

THE Upland GAZETTE

WILDLIFE CONSERVATION AND HABITAT MANAGEMENT

A Note from the Editor



The *Upland Gazette* is in its 20th year of publication by the N.C. Wildlife Resources Commission's Division of Wildlife Management. For these 20 years, we

have published as a stand-alone publication available through either print or online to almost 5,000 readers. We have provided information about bobwhite quail, rabbits, other small game wildlife, songbirds, and many other game and nongame species and their habitats in North Carolina. *The Gazette* has reported on results of recent wildlife research and information on critical issues impacting wildlife. Authors from the Wildlife Commission, universities, other state and federal agencies and private organizations have provided expert insight, and readers often share their responses as well.

After 20 years of success, this edition marks a milestone as *The Upland Gazette* becomes part of the seasonal guides of *Wildlife in North Carolina* magazine. We are proud to become part of this award-winning magazine and plan to bring a wide variety of topics to WINC readers. Our publication has broadened our scope from the early days when we only focused on upland issues. We are still loyal to upland issues but have expanded to cover a wide variety of topics related to on-the-ground wildlife management issues in the Tar Heel State.

This issue includes a first-ever series for us called "Conservation Chronicles" which focuses on three well-managed wildlife habitat properties spread across North Carolina's three physiographic provinces—Coastal Plain, Piedmont and Mountains. We also have introduced the first in a planned series of features designed to highlight and describe the various programs that make up the Wildlife Resources Commission. This issue highlights the Private Lands Program and its biologists. Other articles cover remembrances from one of our state's oldest and most experienced quail hunters and an informational piece about rabies that all North Carolinians should read.

We are very excited to add the news and information from the *Upland Gazette* to *Wildlife in North Carolina*, and we trust readers will enjoy the upcoming changes. We welcome your feedback and thank you for reading the *Upland Gazette*.

Mark D. Jones

SUPERVISING WILDLIFE BIOLOGIST
PRIVATE LANDS WILDLIFE HABITAT GROUP



Landowner Mike Jones (left) and Brian Elam with the N.C. Forest Service survey the impacts of a prescribed burn in a young clearcut on the Jones' Surry County Property.

CONSERVATION CHRONICLES

The following three articles represent the first in a planned ongoing series called Conservation Chronicles. This series will highlight wildlife management efforts on properties across the Tar Heel State. In this inaugural issue, we focus on properties in each of North Carolina's three physiographic regions. Technical Assistance Biologists in our Private Lands Program describe wildlife management successes in Columbus County in our Coastal Plain, Guilford County in our Piedmont, and Surry County in our Mountains.

Bovine Balance

*By John Isenhour, Technical Assistance Biologist, NCWRC
& photographed by Melissa McGaw, NCWRC*

Many landowners who manage native warm season grasses long for the day when quail were plentiful and they could hunt half a day and find six coveys. However, Mike and Jean Jones harken back to a time when native grasses, fire, and bison interacted to maintain prairies and open forests with diverse ground cover. While falling short of free-roaming bison, a herd of Angus cattle serves a similar purpose on the Jones' Surry County farm. The cattle "migrate" from one paddock to the next; grazing, disturbing the soil, and replenishing the soil nutrients as they go. Rotational grazing, combined with the utilization of native grasses, has resulted in a system which allows both forage production and wildlife habitat enhancement.

Mike and Jean ventured into a conservation-based production system in 2004 when they fenced cattle out of streams and provided alternative water sources for the herd. The funds to implement this project came through the Clean Water Management Trust Fund. As part of the funding agreement, a substantial buffer of native vegetation was established to protect water quality in Beaver Creek, a tributary of the Fisher River. More changes came to the farm operation when 10 acres of Eastern gamagrass were planted adjacent to the recently fenced riparian buffer. There was concern over the lack of “gama” that showed up the first year after planting, but Mike’s research had prepared him to be patient. “First year they sleep, second year they creep, third year they leap” is the way he describes the process of establishing the deep-rooted native grasses.

Once Mike saw the “leap” of the gamagrass, more natives were planted on the farm. Between 2009 and 2011, a mixture of big bluestem and indiangrass was planted on 13 acres to extend summer grazing opportunity. In addition to planting native grasses, the U.S. Department of Agriculture’s Farm Bill funded prescribed burning in a young forest stand adjacent to the pastureland. As the blue-stem pastures developed and matured, a host of forbs returned from the seed bank. Black-eyed Susan, lanceleaf coreopsis, and partridge pea were some of the native herbaceous plants that thrived as a result of more favorable growing conditions. Mike and Jean agreed to address these “weeds” not by killing them with herbicide, but rather recognizing these plants are part of a healthy grassland ecosystem. Centuries ago, this ecosystem sustained bison herds in western North Carolina, but today it nourishes the Jones’ cattle. Mike’s statement “you begin to think of ‘weeds’ in a different way” is very evident as you watch the cattle graze through a pasture of diverse vegetation.

Centuries ago, this ecosystem sustained bison herds in western North Carolina, but today it nourishes the Jones’ cattle.

