



the Upland GAZETTE

North Carolina Small Game Notes

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NCWRC

Fire in the 21st Century

A Misunderstood Habitat Enhancement Tool

*By Mark D. Jones, Supervising Wildlife Biologist, Private Lands Program
North Carolina Wildlife Resources Commission*

Fire has been prominent in the headlines in recent months, and the news is often rife with tragedy, economic loss, and human suffering. Just say the words “wildfire” and people think of something detrimental. But, much of the landscape in North Carolina and, in fact, the entire country, has adapted to a pattern of regular fire. The longleaf ecosystem of the southeastern Coastal Plain, the prairies of the southern Piedmont, the grasslands

of the American Midwest, and even the pine forests of the Rockies were landscapes historically maintained by fire. Some plant species are completely dependent on fire for survival, while others thrive best in a fire-manicured world. Many pioneer plants grow quickly and provide lush green growth in a fire-maintained environment, and many animals depend on the plant structures that result from these frequent fire events. American Indians

and lightning maintained the fires which shaped these historical landscapes, and settlers quickly adopted the practice of setting prescribed fires. If you talk to many rural “old-timers” in North Carolina, you learn that this practice remained common as recently as the 1950s. One Beaufort County gentlemen, born before the Great Depression, noted that fires were set in pine forests each year prior to World War II and allowed to burn until stopped by natural firebreaks such as streams, roads, and previously burned areas. This was done to enhance grazing habitat for livestock by promoting lush undergrowth. A catastrophic fire, so common in today’s headlines, was almost unheard of at that time because fuel loads were not allowed to accumulate to dangerous levels. Populations of quail, rabbits, and songbirds responded to the verdant vegetation and overall vegetative structure developed by these fire events. Many wildlife species prefer the relatively open understories with luxuriant grasses and forbs found under a canopy of large fire-resistant trees. This Beaufort County gentleman remembers hunting all day in fire-maintained forests and finding quail in numbers not seen in North Carolina in 50 years.

What is it about fire that benefits ecosystems? The benefits of fire are many and include removing thatch that can inhibit plant growth, stimulating the physiological processes of many fire-adapted and beneficial plants, controlling competition from woody species, and providing a variety of

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height, and density of vegetation preferred by many animals. Not all ecosystems need fire, but many in North Carolina do require it on a frequent basis. The longleaf pine once covered an estimated 93 million acres from Virginia to Florida and west to Texas and Oklahoma. Current estimates have longleaf pine forests at somewhere around 3-million acres following a major national effort to increase stands from a low point sometime in the past century. The single largest factor in the decline of this ecosystem was the loss of fire from the landscape. Longleaf does not compete well

North Carolina's Piedmont and foothills may have once been grasslands or savannahs (park-like areas with scattered trees and grassy understories) maintained by fire and grazing animals like bison and elk. The bison and elk will never again be widespread across the North Carolina landscape, but we can still use fire to mimic many of the natural landscapes to which many of the regions plants and animals are adapted.

Over the last 50 years, public attitudes about fire have changed dramatically. I was amazed at the reaction of many of my neighbors and friends to the prescribed

philosophy of fire suppression in the early years of the Forest Service. It was championed by early foresters and politicians following a series of extreme fires in the western United States. Early forest managers, without the benefit of our 20/20 hindsight, failed to see the fact that fire was a necessary and normal part of many ecosystems. Smokey Bear's main failing has been not to educate the public about the differences between "good fire" and "bad fire." All fire has been labeled as bad.

Until recent years, federal agencies and most state forestry agencies maintained a fire-suppression philosophy for decades. The catastrophic fires in Yellowstone National Park in 1988 brought national attention to the emerging wealth of information demonstrating that prescribed fire was necessary for the health of many ecosystems. The lodgepole pine forests, and associated grasses and forbs, of the northern Rockies were and are similar to our longleaf pine ecosystems and require periodic fire for normal reproduction and growth. Fires had been suppressed by humans in Yellowstone for many years despite the fact that the area's trees and plants depended on frequent low-intensity fires. Without the normal frequent fire, fuel loads built to levels beyond the capacity of fire-fighters to control in 1988, and a national tragedy developed as crown fires (fire spreading through the tops of normally fire-resistant trees) engulfed hundreds of thousands of acres. This catastrophic fire developed in an ecosystem designed for frequent but "milder" fire events.

Is North Carolina in danger of a similar occurrence? North Carolina depends on our forests for clean water, clean air, wildlife, recreation, and economic benefits. We have not had a serious fire season in North Carolina in many years, but each year fuel loads continue to build to dangerous levels.

