather than special interests, political divides and exploitations. I was fortunate to live in a state where bold, visionary actions led to protections of public lands and public waters. I grew up in an environment that stressed environmental education.

That's the North Carolina I grew up in, and that I love, and why I am blessed to work with an organization ever more committed to 'righting the ship' and correcting the wayward course our State has taken these past few years. I'm not blaming all issues of discontent on elected officials, nor am I naïve enough to think that change doesn't occur. But I contend that recent rabid changes and rollbacks are not the path to a sustainable future, especially in the face of estimates that show North Carolina's population continuing to explode.

This is the time to quit shenanigans and get back to the principles that made North Carolina the envy of the South, principles that led folks from the North and Midwest to flock to our beaches, mountains and Piedmont regions. My North Carolina was a beacon of hope of how to do it right. We balanced great economic opportunity with landscapes and outdoor pursuits touted by tourist development boards and chambers of commerce across the state.

Is this the North Carolina you loved, knew and cherished? Do you still recognize it? If not, maybe a thorough review of the current candidates' stances, positions and past votes on public lands, conservation investments, science, and adherence to the state constitution would be time well spent ahead of the votes we will each be able to cast in early November. As this *Journal* shows, each of us can make a difference by nominating someone for a Conservation Achievement award, sharing the news about our scholarship opportunities with a student, or participating in a local wildlife chapter event. Just imagine what we could do if we all did a little by simply planting a patch of milkweed for monarchs. Collectively, we could bring back this migrating wonder from the brink of collapse.

And just imagine what we could do at the ballot box as birders, hunters, paddlers, anglers, hikers, campers, gardeners and farmers—all seeking to elect those with a 'commitment to stewardship' as our common denominator. That was North Carolina, not so long ago. And working together, we can make sure it's not just a memory. <sup>NC</sup>WF



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# North Carolina WILDLIFE Federation Journal

WILD LIVES □ WILD PLACES

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## FEATURES

### 2 ON A WING AND A PRAYER

NCWF's new pollinator program gives butterflies a big boost.

### 8 QUEST FOR HEROES

Conservation Awards nominations now open.

## DEPARTMENTS

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## NORTH CAROLINA WILDLIFE FEDERATION

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

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

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

**GOALS** Toward that vision, we will:

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

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

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

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



# THE BUTTERFLY HIGHWAY

A ROADMAP FOR POLLINATOR AND WILDLIFE CONSERVATION

by Angel Hjarding / Director, Pollinator and Wildlife Habitat Programs



When thinking about wildlife in North Carolina, it is easy to overlook some of our smallest species. Bees, butterflies, moths, and other insects are taken for granted because they often work out of sight and behind the scenes. Even though we don't see the work they do, insects are essential components of the wildlife food chain. Apples, blackberries, and other fruits of the forest and field rely on pollinators to produce fruit that wildlife such as bears and other mammals rely on during summer and fall. Birds will only feed their young soft caterpillars and other fleshy insects as critical protein. Without pollinators and other insects, all wildlife in North Carolina will be challenged to find enough food to survive. Pollinators are facing increasing pressures due to loss of habitat, pesticide use, and conventional farming practices.

To address these issues, the North Carolina Wildlife Federation has launched its newest campaign to support pollinators and wildlife in North Carolina, *The Butterfly Highway: A Roadmap for Pollinator and Wildlife Conservation*. The Butterfly Highway is a statewide community-based environmental restoration initiative with the aim of restoring native pollinator habitats to areas impacted by urbanization across North Carolina. From backyard "Pollinator Pitstops" to large-scale roadside habitat restoration, the project is creating a network of native flowering plants to support butterflies, bees, birds, and other pollen and nectar dependent wildlife.





Tiger Swallowtail



Monarch



Red-Spotted Purple



Viceroy



Fritillary



Painted Lady



Northern Crescent

Anyone can participate in the Butterfly Highway. From apartment balconies to multi acre farms, no space is too small or too large to provide habitat for pollinators. We are looking for pitstops and larger stretches of habitat to come together and form our network of support for butterflies and other pollinators. There is no cost to register your habitat and become a part of our highway.

North Carolina is home to approximately 170 species of butterflies, 1,200 species of moths, and 500 species of native bees. Through this initiative, we aim to enhance existing habitats to support these pollinators as well as restore areas to create new pollinator and wildlife habitat across the state. It's an exciting and positive way to bring attention to the plight of our valued pollinators and their critical role in the web of life.