While not the primary goal when the Jones’ arrived on the property in 1975, wildlife habitat management has crept into the objectives for this property and has become a deeply rooted part of the farm. Guidance was sought from the North Carolina Cooperative Extension Service, North Carolina Wildlife Resources Commission, North Carolina Forest Service (NCFS), Natural Resource Conservation Service, Surry County Soil and Water District, and other organizations as conservation practices were planned and implemented. Most recently, the NCFS conducted a prescribed burn on 50 acres of the farm specifically to benefit wildlife habitat. According to Surry County Ranger Brian Elam, “the burn this spring killed about 95 percent of the woody sprouts.” Prescribed burning ensures ample sunlight reaches the forest floor promoting lush ground cover and tender browse. In a nutshell, this is just a well-managed piece of northern foothills property. The native pastures provide a great source of protein-rich insects for turkey poults, and cottontail rabbits, white-tailed deer and songbirds thrive in the shrub/scrub habitat of the burned clear cuts. Also, bobwhite quail can be heard on the property each spring.

Gone are the days of bison roaming the native grasslands of North Carolina. The bison quickly disappeared from the eastern U.S. following European settlement. In much the same fashion, native grasslands vanished as changing land uses removed large herbivores and frequent fire from the landscape. Mike and Jean have retained a piece of our natural history by tapping into the inherent benefit of managing native vegetation. The outcome of 40 years of work by the Jones family is an uncommon balance between livestock production and ecosystem sustainability. Protecting water quality, maintaining proper grazing pressure, and promoting plant diversity have improved this farm for domestic and wild species alike. 🌿



Wildlife are not the only animals benefiting from Mike and Jean’s native grassland management. The Jones’ cattle love the nutritious and drought-tolerant forage.

Hands-On, Home Place Habitat

By John Isenhour, Technical Assistance Biologist, NCWRC & photographed by Melissa McGaw, NCWRC

Many people leave the family farm and vow never to return. Watching parents struggle to maintain their childhood home, coupled with a youthful dose of “the grass is always greener,” has sealed the fate of many tracts of rural land. Today, more than ever, the financial gain of selling a parcel of family property in the Piedmont of North Carolina is difficult to resist. However, all is not lost for there are folks out there that hold home, heritage, and habitat in high regards. One of these special people is Marie Poteat. Marie not only returned to her Guilford County home place, but she has taken steps to manage the property as a wildlife oasis and protect it in perpetuity.

Ms. Poteat’s 59 acre tract began taking shape when her parents, George E. and Margie Poteat, purchased a parcel of property in 1952.

family physically and strengthened their spirit and resolve. “I always knew I would live on the property and create a wildlife preserve,” Marie said.

Marie left the farm to pursue a career in the automotive industry but returned, as she promised, upon her retirement in 2009. She promptly began evaluating the property, researching management options, and networking with natural resource professionals to develop goals and objectives for the farm. The North Carolina Wildlife Resources Commission’s Private Lands Program, as well as the North Carolina Forest Service and the U.S. Department of Agriculture’s (USDA) Natural Resources Conservation Service (NRCS), provided technical guidance for this project. With input from these agencies, a plan was developed to address the objective of improving

updated to allow the use of a no-till seed drill. Armed with the right equipment, a wealth of knowledge, and EQIP cost assistance she embarked on the process of converting fescue to native vegetation. The first step was killing fescue on 17 acres of old pastures. Once the fescue was killed, a mixture of native grasses, forbs, and wildflowers was planted across the acreage. USDA Farm Bill funding for this project has proven to be a great investment, paying high dividends to many wildlife species. Anyone that knows Marie would agree she was not sitting around before the fescue conversion project, but the successful planting seemed to shift her into overdrive. “Marie has been a spokesperson for native species and wildlife habitat,” according to NRCS District Conservationist Gary Cox. “She often opens her property to educate others and was instrumental in native planting projects on Guilford County’s publicly-owned open space properties.”

Marie has continued to research what to do and uses a methodical process to figure out how to best reach her goals. She is now a licensed Pesticide Applicator and spends hours scouting her property and treating non-native plant species. She continues to gain knowledge by attended training sessions covering topics such as prescribed burning and pollinator habitat enhancement, but more importantly, she is constantly working on her property. With new knowledge and training, she is continually refining her objectives and working to improve the habitat on the farm. Marie is currently expanding her native grassland acreage by converting a sewer line right-of-way from sericea lespedeza and fescue to a mixture of short native grasses and forbs. The three-year site preparation process has involved treating non-native sericea and fescue each year then sowing cover crops to protect the soil. Planting the right-of-way should take place during the spring of 2016.

With help from the Piedmont Land Conservancy, Marie recently placed a conservation easement on the property. This easement will ensure that the property stays undeveloped while allowing for future forest and habitat management. The early successional habitat

“I always knew I would live on the property and create a wildlife preserve.”



Soon, this property began providing for the Poteat family and teaching life lessons to those who “worked the land.” Marie does not use the term “subsistence farm” but does recall “Dad raised just about everything we ate, we did not sell much, we just lived off the land.” Staple crops of corn, tomatoes, green beans, field peas, and white potatoes were canned, frozen, or stored in the root cellar to feed the family through the winter, or they were traded with neighbors. Sweet potatoes, blueberries, watermelons, and peanuts offered seasonal treats throughout the year. The sustenance raised from the land nourished the

general wildlife habitat with an emphasis on small wetland communities, early successional wildlife habitat, non-native plant control, and pollinator enhancement. Using this plan, Marie identified priority practices, submitted an application, and was awarded a contract for cost assistance through the NRCS’s Environmental Quality Incentive Program (EQIP).