With the right weather conditions and ignition sources, we could suffer from wildfires like we saw this past summer and fall in southern California and many Rocky Mountain states. We cannot control the weather, but we can control fuel



NCWRC/MARK JONES

Switchgrass recovering from prescribed fire.

with loblolly and other pines, and it suffers from hardwood competition. However, its seeds are stimulated by fire, and a longleaf tree is practically fire resistant throughout most of its life stages. Fire is the key to allowing longleaf to compete with more aggressive (but less fire-tolerant) species like loblolly pine. A myriad of animals are adapted to living in the relatively open and park-like grasslands found under mature longleaf stands. These include everything from game species like bobwhite quail to the endangered red-cockaded woodpecker.

Other examples of fire-dependent ecosystems can be found across the state. Many ecologists believe that vast areas of

burning I conducted on my own property this past spring. This management was designed to improve stands of native grasses and adjacent woodlands for bobwhite quail, cottontail rabbits, and a variety of songbirds. My neighbors and friends, however, thought I had lost my mind and was ruining "perfectly good" pine trees and burning up beautiful stands of tall grass. However, the lush green growth of fire-adapted plants that quickly invaded these areas was a testament to the benefits of these spring efforts.

Who is not familiar with the U.S. Forest Service's anti-fire campaign known as "Smokey Bear"? The Smokey Bear campaign, developed in the mid-1900s from a

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Meet John Wooding

Q and A with New Small Game Biologist

Upland Gazette editor, Jill Braden, spoke to John Wooding, the new small game biologist about his job duties in the Division of Wildlife Management.



FRANK WOODING

John Wooding is the new small game biologist.

Upland Gazette: Tell us about yourself.

John Wooding: I have been the small game biologist here for five months. I earned degrees in wildlife ecology from N.C. State, Mississippi State and the University of Florida.

UG: What did you do prior to coming to the Commission?

JW: I'm a North Carolina native, but I left home in 1980. I worked for Florida Game and Fish for 12 years with black bear and furbearing species, and then in small game research and management. For the past 12 years I've worked as a consultant on wildlife surveys and wildlife management plans. The projects included game surveys, alligator surveys, developing wildlife management plans for private landowners, nuisance wildlife control, as well as research on species ranging from black bears to fox squirrels to gopher tortoises.

UG: What are your goals for this position?

JW: I'm responsible for nine species: three species of rabbits (Eastern cottontail, Appalachian cottontail, and marsh rabbit), three squirrels (fox, red and gray squirrels) and three birds (quail, grouse and pheasants). There are night and day differences between the species in terms of distribution, abundance and future conservation challenges. I'd like to develop some accurate distribution and abundance maps for these species. I also want to understand where the species will be in 100 years and begin to prepare for any issues now.

UG: What are the challenges facing the species you study?

JW: Urban growth, habitat fragmentation, exotic plants, detrimental farming and forestry practices, unchecked forest successions—you name it. There are no shortages in terms of challenges. Currently, conditions are good for gray squirrels but conditions are deteriorating for bobwhites and grouse and for fox squirrels and red squirrels.

UG: How do these issues specifically affect quail?

JW: There's almost a double whammy for quail. First, human uses of the land are not working in their favor. Exotic grasses have been introduced from other parts of the world into North Carolina: fescue, bahia grass, Bermuda grass. These are pasture grasses that are so good at growing that they out compete everything else. So all the beneficial weeds we'd like to have aren't there because the grasses take over. That's to the detriment of quail. Exotic grasses are one of the quail's worst enemies and perhaps more threatening than all the predators put together. It's hard for people to believe that a grass like fescue is more detrimental to quail populations than an animal like a coyote, but it's true.

Second, nature is against quail. A large part of the habitat in North Carolina wants to be a hardwood forest. If it weren't for disturbances by humans—clearing the land, burning the land, plowing, mowing—nature would reforest the landscape. If you take disturbance away, nature wants a hardwood forest and that's not good quail habitat.

UG: What about habitat conditions for other small game species?

JW: Most of the habitat changes over the past 40-50 years have worked against small game. It's a combination of too little food

and cover, and too much urban growth. The exception is with gray squirrels. They are thriving. They tolerate people well, and nature is working in their favor by increasing hardwoods.

UG: Why are current farming practices detrimental for quail?