#### ► STATE OF THE POLLINATORS ◄

Declines in monarch butterfly and honeybee populations have made national news headlines and brought a lot of attention to the troubles facing our insect pollinators. The iconic monarch butterfly has faced a significant population decline, and in the winter of 2014-2015 reached an all-time low in their overwintering locations in Mexico. Monarch butterflies were once commonly seen in the spring and fall migration through North Carolina, but now sightings have become rarer due to the declining population and available habitat. This decline has been attributed to numerous factors including: forest loss in overwintering areas, loss of breeding habitat due to agricultural practices, urbanization, increased pesticide use and the effects of climate change. Adult monarchs rely on a variety of nectar plants to provide energy for their long migration to Mexico as well as milkweed to lay their eggs on, as milkweed is the only plant that monarch caterpillars will eat. Without appropriate flower and plant resources, monarchs will not be able to survive.

Species of wild bees and bumblebees have also declined over the last 50 years due to many of the same issues that are impacting monarchs and other pollinators. Managed honeybee populations have been experiencing similar issues in both the United States and Europe that have been attributed to disease, loss of habitat, pesticide use and colony collapse disorder.

There are several species of butterfly in North Carolina that are considered to be threatened or endangered due to loss of host plant habitat. The Saint Francis satyr (*Neonympha mitchellii francisci*) is on the federal endangered species list with only one population known to exist in the sandhills in Cumberland and Hoke Counties. The frosted elfin (*Callophrys irus*) is not under federal protection but is listed as endangered

by several states on the East Coast. There is a local population on the coast on North Carolina, *C. i. arsee*. The biggest threat to this species is the loss of its host plant, lupine. There are 13 species of bumble bees native to North Carolina listed as threatened. These species include rusty patch bumble bee (*Bombus affinis*), yellow-banded bumble bee (*Bombus terricola*) and cuckoo bee (*Epeoloides pilosula*).

### ► POLLINATORS AND AGRICULTURE ◀

Pollinators are critical to the \$78 billion agricultural economy of North Carolina. More than 70 percent of crops either require insect pollination or have a higher production because of pollinator insect visits. It is estimated that native bees are responsible for pollinating almost \$3.07 billion of U.S.-produced fruits and vegetables. Several studies have shown that wild bees are more frequent visitors than managed honeybees to certain crops such as strawberries, watermelon, tomatoes, muskmelons and peppers. Pollinators can also impact certain commodity crops. Increased bee activity in canola fields has been shown to increase seed set and it is estimated that yield and profit can be maximized if 30 percent of farmland is left uncultivated.

Agriculture is an important component of the Butterfly Highway campaign. Demands for insect pollination of crops has continued to increase despite the significant losses in both managed honeybee and native bee populations. Experts fear that without intervention, we may be nearing a "pollination crisis" that could result in catastrophic events such as crop failure due to inadequate pollination

resources. Despite the challenges, agriculture can make a huge impact towards protecting pollinators by providing native pollinator plant enhancements in hedge rows and meadows planted alongside crops.

### ► BACKYARD HABITATS ◀

Urban gardens have the potential to provide considerable benefits to wildlife. As rural habitat quality decreases, urban backyard refuges become increasingly important for native biodiversity and wildlife. Dense urban neighborhoods with both single family and multi-family homes have been shown to support bee communities and pollination services as long as there are diverse and abundant mix of flowering plants available.

Backyard gardens are also important habitats for monarchs. A study on the impact of backyard gardens on monarchs found that there was a significant increase in monarch butterfly eggs in backyard butterfly gardens compared to host plants in natural areas. Their results suggest that backyard gardens planted to support monarchs could serve as part of a mitigation strategy to combat the loss of critical monarch habitat.

These impacts aren't just limited to backyard gardens but can also be seen in container gardens planted with appropriate nectar and pollen producing plants. A study of New York City balcony gardens found that containers planted with purple cone flower could attract bees from hives located several blocks away.

### ► POLLINATORS, ROADSIDES, AND RIGHT OF WAYS ◀

Roads and highways are known to fragment and destroy native habitat for wildlife. Roadside plantings are often planted to manage pollution and erosion but there is a lot of potential for roadsides to contribute to pollinator conservation. Planting native vegetation along roadsides has the potential to provide beneficial habitat for insects as well as reduce maintenance costs for management.

Species diversity in roadway verges has been strongly correlated with the abundance of nectar plants. A study showed that roadside prairie restoration had a positive effect on the abundance and diversity of habitat sensitive butterflies and in some cases increased the diversity five times what was observed in areas with non-native grasses. Butterfly mortality was also decreased in areas with restored prairie when compared to areas with non-native grass and weeds.

Mortality rates of monarchs have been observed to decrease on roadways with the highest rate of traffic and speed. At speeds of 55 mph and greater the butterflies were observed to be caught in a wind draft from the cars and "catapulted" over them. Another study found that mortality rates due to automobiles was insignificant when compared to natural causes. And butterflies were found to be less likely to cross the road when there was a vegetation corridor that provided nectar than in areas where there were no nectar plants available.