With a solid plan and EQIP contract in place, Marie began making big changes on the farm. She bought a sprayer for her tractor and carefully learned how to calibrate it for safe, effective herbicide application. The hydraulic system on Marie’s tractor was



After a career that took her away from the family farm, Marie Poteat returned after retirement to fulfill her dream of managing the farm for wildlife. Diverse native vegetation (below) is rare in today's Piedmont which is dominated by non-native fescue. These native grasslands can provide much-needed habitat for a wide variety of species including insects, songbirds, and game animals.

on this property is also under a Wildlife Habitat Conservation Agreement with the North Carolina Wildlife Resources Commission. This agreement allowed the property to be enrolled in the Wildlife Conservation Land Program which results in habitat areas being taxed at the same rate as agriculture cropland, a rate lower than typical properties.

In today's fast paced world, we are surrounded by the lure of instant gratification. Many of us, myself included, succumb to the easy way at times. Isn't it nice to know that there are those who value the home place, are rooted in their heritage, focus on habitat, and have the heart to implement conservation? Marie Poteat has chosen to take on the same struggle as her father — working the land. The fruits of her labor are different than her father's, but they should be appreciated and commended by all of us who enjoy the outdoors, value our wildlife resources, and are a little nostalgic for how things used to be. 🐌





Commercial thinning can be beneficial to both the landowner's pocketbook and to the wildlife that many landowners desire. This newly installed lane was cut into 14 year-old pines and will allow sunlight to reach the forest floor creating optimal growing conditions for beneficial plants wildlife need.



Forest Manager Ricky Ward (middle) meets with landowner Monroe Enzor (right) and Sawyer Strickland (Enzor's grandson) to discuss logging procedures as part of the long-term forest management plans for the Enzor property.

CONSERVATION CHRONICLES

Managing a Farm Beyond the Fields

Written and photographed by John Henry Harrelson, Technical Assistance Biologist, NCWRC

As I drove down the gravel road on my way to a meeting, I could not help but notice the five gobblers in full strut in the middle of a nearby field. I stopped the truck and pulled out binoculars to watch for a moment. With the window rolled down and a spring breeze hitting me in the face, I heard the unmistakable whistle from 50 yards away along a ditch bank of a Northern bobwhite quail. And then another, and another. There were at least four males announcing to the world their presence and need for a mate.

The field and unmowed ditch bank are a part of 2,000 acres belonging to Monroe Enzor of Fair Bluff, North Carolina in western Columbus County. He was raised on this farm and has been tied to this dirt for all of his 75 years. In 1967, when his father was able to purchase it from the Floyd family, it was a homecoming for the Enzors since it was lost in 1929 by his great-grandmother at the start of the Great Depression.

Managing this farm goes beyond the fields and into the forest. The acres of forest that stretch across the property were all established

by the family. In 1968, the family cleared all remaining trees on the farm, and the street lights of town could be seen from the family home two miles away. Due to wind and water erosion in the first year, trees had to be established as wind breaks. Over the course of time, trees became an investment to the family which Mr. Enzor readily acknowledges will not succeed if management does not occur.

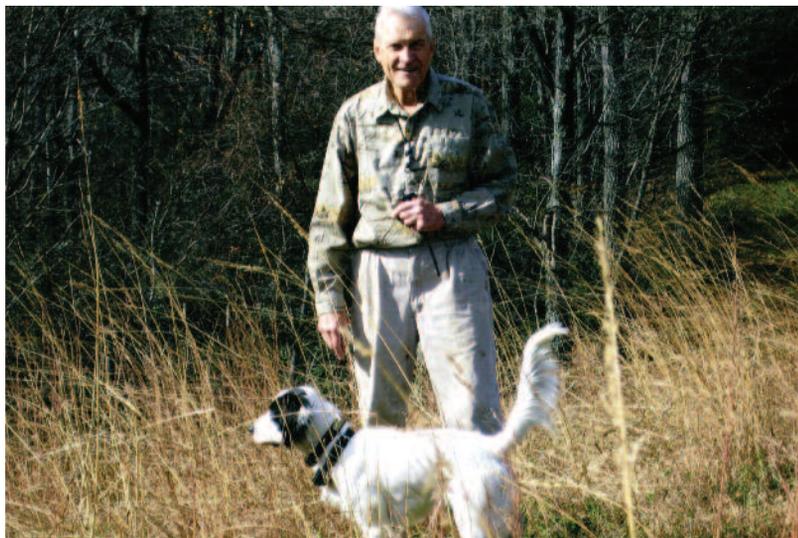
Currently, over 200 acres of 14-year-old loblolly pines serving as CRP (Conservation Reserve Program) field borders and wind breaks are being thinned for the first time. Coupled with past and planned future use of prescribed fire, these wooded field borders will continue to offer valuable wildlife habitat with an early successional understory.