JW: The older practices didn't call for herbicides and pesticides. Farmers didn't have the equipment to do things so cleanly; they would leave a lot of weeds. And weeds produce seeds and cover that quail thrive on. Quail are a by-product of farming practices. In earlier times, they had the cover they needed to hide in and the food they needed. The more weeds, the better.

With today's farming and edge-to-edge practices, there is almost nothing left for quail—nowhere to hide and nothing to eat. The fields are too clean. Up through the 1950s, quail were everywhere and abundant. But then farming practices began to change. And it's all been to the detriment of quail.

UG: If species are in decline, why are people permitted to hunt them?

JW: It's habitat related and not related to hunting. If you stop hunting, the animals aren't going to increase because hunting is not the issue. The issue is habitat—it's all about plants.

UG: What is the long-term prognosis for small game?

JW: It depends on land use, and if the fields and woods provide the needed food and cover. Gray squirrels should do fine – things are going their way. Declines are likely with the other species, and their future depends on habitat conservation and management. But if we humans are smart and far sighted enough, and committed to wildlife, we can continue to provide the conditions needed for healthy, huntable small game populations. ♣

Beneficial Insects and Wildlife Buffers

By David Orr, Department of Entomology, North Carolina State University

When we think of wildlife, it's easy to overlook smaller creatures and focus on larger animals such as birds and mammals. But insects are an important part of the animal world and play a vital role in the functioning of many ecosystems. These roles are varied and include those that indirectly affect us, such as providing food for many different types of animals and helping with decomposition of dead plants and animals. But insects also affect us directly and provide so-called "ecological services" that we depend on. For example, production of one-third of our food is dependent on pollination by insects. Also, agriculture would be extremely difficult if it weren't for actions of predatory and parasitic insects that act to reduce populations of many insects that don't become pest problems as a result. How wildlife buffers might affect these beneficial insects is the focus of this article.

Integrated Pest Management (IPM)

Before talking about beneficial insects, insect management, and buffers, it's important to step back a bit and consider insect-management strategies that include beneficial insects and their importance in crop production. Integrated Pest Management (IPM) is a commonly used approach to pest management with a goal of being socially acceptable, environmentally responsible, and economically practical. In practice, IPM can be described with the acronym PAMS: Prevention, Avoidance, Monitoring, and Suppression. Ideally, the best way to manage insect pest populations is to prevent them from developing to damaging levels. This is one of the reasons why crops are rotated. If pest populations can't be prevented, then another approach is to avoid damage by selecting a resistant crop variety. It's important to monitor insect populations so that you treat (or suppress them) with an insecticide only when they reach damaging levels; thereby avoiding an unnecessary expense. For more information



DEBBIE ROOS, NORTH CAROLINA COOPERATIVE EXTENSION SERVICE

Conservation of native pollinators, like this bumblebee, is receiving increased attention because of problems such as Colony Collapse Disorder.

on IPM, see the North Carolina Pest Management Information Program Web site at: <http://ipm.ncsu.edu/ncpmip/>.

Biological control is one of many tactics that can be used in IPM programs. Biological control is the practice of manipulating insect predators and parasites to suppress pests to non-damaging, tolerable levels. One of the approaches used is called conservation biological control which uses environmental modification to protect and enhance beneficial insects. These modifications range from improving pesticide use practices in crops to manipulation of beneficial insect habitat within agricultural landscapes.

Beneficial Insects and Habitat

This is where the idea of beneficial insects interacting with buffer habitat comes into

play. As an Extension specialist, I need to be able to recommend pest-management strategies that will be effective and make economic sense for farmers. Just because a habitat attracts beneficial insects doesn't mean that these "beneficials" will actually help control pests in an adjacent cash crop. This is an important point. In assessing whether habitat is valuable for pest management, there are five important questions to consider:

1. Does the habitat attract the appropriate beneficial insects? Does it also attract pests, diseases, or enemies of beneficial insects?
2. Does the habitat provide enough resources to actually improve the health and reproduction of beneficial insects?
3. If beneficial insects are attracted to the habitat, do they then move into

adjacent crops, or is the habitat so appealing that it acts as a beneficial insect sink?

4. If the beneficial insects do move into the crop, does predation, parasitism, or pollination actually increase? Does the timing of beneficial insect movement to the crop coincide with pest populations?
5. Does crop damage get reduced to an acceptable level?