A Swedish study examined butterfly species assemblages in semi-natural pastures and power line right of ways. They found that vegetation height and amount of flowering plants had the most influence on diversity and abundance. The authors concluded that power line right of ways were an overlooked habitat that has great importance to butterfly communities. Butterfly

### Threats to North Carolina Pollinators



- Native pollinator habitat loss due to changes in agriculture practices
- Non-native and invasive plants that do not provide adequate pollen and nectar resources
- Landscape fragmentation and habitat loss due to urbanization
- Parasites and diseases
- Overuse of pesticides and fungicides





## THE BUTTERFLY HIGHWAY

A ROADMAP FOR POLLINATOR  
& WILDLIFE CONSERVATION

This property provides food and habitat for native insects and wildlife that help pollinate and protect North Carolina's plant and food sources. This site has been designated a Pollinator Friendly Habitat by the North Carolina Wildlife Federation and is part of *The Butterfly Highway* connecting green spaces and pollinator gardens throughout our State.



North Carolina Wildlife Federation  
ncwf.org

Register your Pollinator Pitstop habitat, and order seed packets and Butterfly Highway signs at [www.butterflyhighway.org](http://www.butterflyhighway.org)

### How Can I Join the Butterfly Highway?

There is no fee to register your Pollinator Pitstop habitat at [www.butterflyhighway.org](http://www.butterflyhighway.org).

When designing your habitat, keep these elements in mind:

- ▶ **Size:** There is no minimum size required as long as the appropriate plants and resources are provided. Even an apartment balcony can provide habitat for many pollinators.
- ▶ **Location:** Pollinators and the plants that support them need lots of sun. The site should include an area that receives at least 6 hours of sun every day.
- ▶ **Water:** Most pollinators get the water they need from nectar but butterflies do love puddling in a butterfly spa!
- ▶ **Shelter:** Plants should be planted close together, but not crowded, to provide protection from pests and predators.
- ▶ **Place to raise young:** Native bees typically build their nests in the ground and require open patches of soil. Leave space in your garden free of mulch and debris to provide this essential bee nesting habitat. Butterflies lay their eggs on trees and herbaceous plants. Certain species have very specific requirements for plants, for example the monarch butterfly caterpillar will only eat the leaves of milkweed plants.
- ▶ **Food source:** Nectar plants provide an essential food source for butterflies, hummingbirds and other pollinators. It is important to provide plants that bloom from early spring to late fall to provide adequate food for breeding and migration. It is also recommended to provide a variety of plants in different colors, shapes and heights that may be attractive to a diversity of pollinators. Your garden should include at least 3 nectar plants that are native to your region.
- ▶ **Sustainable gardening practices:** Many pollinators are insects and are vulnerable to the effects of insecticides. It is recommended to use organic gardening practices to reduce these effects. This includes eliminating chemical pesticides, not treating your yard with a chemical mosquito barrier and using native plants that have not been treated with neonicotinoids.

### Gear Up!

Order seed and Butterfly Highway signs to get started.

One seed packet will cover an area up to 25 square feet. Identify a site that receives full sun and prepare area by clearing away all grass and weeds. Spread seeds evenly over soil and use hand to gently press into ground. Do not cover seeds with mulch, straw, or soil. Seeds packets are \$5. Butterfly Highway signs are \$25.

Both can be purchased at [www.butterflyhighway.org](http://www.butterflyhighway.org)

Seed mix includes both perennial and annual plants.

**PERENNIALS** ▶ Common yarrow • Common milkweed • Butterfly milkweed • Smooth blue aster • Greater tickseed • Goldenmane tickseed • Whorled tickseed • Purple coneflower • Joe Pye Weed • Oxeye sunflower • Blazing star/Spiked gay feather • Wild bergamot • Blackeyed susan • Roughleaf goldenrod • Ohio spiderwort • New York Ironweed. **ANNUALS** ▶ Indian blanket • Partridge pea • Crimson clover



abundance and species richness was highest in power line corridors with short or medium height vegetation. This study concluded that creating a diversity of habitats that include a variety of plant heights and types would be the most effective method for butterfly conservation.

### ► IMPORTANCE OF NATIVE PLANTS TO POLLINATORS ◀

Non-native ornamental plants are favored by landscapers and homeowners and are increasingly used in suburban landscapes. They are not typically considered a threat to biodiversity, as most are ornamental and are not considered invasive. Nonetheless, there has been a large-scale replacement of native vegetation with non-native species, which now dominate vegetation in millions of acres in urban and suburban areas. While these ornamentals may be a beautiful enhancement to a garden, they provide limited resources to pollinators. Native pollinator plants that provide nectar and pollen resources as well as those that are host plants are the preferred plants to enhance and create new habitat.