Mr. Enzor has planted longleaf pine on sites with sandy soils following the recommendation of his forest manager, Ricky Ward, and the National Wild Turkey Federation Regional Biologist, Gary Peters. These longleaf stands, which are just coming out of the grass stage, are loaded with briars, wildflowers, and native vegetation offering food, brood

sites, bugging areas, nesting sites, and cover for quail, turkeys, songbirds and other species. The use of prescribed fire has decreased woody competition as well as diversified the herbaceous understory.

In addition, a recent change includes the light disking of ditch banks and road shoulders to improve vegetative cover and allow the miles of ditches and paths to serve as travel corridors and escape cover for wildlife. These areas, which were once regularly mowed, are now bugging areas for turkey poults and quail chicks as well as high value browse for deer.

From a distance, this farm looks like much of the rest of eastern North Carolina with big fields surrounded by pine trees. However, if you take a closer look, it is so much more. Much of this work has been accomplished because of sound technical advice from professionals coupled with a mind set to manage for the future. This farm is a part of Monroe Enzor. It's the family legacy and heritage, and as time passes, Mr. Enzor hopes to see his children and grandchildren keep it that way. 🌲



BRADY WELLS

The Author has been hunting quail in the Tar Heel state since first tagging along with his father in 1939. Over the last 76 years, he has gone afield with a variety of bird dogs including this young setter.



Remembrances of an Old Bird Hunter

By Dewey Wells, Blowing Rock, North Carolina

The stock market crash of October 29, 1929 (Black Tuesday) heralded the worldwide Great Depression. From the bobwhite quails' perspective, another calamity occurred 15 days earlier—my birth. I did indeed harass quail during the decades that they thrived in eastern North Carolina. They were abundant despite a very high annual mortality rate with hunting being a negligible factor. The habitat was right, and quail responded. But, as quail began to lose ground (literally) to “progress” in rural land management, my zeal evolved from taking to conserving quail. That transition, which I and others have experienced in respect to “The Prince of Game Birds,” is the subject of this little piece. I’ll spare you my ruminating about “The King” (the ruffed grouse).

During the Depression, we had enough to eat, but it wasn’t fancy. Quail for supper was a staple during only fall and winter because the ice box, and later the electric refrigerator, did not have frozen storage capability. My father had begun hunting quail as a boy, and when he was an old man he said he could go to the very spot where he had shot his first quail. He managed to be able to keep himself supplied with shotgun shells during the Depression, and we enjoyed the bounty of his days afield.

At an early age I was assigned the duty of feeding the bird dogs. Dad had pointers until

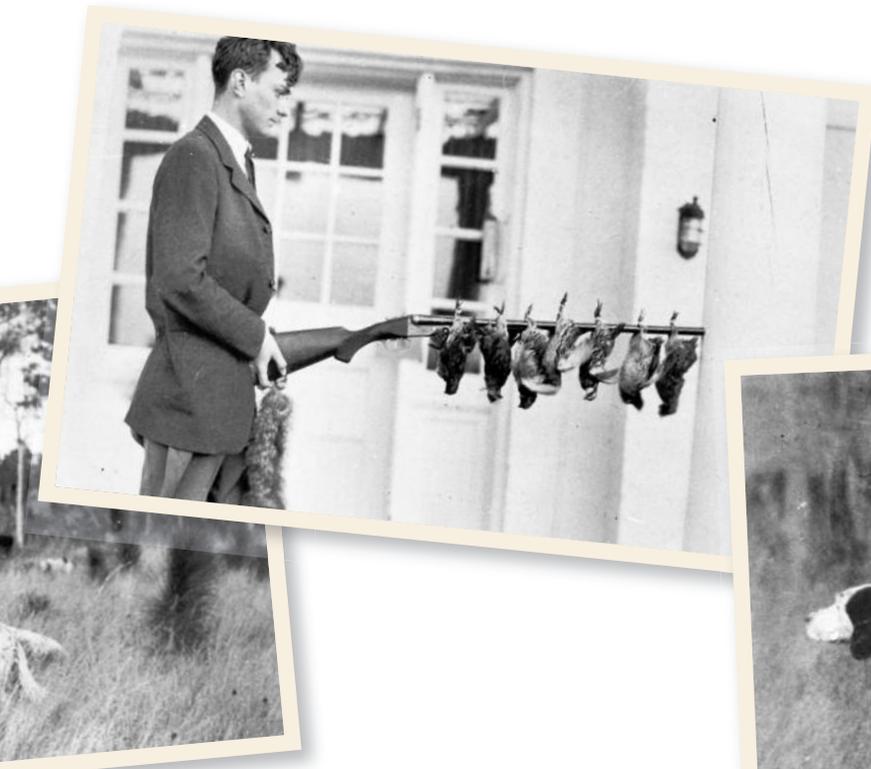
he eventually matured and switched to setters. With great anticipation I awaited his return from hunting. When I was old enough to keep up with him I went along, first without a gun, and after reaching age 10 with my first shotgun. It was a .410 bore single-shot hammer-operated Iver Johnson (which I then did not know was not a good gun for a beginner). I was awed by the abundance of quail which were sustained by marvelous cover and pursued by rangy, tireless dogs holding points until the birds were flushed by expectant, grateful hunters. That my father could consistently bag those fleeting denizens was impressive. I usually missed. I think it was because I fired in the direction where the birds were rather than where they would be when the shot charge arrived. I do not remember thinking at the time about the enormous impact all this would have on the remainder of my life.