Previous research has shown that fallow type vegetation buffers, typical of CP33 habitat in North Carolina, do not affect natural enemy or pest populations in adjacent crop fields. This is a good thing in that there does not appear to be any problems from an insect management perspective associated with locating these buffers next to crop fields. Pest insects are not increased by the presence of weedy vegetation next to fields. However, it is also a bad thing because it is a missed opportunity to provide habitat to insect predators, parasites, and pollinators while at the same

time benefiting quail and songbirds. Taking this opportunity may allow growers to get the most out of their buffers by enhancing the ecological services provided by beneficial insects.

Adding Value to Wildlife Buffers

A good way to enhance the value of wildlife buffers for beneficial insects is to plant portions of the buffer in flowering plants that attract and feed the “beneficials.” Prairie plants are a good choice for this application. It may be surprising, but there were large areas of open prairie habitat in North Carolina prior to European settlement. As a result, a variety of prairie plants are native to North Carolina. They are easily established in plantings and are available from commercial seed sources such as Ernst Conservation Seeds and Roundstone Seeds.

We also know that they can have a positive effect on beneficial insect populations (see Figure 1).

The amount of a field border to plant and the number of planted plots within a border depends on the time and money each grower is willing to invest as well as the type of buffer program in which they are enrolled. Planting portions of CP33 habitat in North Carolina is allowed by the Natural Resources Conservation Service (NRCS) and has been approved by the USDA Farm Service Agency under guidelines issued in a NRCS jobsheet entitled “Buffers for Birds, Bees, and Beetles.” Contact your NCWRC wildlife biologist or NRCS district conservationist for more information on this program. ♣

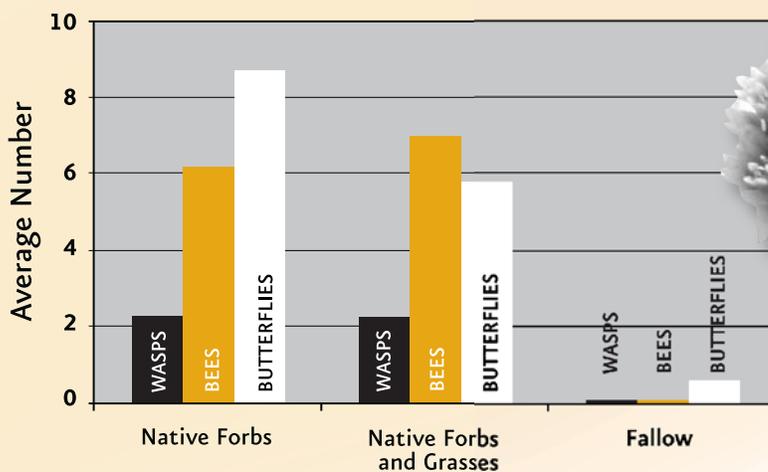
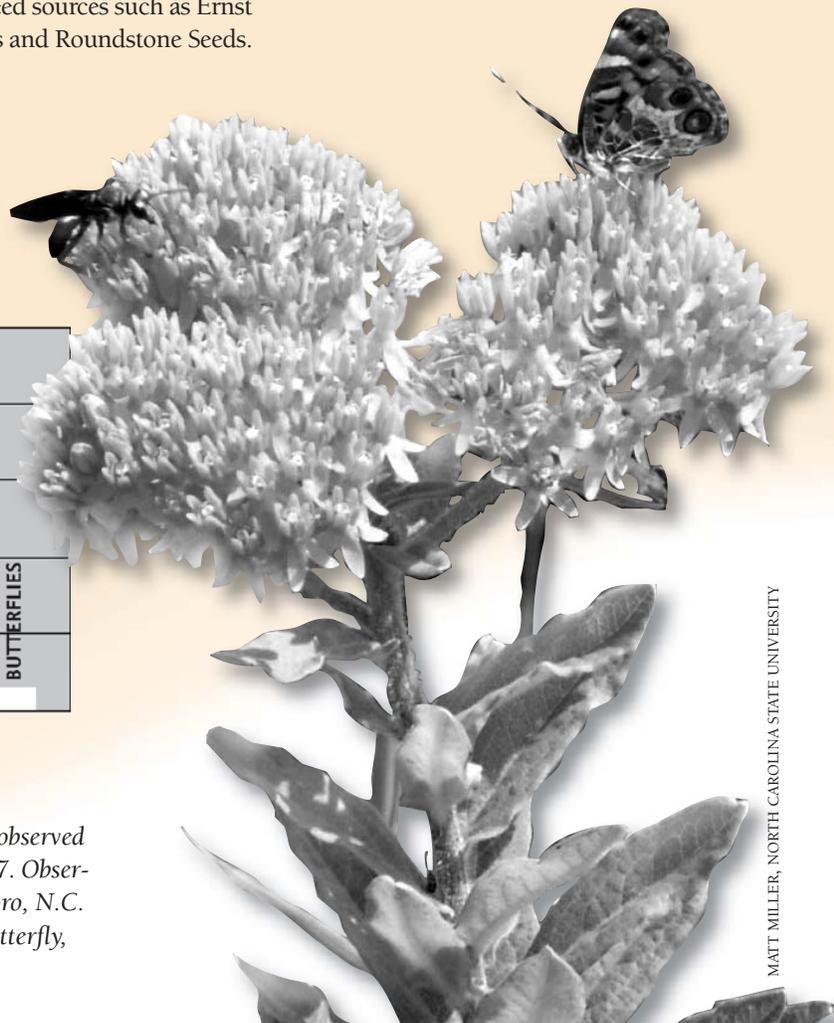