Host plants are plants that certain species of butterflies and moths will only lay their eggs on. Butterfly caterpillars can be picky eaters and some will only eat one type of plant. So adults will only lay eggs on the preferred plants for that species. An example of this is the monarch butterfly and milkweed plants. Other species such as the eastern tiger swallowtail, the North Carolina state butterfly, have a diversity of host plants such as

black willow, red maple, and spicebush. Adult butterflies are not as picky as their young and prefer a variety of native plants to nectar from. If you want to attract monarchs to your garden, then you need to plant a variety of nectar plants in addition to milkweed.

Bees are not nearly as picky as butterflies and will be attracted to any garden that provides plants with nectar and pollen resources for them to collect. So by providing a quality habitat for butterflies, you also provide one for bees. This is important for preserving the biological diversity of pollinators in North Carolina, but it also provides an extremely valuable benefit to agriculture, from backyard vegetable gardens to large-scale commercial crops. Many of our crops require pollination to produce fruit and vegetables. By providing habitat that attracts pollinators, you also provide essential pollination for your garden and farm.

### ► THE BUTTERFLY HIGHWAY—GET INVOLVED! ◀

The Butterfly Highway began in 2014, with several Charlotte communities that wanted to beautify their environment by planting native butterfly gardens. Through the Butterfly Highway, these communities have transformed community gardens, backyard gardens, public spaces and park fragments into new pollinator and wildlife habitats. The Butterfly Highway has also provided capacity for communities to participate in a community-based citizen science project that monitors butterflies and bumble bees.

## *Plant It and They Will Come—a Food Web to Guide Butterfly Plantings*

Plant these species if you want to attract specific pollinators.

Hackberry *Celtis laevigata* (tree) if you want ► American Snout, Mourning Cloak, Question Mark, Hackberry Emperor, Tawny Emperor  
 Black willow *Salix nigra* (tree) if you want ► Eastern Tiger Swallowtail, Mourning Cloak, Red Spotted Purple, Viceroy  
 Spicebush *Lindera benzoin* (shrub) if you want ► Spicebush Swallowtail, Eastern Tiger Swallowtail, Palamedes Swallowtail  
 Passionflower *Passiflora incarnata* (vine) if you want ► Gulf Fritillary, Variegated Fritillary, Zebra Swallowtail  
 New England Aster *Aster novae-angliae* (wildflower) if you want ► Pearl Crescent  
 Partridge pea *Chamaecrista fasciculata* (Wildflower) if you want ► Cloudless Sulpher, Little Yellow, Sleepy Orange



BLACK WILLOW

PASSIONFLOWER

NEW ENGLAND ASTER





## Check Out Our Partners


NCWF has partnered with community organizations, businesses, and various government institutions to create large scale habitat restoration.

- ▶ In the fall of 2015, Piedmont Natural Gas seeded two acres of its property with a North Carolina native meadow seed mix. These sites are experimental and will be used to determine the feasibility of additional restoration projects on Piedmont Natural Gas owned sites and right of ways. One of the sites for this project is located at a facility in Huntersville, and the other located on a right of way adjacent to a residential neighborhood in Charlotte. The residential project was done in partnership with the community organization.
- ▶ Mecklenburg County Park and Recreation was an early adopter of the Butterfly Highway. Gardens were installed at 17 parks, recreation centers and senior centers in 2015. Additional projects are scheduled for 2016 including several urban parks and two acres of restored meadow on county owned and managed land.
- ▶ A locally owned real estate company in Charlotte, Honeybee Real Estate, is launching a new program this spring aimed at encouraging neighborhoods to become more pollinator friendly. Pollinate Your Property Community Challenge ([www.pollinateyourproperty.com](http://www.pollinateyourproperty.com)) will be a six-month competition to get residents to register their gardens as a part of the Butterfly Highway. Each month they will host an event focused on pollinator education and the neighborhood with the most registrations will get a special recognition at a celebration party in August.
- ▶ The Hornets Nest Girl Scout Council partnered with NCWF to restore two acres of meadow at the Dale Earnhardt Environmental Leadership Campus at Oak Springs in Statesville. The meadow site is located on land that was previously used for sorghum farming and is adjacent to the parking area for the camp. This will also create an opportunity to include monitoring of the meadow as part of the environmental science curriculum at the camp.
- ▶ This past fall an honors biology class at UNC-Greensboro, led by Ann Somers, focused on service learning opportunities to connect the students to the natural world. One of these projects included planting two “no mow” zones on campus that will provide both a new home for pollinators as well as reduce labor for the university grounds crew. Both of these sites have been registered on the Butterfly Highway.
- ▶ Ernst Conservation Seed Company has been an invaluable partner in helping NCWF to curate a custom seed mix that is primarily North Carolina native pollinator-friendly perennial plants. This mix is available in seed packets for use in your home garden and includes seeds for asters, tickseed, milkweed, purple coneflower, New York Ironweed, Joe Pye weed, and partridge pea. There is also a NCWF native meadow mix available that includes wildflowers plus native grasses to support a host of wildlife in addition to pollinators. The optimum time to plant these seed mixes is in the fall, September-December, as perennials need a period of cold stratification before they can germinate and bloom.