I also did not foresee the drastic changes which would occur in rural land management. Then the small fields were tended mostly by tenant farmers with equipment primitive by today’s standards. Fallow areas abounded, and woodlands were mostly hunttable hardwoods because monoculture pine thickets were yet to be. In fields, we grew corn, peas, and weeds (there being no herbicides). Such harvesting equipment as was available was crude and inefficient. Soybeans had not arrived as a crop.

Wild patches of lespedeza were common, and quail spent lots of time eating them because it took a long time to fill a crop with the tiny seed. Cover abounded for feeding, roosting, nesting, and brood rearing (raising chicks). I have a photo, which my Dad took in 1941, of his dogs pointing in a field of standing corn with knee-high weeds (which would be almost unheard of on today’s manicured lands). There is an adage about a picture being worth a thousand words. That photo is a startling reminder of a landscape change which occurred so gradually that we didn’t realize what was taking place.

The ground-nesting quail were aided by trappers because there was a good sales market for furbearers such as raccoon and foxes along with a local demand for opossum meat. The predators not subjected to trapping (raptors, rodents, snakes) had the disadvantage of too much cover for them to hunt quail very efficiently. There were then no coyotes or fire ants. Turkeys, which some consider to be hostile to quail, were not around, and deer were scarce. Predation had minimal impact because of the near-perfect feeding and escape habitat for small game.

I believe the quality of North Carolina quail hunting peaked during my younger years. A few generations earlier there doubtless were as many quail, but by the time I came



Overhills, Harnett County, Manchester vicinity, 1920s. All photos are from the General Negative Collection, State Archives of North Carolina.



along roads and vehicles had so developed that transporting men and dogs from a few to a few hundred miles was feasible. But long trips were not necessary. Many a time, before I was old enough to drive, I walked from my house with dog and gun. Also, my Dad would drive a friend and me to the outskirts of town, put us out, and at the end of the day retrieve us, the dog, and usually a few bagged birds. However, my most vivid hunting memories are of the hunts where Dad and I drove somewhere away from home. Afterwards, my young, spindly legs may have ached, but there was nowhere else I'd rather have been. A reason I enjoy reminiscing about that era is that the bond which my father and I built was stronger and more durable than it would otherwise have been, but this piece is about habitat, not sentiment.

When Mark Jones asked me to write a piece on what I recall about quail and their habitat, I was surprised that he thought anyone else would be interested. But I was intrigued with the thought that if I should be cross-examined by a reader, I would have the certain knowledge that he could not produce a witness to contradict me. Nonetheless, no exaggeration is needed. The superb habitats I recall

produced amazing numbers of coveys. Hunts with my father were usually half days unless shortened by attained bag limits. However, shooting the bag limit could not be taken for granted. The author of Murphy's Law might have been a bird hunter, but numbers bagged was not the objective.

I recall full days of hunting, both with my dad, and later in the late 1950s and 1960s when I resided too far away for us to regularly hunt together, when flushing a dozen or more

"I believe the quality of North Carolina quail hunting peaked during my younger years."

coveys was not unusual. I was very fortunate as a young man to have access to a tract of nearly 5,000 acres which was being converted from dense wetlands to croplands (before there were wetlands regulations like now). There, a 20 covey half-day could occur hunting the messy transition cover of hedgerows. Coveys there resided in much closer proximity to one another than they normally tolerate.

Hunting flushed birds (singles) was neither necessary nor practical as another covey would likely be encountered on the way to where the singles flew. It was there, on this newly disturbed land, that I learned that quail crave pokeberries. When that land conversion was completed and the messy cover eliminated for more intensively cropped lands, the land became barren of cover, and of course quail followed. This change began to occur throughout the Coastal Plain as an era was drawing to an end.

Tenant farmers no longer tend the land with mule-drawn plows or one-row tractors. Small fields interspersed amongst corners, edges, and fallow patches of native cover are mostly gone. Huge, squared-off fields drained by manicured ditches and bordered either by ground-cover-deprived woodland or pine thickets restrict our remaining quail to marginal habitat. Here and there the clearcutting of timber will create a short-term oasis for quail which man and dog can traverse for a few years before briars and early successional growth become impenetrable. Those spots can give a hint of old-time hunting conditions.

My remembrances have centered on eastern North Carolina because that is where I

grew up and hunted. Only a few times did I hunt the Piedmont. That was in the 1980s as row-cropping was surrendering to fescue (a plant with no redeeming value for quail). In our mountains, I have only hunted ruffed grouse but have heard acquaintances tell about their grandfathers and fathers returning from hunts with both grouse and quail to adorn the dinner table. Before the abandonment of small farms, and for a decade or so thereafter, both “The Prince” and “The King” thrived in a wonderland of mountain cover.