## NCWF Chapter Projects

The Butterfly Highway has been a great way for chapters to engage with new audiences that are concerned about monarchs, bees and other pollinators. It is also serving as a way to re-engage members with Certified Wildlife Habitats and encourage them to emphasize supporting pollinators in their habitats. The Butterfly Highway is not intended as a replacement for Certified Wildlife Habitats but as a way to re-energize these habitats and reach a new audience for wildlife habitats. Chapters have found many ways to get on the Butterfly Highway.

- ▶ The CROWN chapter in Charlotte is working with schools that have Certified Schoolyard Habitats to bring butterfly curriculum into Butterfly Highway garden habitats. This spring they plan to do a Butterfly Highway garden at McClintock Middle School where the chapter also holds monthly meetings.
- ▶ Concord Wildlife Alliance planted 1,000 pollinator plants with the staff of Frank Liske Park to create an erosion control and water retention ditch along areas that are impacted by storm water run-off.
- ▶ Lake Norman Wildlife Conservationists planted a pollinator garden at Robbins Park in Cornelius. They plan to reclaim an area of grass this fall and replace it with native meadow plants.
- ▶ The Lake James Area Wildlife and Nature Society planted a Butterfly Highway garden at the Linville Overlook at Lake James State Park. NCWF is continuing to work with the chapter and the park on additional projects for this spring and fall that will result in almost five acres of land being restored to meadow and native pollinator gardens. This will include areas near the Paddy's Creek area and a two-acre drain field.

Other chapters have purchased milkweed and other native plants for spring plant sales, used native seed packets as giveaways, and featured Butterfly Highway garden builds as a part of their chapter activities. 



# *We're looking for* **CONSERVATION HEROES!** **2016 Governor's Conservation Achievement Awards**



## **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 June 30, 2016. 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](http://www.ncwf.org).

### **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 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.

### **ENVIRONMENTAL EDUCATOR of the Year**

Outstanding environmental education effort by an individual or organization.

### **YOUTH CONSERVATIONIST of the Year**

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

### **CONSERVATION COMMUNICATOR of the Year**

Outstanding effort within communications profession to create public awareness of wildlife and natural resources or to examine a particular related issue.

### **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.

### **MUNICIPAL CONSERVATIONIST of the Year**

Outstanding conservation effort by any federal, state, or local government entity, including efforts to aid the public's ability to enjoy natural resources.

### **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.

### **HUNTER SAFETY EDUCATION**

#### **INSTRUCTOR/ORGANIZATION of the Year**

Outstanding accomplishment by an individual or organization in the state's Hunter Safety Program.

### **NATURAL RESOURCES AGENCY of the Year**

Outstanding effort by any local, state, or national agency responsible for managing natural resources.

### **NATURAL RESOURCES SCIENTIST of the Year**

Outstanding scientific effort 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.

### **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, to the North Carolina Wildlife Federation, ATTN: Awards Committee, P.O. Box 10626, Raleigh, NC 27605. Deadline for receiving applications is June 30, 2016. Please print or type all data below. This form may be duplicated.

Nominee \_\_\_\_\_

Complete 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 June 30, 2016.

*\*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.*



# NCWF Aids with Sicklefin Redhorse Conservation



MARK CANTRELL

The sicklefin redhorse is a rare species of fish in the sucker family that is native to the Little Tennessee and Hiwassee rivers in western North Carolina and northwestern Georgia. It is a candidate for listing under the federal Endangered Species Act.

As an alternative to listing the fish, several entities, including the N.C. Wildlife Resources Commission, U.S. Fish & Wildlife Service, Georgia Department of Natural Resources, Eastern Band of the Cherokee Nation, Tennessee Valley Authority and Duke Energy, have entered into a Candidate Conservation Agreement. Under this agreement the partners will develop and undertake conservation measures to restore and expand populations of the fish in order to eliminate the need for listing. Duke Energy and TVA will each contribute \$200,000 to fund the project over the next decade. The North Carolina Wildlife Federation will administer the fund.

An important conservation measure will include annually collecting and fertilizing sicklefin eggs from the Little Tennessee, Oconaluftee, Tuckasegee, and Hiwassee rivers. The eggs will be hatched and reared at facilities operated by USFWS

and Conservation Fisheries, Inc. Young fish from these eggs will be stocked into North Carolina and Georgia streams to augment or reestablish populations.

In addition to stocking fish, several other conservation actions will help to enhance sicklefin populations. Duke Energy and TVA will manage reservoir levels and dam releases to decrease negative impacts and increase positive impacts to the fish, especially during critical spawning periods. The Natural Resources Conservation Service and several watershed groups will work to conserve and improve physical stream habitats. The N.C. Wildlife Resources Commission will manage Needmore Game Lands along the Little Tennessee River to restore sicklefin habitat.

The partnership's efforts will be evaluated by periodically surveying and assessing the sicklefin redhorse's distribution, abundance, and status. Success in this effort should preclude the listing of the species and the numerous restrictions on other uses of affected waters that usually accompany listing.

## Neuse River Striped Bass

A recent report by the N.C. Wildlife Resources Commission indicates that the population of striped bass in the Neuse River is at a low level and is unlikely to increase from stocking of additional fish. Two possible causes for this have been identified as excessive fishing mortality and poor reproduction due to genetic issues.

The genetic issue centers on the genetic differences that have been found between the original Neuse River striped bass and the separate Roanoke River population. For several years prior to knowing that there was a genetic distinction, Roanoke River fish were used as the source population for stocking the Neuse River. No one knows what, if any, significance the genetic differences might entail. For example, certain genes could code for properties of the eggs that make those from the Neuse River more adapted to conditions in that river; or they could code for something as benign as minor coloration differences of the stomach lining. The U.S. Fish & Wildlife Service, which rears and stocks the striped bass being put into Neuse River, now only uses eggs taken from Neuse River fish. However, adults from whom the eggs are taken are likely to be striped bass stocked into the Neuse years ago from the Roanoke River.

The other possible cause is excessive fishing mortality. The WRC study estimated mortality rates from the recreational and commercial fisheries as well as natural mortality, and found a large unexplained mortality that could not be attributed to fish merely leaving the river and going elsewhere. The magnitude of the mortality was enough to make it unlikely that the population could be sustained without annual stocking. The source of the unexplained mortality is probably the commercial or recreational fishery, or both. Since good estimates are available for legal commercial landings and the recreational harvest, the additional mortality is likely due to illegal harvest or high discard losses.

The Federation has made recommendations for conservation measures that could be employed until the causes of reduced natural reproduction and excessive mortality can be better identified. Those recommendations include that only striped bass from the native Neuse River stock be used as brood fish for subsequent stockings in the river, to the extent possible, and that additional rules be developed and enacted to reduce striped bass mortalities in the recreational and commercial fisheries. Such measures need to be employed immediately by management agencies to maintain a sustainable population of striped bass in the Neuse River.



## Scholarships for Wildlife Study

The Wildlife Federation is again seeking to identify and provide scholarship grants to students enrolled and attending an accredited North Carolina college or university full-time.

The NCWF scholarship program has a five-decade history, and to date has helped hundreds of North Carolina students pursue their dreams of studying and working in the conservation field. These students are majoring in the areas of wildlife, fisheries, forestry, conservation or environmental science.

We are anxious to recognize deserving students and are soliciting applications for scholarship aid. Go to [www.ncwf.org](http://www.ncwf.org) to download an application. Additional information can also be requested by emailing Autumn Chappell of the NCWF at [autumn@ncwf.org](mailto:autumn@ncwf.org).

Need is a factor, and a good record of scholarship and extra-curricular involvement is considered. The Federation will provide up to seven grants to both undergraduate and graduate students, awarded as seven \$1,000 grants or six \$1,000 grant and one \$2,500 Conservation Leadership grant awarded to a student of exemplary merit.



## Elk and Alligator Management a State Focus

At the February meeting the Wildlife Resources Commission considered action on proposals presented at public hearings this year to include limited permit harvests in management plans for newly introduced elk and expanding alligator populations. Implementing decisions on both proposals were qualified through adoption of resolutions to guide further action by the agency.

### Alligator:

In the case of the proposed alligator season, the Commission considered strong opposition to setting an alligator harvest season from 781 individuals and eight conservation organizations and decided to establish a North Carolina Alligator Task Force to develop an alligator management plan to include:

- Evaluation of all available biological information
- Identification of research needs about population levels and distribution, habitat requirements, and public attitudes and opinions
- Identification of areas of overpopulation with recommendations for biological and social strategies for management in these areas
- Recommendations for geographical management zones
- Recommendations concerning limiting and allocating harvest in areas where sustainable populations exist consistent with favorable social conditions, and
- Recommendations for a framework to gather public input for the North Carolina Alligator Management Plan.

The North Carolina Wildlife Federation was one of the eight conservation organizations opposing an open season for alligators at this point in time. We look forward to participation with the Commission and other groups in development of the Alligator Management Plan.

### Elk:

In regard to the proposal to implement a limited, carefully controlled hunting season for elk in the western mountains of North Carolina, NCWF supported the concept of such a season as consistent with sound management of this renewable resource. Newly reintroduced elk into ancestral range of the Great Smoky Mountains National Park about 15 years ago has been successful in establishing a permanent population of elk that is growing in number and expanding across suitable habitat in western North Carolina. Movement of elk from their initial stocking inside the Park has created conflicts with some private landowners over destructive activities of elk regarding fences, crops, and livestock. Some elk have been killed by landowners in response to this damage and some have been killed in collisions with vehicles.