The loss of small game habitat has of course been accompanied by a severe reduction in the numbers of quail and rabbit hunters. I was a member of the Wildlife Resources Commission when license revenue from small game hunters had declined to the point that the Commission decided to seek annual appropriations from the General Assembly. Quail hunters have responded in different ways. Some have just quit. Some hunters convert to shooters by frequenting preserves. Others persevere and keep bird dogs to hunt for wild birds despite adverse odds. We regret that our children and theirs will not have the North Carolina quail hunting experiences we had. Some bird hunters travel to the Midwest or Texas for quail, to western states and Canada for prairie birds, and to the lake states and New England for ruffed grouse and woodcock. I am fortunate to have been able to do that, but I miss the joy and convenience of good local quail hunting.

We old bird hunters enjoy recalling those

days and are thankful for the memories. We lament the dearth of young people attracted to upland gunning. Is there anything we can do to help maintain quail numbers at current levels and maybe even increase them? The Chinese proverb admonishes us to not curse the darkness but to light a candle. One such candle to light is for those of us in control of land to attempt to restore good quality habitat for small game. Few of us can do that on enough acres to bring about landscape changes large enough to bring back the old days, but habitat improvement on small tracts can yield at least token numbers of quail as well as rabbits. There’s satisfaction in making even a small difference. Another thing we can do is to encourage, maybe even incentivize, owners of farmland who may have little or no interest in small game to set aside field borders and lands of marginal quality and to be less drastic and use better timing in mowing ditch banks. And a third candle we can light is to actively and financially support those organizations which promote improvement of habitat on private lands as well as the acquisition of public land for the purpose of preserving and improving game habitat which will be accessible to hunters.

Hunting the Prince of game birds represents a storied tradition in our country and state, and I hope this tradition is around for future generations to enjoy. I don’t expect friends to light 86 candles on my birthday cake, but I hope we all can continue to light candles to help “Bob White.” 🦌

Devoted *Upland Gazette* readers can still access each issue at

ncwildlife.org/UplandGazette

Issues from 1996 through spring 2015 have been posted on the site, and we plan to continue posting issues in the future. While visiting the website, be sure to sign up for e-mail notices to be sent to you each time a new issue is available.



The Upland Gazette is published twice a year by the N.C. Wildlife Resources Commission, Division of Wildlife Management.

Wildlife Management Chief Editor David Cobb, Ph. D.
Mark D. Jones

Report hunting violations 1-800-662-7137
Seasons for migratory game birds 1-800-675-0263

GET SOME WILD IN YOUR LIFE!

The N.C. Wildlife Resources Commission has four family-friendly wildlife education centers spread across the state to help you “take a walk on the wild side.”

Each facility offers programs and exhibits—both indoors and outside—to help patrons learn wildlife and conservation in the Tar Heel state. Each education center also offers programs unique to its location and environment in the state. From Pisgah Forest in the mountains to Corolla on the coast, we’ve got the state covered.

PISGAH CENTER FOR WILDLIFE EDUCATION, Pisgah Forest, NC

CENTENNIAL CAMPUS CENTER FOR WILDLIFE EDUCATION, Raleigh, NC

JOHN E. PECHMANN FISHING EDUCATION CENTER, Fayetteville, NC

OUTER BANKS CENTER FOR WILDLIFE EDUCATION, Corolla, NC

ncwildlife.org/learning.aspx

Private Lands Program

The Private Lands Program provides science-based management advice, wildlife disease monitoring, and wildlife-related technical assistance across the state. Private Lands Program staff work to address wildlife issues at the local level and represent North Carolina's interest through their involvement with agencies and organizations at a regional and national level. The staff and structure of this section ensure a strong system to engage and advise private landowners of North Carolina in the varied arena of wildlife policy and management.



Wildlife Commission Biologist John Isenhour (left) meets with landowner John Bishop (middle) and Land Manager Lee Efirm to discuss management options on Bishop's property in North Carolina's Piedmont.

MELISSA MCGAW/NCWRC

Regional Wildlife Biologists

Each of the nine North Carolina Wildlife Resources Commission (NCWRC) districts is assigned a Wildlife Biologist. These biologists are well-versed in many facets of wildlife management and serve as the primary contact for the NCWRC Division of Wildlife Management in their respective district. While the unexpected is the norm in the wildlife field, these biologists commonly work with private landowners to address wildlife issues such as: wildlife population management, habitat development and management, wildlife disease investigations, and human-wildlife conflicts.

Technical Assistance Biologists — Forest Stewardship

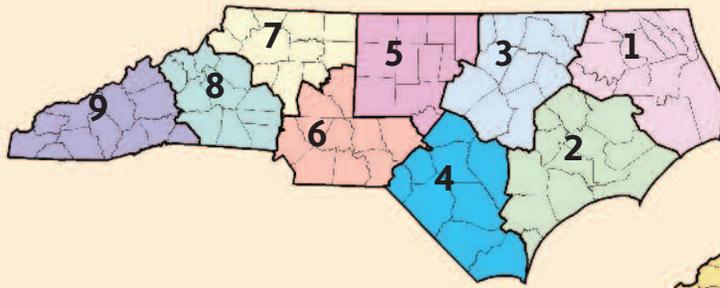
The Forest Stewardship Technical Assistance Biologists (TABs) primary responsibility is to work with landowners to develop comprehensive forest management plans with wildlife as the primary focus. Landowners interested in managing their forested lands for multi-use resources including timber production, wildlife habitat, soil and water quality improvements, recreational opportunities, and aesthetics can seek guidance from one of these biologists. Forest Stewardship plans are developed in partnership with the North Carolina Forest Service and other natural resource professionals. Landowners with 10 or more acres of privately held forested land are eligible for stewardship

plans. These TABs also work with landowners who are interested in enrolling their property into the Wildlife Conservation Lands Program. This program offers landowners a potential reduced property tax assessment in exchange for managing a minimum of 20 connected acres for the conservation of certain priority wildlife habitats and priority wildlife species. For more information and to discuss a site visit on your property contact your local Forest Stewardship Technical Assistance Biologist.