NCWF strongly favors legal harvest of surplus or destructive elk over depredation killing by landowners. Instead of a harvest season, the Commission opted to approve only the concept and framework of the season and deferred the actual implementation according to the following Resolution: The Commission will delay issuance of any elk hunting permits until sustainability and allocation of harvest among state, federal, and tribal lands are determined. The executive director shall collaborate with the Eastern Band Cherokee Indians and other stakeholders to determine and recommend sustainable annual harvest goals for the population and geo-political allocation of the harvest.

The Federation will continue to support a harvest season consistent with the premises set forth by the Resolution. NCWF also urges the Commission to take all available actions, including regulatory and enforcement action, to discourage killing elk by individuals under the depredation law. Specifically, anyone killing an elk for depredation reasons must be required to report the kill and surrender the animal within 24 hours.

## CHECK OUT OUR CHAPTERS!

For more information on how you can participate, contact Christopher North at [chris@ncwf.org](mailto:chris@ncwf.org).



Capital Chapter



Concord Wildlife Alliance



CROWN (Charlotte Reconnecting Ourselves With Nature)



PAWS (Gaston County Piedmont Area Wildlife Stewards)



HAWK (Habitat and Wildlife Keepers)



Lake James Area Wildlife and Nature Society



Lake Norman Wildlife Conservationists



Mountain Island Lake Wildlife Stewards



Mountain WILD



PACT (Protecting, Advocating and Conserving)



PAWC (Pamlico Albemarle Wildlife Conservationists)



River Hawks (Wake Forest)



South Wake Conservationists



The Albemarle Conservation and Wildlife Chapter

## NOT JUST TRASH TALKING


Are you missing a tire? How about a TV? Volunteers organized by NCWF's Lake James Area Wildlife and Nature Society chapter removed 181 tires, a washing machine, a television set, multiple large pieces of Styrofoam, a dilapidated dock, and a large metal top of an old boat from in or around the lake, including Lake James' islands. Chapter members filled more than two and a half 40-yard dumpsters with about 1,000 bags of trash during the annual waterways clean up.

Americans discard over 250 million tons of trash each year. Much of this garbage ends up in our landfills, but an inexcusable amount makes its way into the natural environment. These items can be detrimental to our local wildlife. Birds, fish, mammals, and reptiles can be injured or killed by the trash we throw away.

Birds get lead poisoning by swallowing small fishing weights. Containers get stuck on the heads of mammals or on their paws while they are looking for food. Fishing line wraps around turtles, birds, fish, otters, and beavers, and even broken glass cuts the feet of mammals roaming the shorelines for water. Marine species such as sea turtles, seals, sea lions, whales, dolphins, and seabirds are known to ingest or get entangled in litter.

Lake Norman is the largest man-made body of freshwater in the state, with 520 miles of shoreline and islands that are heaven for wildlife but are also very popular places for boaters and lake users. Volunteers from the Lake Norman Wildlife Conservationists chapter are expanding the Island Habitat Program to monitor and keep islands clean from litter all year long. The group also is erecting nesting boxes for various priority species, and planting shoreline shrubs to provide food sources for wildlife and erosion control.

There are more than 100 islands in the Catawba River system alone, and thanks to these two chapters, conservation awareness is being improved, and waterways are being cleaned and managed for wildlife.

Picking up litter is just one example of NCWF chapters making a difference for wildlife—and having a lot of fun along the way. It's an easy way to get involved with like-minded people in your community. For more information on connecting with our chapters, drop a note to Chris North at [chris@ncwf.org](mailto:chris@ncwf.org). 



VOLUNTEERS REMOVED 181 TIRES, A WASHING MACHINE, A TV, MULTIPLE LARGE PIECES OF STYROFOAM, A DILAPIDATED DOCK, A LARGE METAL TOP OF AN OLD BOAT AND MORE THAN 1,000 BAGS OF TRASH FROM IN AND AROUND LAKE JAMES.