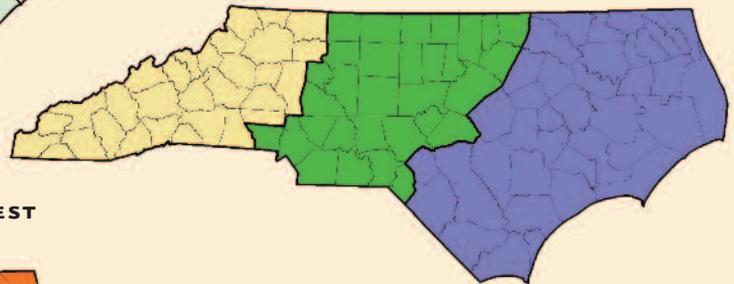
Technical Assistance Biologists — Wildlife Habitat Program

These Technical Assistance Biologists (TABs) integrate wildlife management principles into land management practices used on private lands in North Carolina. They lead Agency efforts to identify suitable sites and implement early successional wildlife management through the Cooperative Upland habitat Restoration and Enhancement Program (CURE) and deliver the agency's programs directed toward habitat management on private lands throughout the state. These TABs provide free technical advice to landowners in North Carolina, manage the Agency's Corporate CURE Program, and serve as the Agency's primary liaisons for integrating U.S. Department of Agriculture (USDA) Farm Bill programs into effective tools for improving land management.

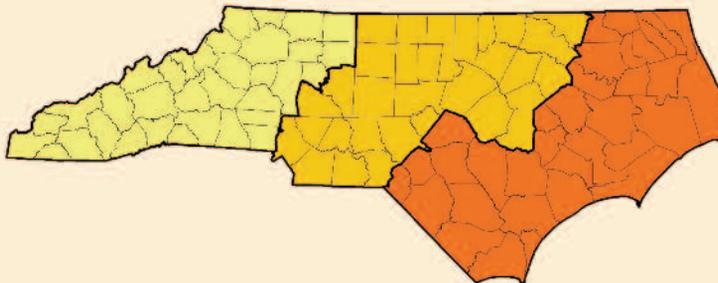
N.C. WILDLIFE COMMISSION DISTRICTS



N.C. WILDLIFE COMMISSION WILDLIFE HABITAT PROGRAM REGIONS



N.C. WILDLIFE COMMISSION FOREST STEWARDSHIP REGIONS



PROGRAM SUPERVISOR	BRAD HOWARD	828-294-2605
COASTAL SUPERVISOR	EVIN STANFORD	252-940-0218
REGIONAL BIOLOGIST DISTRICT 1	CHRIS TURNER	252-221-9961
REGIONAL BIOLOGIST DISTRICT 2	"VACANT, CONTACT SUPERVISOR"	252-940-0218
REGIONAL BIOLOGIST DISTRICT 4	TOM PADGETT	910-645-4115
TECHNICAL ASSISTANCE BIOLOGIST	DEANNA NOBLE	252-522-3440
PIEDMONT SUPERVISOR	KEN KNIGHT	704-982-8260
REGIONAL BIOLOGIST DISTRICT 3	GREG BATTS	919-269-9731
REGIONAL BIOLOGIST DISTRICT 5	JASON ALLEN	336-524-9801
REGIONAL BIOLOGIST DISTRICT 6	RUPERT MEDFORD	910-571-9747
TECHNICAL ASSISTANCE BIOLOGIST	KELLY DOUGLASS	919-621-3317
MOUNTAIN SUPERVISOR	MIKE CARRAWAY	828-646-9913
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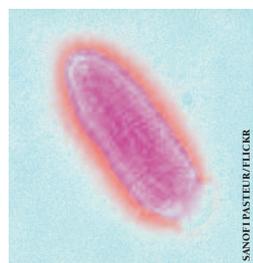
The Season of Rabies

By Maria Palamar, Wildlife Veterinarian, NCWRC

As the weather warms and spring shows its North Carolina beauty, we at the NCWRC start preparing for an influx of calls regarding sightings of many species, both young and old, with the all too common assumption of: “it must have rabies.” During the spring, summer, and fall months, concerned members of the public tell us about their close encounters with wildlife and their young, and for some species they share with us the assumption that the animals must be sick because they were out during the day.

Spring and summer are taxing months for many wildlife species as most mammals will have their young in the spring and face increasing needs for nutrients coupled with increasing time foraging for food. The day has only a certain number of hours, so it is not unusual to see many mammalian species, including foxes and raccoons, looking for food during the day. Females with young may also be scouting the area for signs of predators or suitable denning areas to protect their young. Foxes and raccoons are also predators, and this time of the year, when many other species are having young, represents a good opportunity to find an easy meal. Later in the summer and early in the fall, many young start dispersing and looking for a piece of land to call their own. This behavior also increases the possibility of sighting a wandering young fox, rabbit, or raccoon during your neighborhood walk.

But as the saying reminds us: “not all who wander are lost,” or as we say at the Wildlife Commission: “not all who wander are sick.” In North Carolina, we have a great diversity of wildlife, and only a few are considered rabies vectors. Although all mammals are susceptible to rabies, rabies vectors are those considered to have a higher risk of becoming carriers for the virus and thereby be more likely of transmitting it to humans. Our rabies vector species are raccoons, foxes, bobcats, coyotes, bats, and skunks, and when one of these animals bites or otherwise breaks the skin of a person, it is considered rabid until proven otherwise.



Rabies virus

The pathogen responsible for rabies is a virus which replicates very well in the brain and the salivary glands and infects new individuals when the host animal bites or scratches a new host. The virus cannot penetrate healthy, unbroken skin, so the blood or saliva of an infected animal needs to come in contact with an open wound on the uninfected individual. Once inside the new host, the virus travels through the nerves towards the brain and glands; a

process that can take days to years in humans. The process is much faster in animals with most animals infected with rabies presenting symptoms and dying within 14 days of infection. Therefore, 14 days is the common quarantine requirement for most pets. Once the symptoms appear, the disease is fatal and has no cure. This disease kills over 55,000 people a year around the globe, but only one or two deaths occur yearly in the United States.

As your veterinarian may have told you, there is a rabies vaccine for pets. We even have a very specific oral rabies vaccine for wild



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Gray foxes (below) and raccoons (above) are two of North Carolina's most likely rabies vectors.



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raccoons and a vaccine for people that are at high risk including wildlife biologists and veterinarians. It is extremely important to vaccinate your pets against rabies because in many cases humans become exposed to rabies when tending to a pet that has had a fight with a wildlife species. If your pet is vaccinated, he is protected, and he is protecting you. If he is not, then you are at risk, and your pet will have to go through expensive quarantine procedures that can be very stressful for the animal and the owner.

Once a person is exposed to rabies, there are two choices. If the wildlife or domestic animal responsible for the exposure is available, the animal will be tested for rabies. The tissue needed for rabies testing is the brain, so the animal has to be euthanized. If the animal is a pet, vaccination records and ownership will determine the path taken. In the worst case scenario, the pet will be euthanized and tested, and

in the best case scenario its vaccination may be boosted and the animal may return home with its owner. If the animal tested is negative, then the person exposed is cleared, but if the animal is positive, then the person exposed will have to get post-exposure prophylaxis. Post exposure prophylaxis is an expensive series of vaccines given at specific intervals. Currently, these are given in the muscle, not in the belly like in years past, and are comparable pain-wise to any other vaccination you have received. In some cases, the offending animal is not available because sometimes they escape or they die and are discarded before being tested. When this happens, the exposed person will get the post exposure prophylaxis as a preventative measure.

In North Carolina, the public health laboratory tested 4,380 samples for rabies in 2014, and 2,282 (about 52 percent) of those were from wildlife species. The bulk of the wildlife testing was from bats (1,539 animals), and only 2 percent of the bats tested were positive for rabies. The other 743 wildlife species tested included bobcats, foxes, raccoons, skunks, and opossums amongst others. Most of the positive rabies results came from foxes, raccoons, and skunks. This is to be expected as these species are our rabies vector species. Approximately 40 percent of tested raccoons and foxes and over 70 percent of tested skunks were positive for rabies. In total, only 14 percent of the wildlife specimens tested were positive for rabies leading us to reinforce the idea that “not all animals that wander are sick.” Keep in mind that this lab only tests animals that have been part of a human exposure case, either by directly attacking a human or attacking a pet. Bats are the only

exception as bats get tested when encountered inside the living quarters of people regardless of known contact.

To reduce your risk of becoming infected with rabies, be aware of the normal behavior of wildlife. Do not approach wildlife, even when they look healthy, and do not collect young of any mammal species. Many well-intentioned individuals try to help young foxes and raccoons that seem abandoned by feeding them and bringing them into their homes. In most cases, the young are not abandoned, but the mother has left them just long enough to be able to hunt for dinner. She will be back as soon as you leave the area. If the person finding the animals moves them, or stays close to keep an eye on them, the mother cannot come back. Once a person has taken a rabies vector species into their house and has fed them, the person is considered exposed to rabies. That young animal will have to be euthanized and tested. All of the good intentions turn into a death sentence to the young animal.

If you find an animal that is acting strange, walking in circles, attacking animals or things, chewing on rocks, or one that is just extremely depressed and unresponsive, call Animal Control or your local wildlife biologist immediately. We are here to help. But if you are one of the lucky individuals that sees a wandering fox or a curious raccoon crossing your yard, consider yourself fortunate to live in a state where this is a common occurrence. Maybe even snap a picture, but do not approach them because your health and that of your family and pets could be at risk. ♣

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