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

# for Wildlife

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

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

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

# Charlie Shaw Society



NCWRC

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



## Current Members

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

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

Jennifer Alligood  
Tom Angelo  
Avery Bates  
John Benbow  
Robert Berton  
John Bishop  
Frank Bragg  
Robert Brown  
Mollie Brugh  
Pinkney Bynum  
Susan Cameron  
Glenn Campbell  
Maurice and Addria Capps  
John Crutchfield  
Jerry Davis  
Leah Dey  
Roger and Sally Dick  
James Doyle

Scott and Ann Fletcher  
Paul Foos  
John Fuller  
Carol Gestwicki  
Tim and Karen Gestwicki  
Stephen Graf  
John Hairr  
Fred Harris  
Daniel Harris  
Susan Harris Hileman  
Robin Hayes  
Phil Hinton  
John Hislop  
Brigid Hogan  
Carol Buie and Jay Jackson  
William & Deborah Jarman  
Steve Jester  
David Knight

Harry Lancaster and Jane Henderson  
Christa Milne  
Richard and Julia Mode  
Patrick O'Leary  
Perry Patterson  
Karen Redfern and Joye Thomas  
Mark and Jane Ritchie  
John and Holly Robbins  
Rick Smith  
Jack and Jenny Spruill  
Fred and Alice Stanback  
Bill and Nancy Stanback  
Bill Staton  
Victoria Sutton  
Dewey Wells

# THE Season

Jeff Beane's GUIDE TO  
NATURAL NORTH CAROLINA

North Carolina Wildlife Federation  
1024 Washington Street  
Raleigh, NC 27605

insert  
progress  
indicia

## JUNE

**June 1:** Venus' flytraps are in bloom in the south-eastern 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.

**June 6:** Great-spangled fritillaries are flying.

**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—a small, 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 stone nests built 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 will disperse into terrestrial habitats on rainy nights.

**June 16:** Gray's lilies are in bloom in the mountains.

**June 17:** Five-lined, southeastern five-lined, and broadhead skinks are nesting. Females of these lizards tend their eggs until they hatch.

**June 18:** Carolina gopher frog tadpoles and tiger salamander larvae are transforming; metamorphs will migrate into upland terrestrial habitats on rainy nights.

**June 19:** Rhododendron and mountain laurel are near the peak of their bloom 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 20:** It's summer! Solstice is at 6:34 p.m. EDT.

**June 22:** Sourwood is in bloom.

**June 23:** Eastern box turtle nesting peaks.

**June 24:** Northern pine snakes are nesting. These uncommon snakes, found mostly in our Sandhills region, lay the largest eggs of any of our snakes.

**June 25:** Forgotten how much fun camping can be? It's National Wildlife Federation's Great American Backyard Campout. Take a kid (or a grown-up) camping! Visit <http://www.nwf.org/Great-American-Campout.aspx> for more information.

**June 26:** Chickasaw plums are ripe, and they make good jams and preserves, but you might have to compete with coyotes and foxes for them.

**June 27:** Redlip shiners and mountain redbelly dace are spawning in mountain streams.

**June 28:** IO moths are flying.

**June 29:** Green June beetles are emerging. Large emergences usually follow a rain that softens the soil so that the adults can dig to the surface.

**June 30:** Loggerhead sea turtle nesting peaks.

## JULY

**July 1:** Black skimmers are nesting, mostly on our more remote beaches and barrier islands.

**July 2:** Ox beetles are flying.

**July 3:** Northern bobwhite eggs are hatching.

**July 4:** Blackberries are ripe. Celebrate our nation's birthday with a cobbler (but leave some berries for all the other creatures who enjoy and need them).

**July 5:** Velvet ants are mating. These beautiful insects are not ants at all, but terrestrial wasps. Females are wingless.

**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 (though not to cicadas).

**July 7:** There's good fishing for white perch during their summer runs on the Chowan River.

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

**July 10:** Squirrel treefrogs, eastern narrow-mouthed toads, and oak toads breed in temporary wetlands after heavy summer thunderstorms.

**July 11:** Blue grosbeaks are fledging.

**July 12:** American goldfinches are nesting. These familiar, colorful finches depend on mature thistles for food and nesting material, and are thus among our latest nesters, raising just one brood per year.

**July 13:** Black bear mating peaks.

**July 15:** Peak flight period for our largest butterfly, the giant swallowtail, in the outer Coastal Plain.

**July 20:** On hot, humid afternoons, watch and listen for the impressive dives and "boom displays" of the common nighthawk.

**July 21:** Black-eyed Susan, jewelweed, and Joe-pye weed are in bloom.

**July 22:** Our largest beetle and heaviest insect, the eastern Hercules beetle, is flying. Look for adults of this impressive beetle around lights at night.

**July 22-24:** North Carolina Herb Association's "Wild Herb Weekend" in Valle Crucis (visit [www.ncherbassociation.org](http://www.ncherbassociation.org) for more information).

**July 23:** Indian pipe is in bloom.

**July 23-31:** National Moth Week (actually lasts for nine days each year). Stay up late and learn about the beauty and diversity of moths.

**July 27:** Garter snakes and ribbon snakes are giving birth.

**July 28-29:** Southern Delta Aquarids meteor shower. Best viewing is usually just before dawn. Open fields, beaches, or other remote areas make the best viewing spots for meteor showers.

**July 30:** Royal walnut moths and imperial moths are flying.

**July 31:** Turk's-cap, Michaux's, and Sandhills lilies are in bloom. Fence lizard eggs are hatching.