Figure 1. Average numbers of predatory wasps, bees, and butterflies observed each three minutes in different habitats from May 21 to Aug. 27, 2007. Observations were made in plots at four different locations near Goldsboro, N.C. Right: Butterfly milkweed flowers feed this predatory wasp and butterfly, and the leaves provide food for monarch butterfly larvae.



MATT MILLER, NORTH CAROLINA STATE UNIVERSITY

The Relationships between Declining Ruffed Grouse Populations and Declining Early Succession Habitat

By Patrick Farrell, Technical Assistance Biologist
North Carolina Wildlife Resources Commission

The ruffed grouse is found from Alaska to eastern Canada and south into the Rocky and Appalachian mountains. It is widely regarded as a bird of the northern boreal forest or the aspen-dominated forests of the upper Midwest in the United States. It reaches its southern limits in the southern Appalachians, and this habitat has always been considered marginal in most cases. Ruffed grouse were probably never as abundant here as in northern areas, but over the last couple of decades, ruffed grouse populations have experienced a serious decline throughout the southern Appalachian Mountains of North Carolina and neighboring states. Research indicates that their decline is correlated with loss of early succession habitat. Overcoming the negative public attitudes toward timber management is the challenge faced by natural resource managers when proposing to manage forests for ruffed grouse. The habitat needs of the species require that timber-management practices to be implemented, and oak regeneration must be a critical part of this management.

Improving Grouse Habitat

In the mountains of North Carolina, ruffed grouse habitat can be improved through the use of shelterwood, two-age, group selection, and clearcuts (also known as even-aged management).

The shelterwood method is recognized for its use in managing stands for oak and mixed hardwood forests. The removal of trees occurs in two or more stages. The first stage involves cutting trees for regeneration, and the next two or more cuts involve removing competition from undesirable and closely spaced trees. This method opens the forest canopy increasing herbaceous groundcover and creating important brood and foraging habitat.



NCWRC/MARK JONES

A German Wirehaired Pointer examines a grouse she pointed and retrieved for “her” hunter.

The goal of the two-aged harvest method is to lower the basal area in one or two cuts to 20 sq. ft./acre with the dominant and co-dominant trees remaining. The remaining trees are retained beyond the normal harvest period, resulting in two distinct age classes. This method is used for oak regeneration and allows hard mast to be produced for grouse while providing cover and forage habitat from the sprout growth of the new stand.

The group selection method harvests groups of trees within a stand over time and creates a patchwork of even-aged trees up to two acres. For grouse management, the group selection method may be the most beneficial for creating brooding

habitat. In North Carolina, brooding hens use the edges of group cuts harvested four or more years earlier. These cuts contain large amounts of ground cover located within old mixed oak stands, allowing grouse relatively safe access to hard mast in the fall and winter months. Furthermore, these cuts can be favored by landowners and the public due to the small unit size. However, if the volume of timber is low, it may be hard for landowners or managers to find a willing logger to complete the work.

The clearcut harvest method creates an even-aged stand of regenerating timber. Cuts are usually 2-40 acres and are considered the most beneficial for ruffed



grouse. The more you cut, the better it is for establishing grouse habitat. The high midstory stem density created provides cover and good foraging opportunities. Depending on site location, clearcuts are ideal for grouse six to 20 years after regeneration. As a silvicultural practice, clearcuts are one of the best methods for creating grouse habitat.

Habitat Impact on Other Species

Ruffed grouse are not the only declining species that depends on early succession habitat. Other species include the American woodcock, golden-winged warbler, many songbirds, and Appalachian cottontail rabbit. Figure 1 shows how bird species requiring shrub-dominated breeding habitats have declined at a higher rate than those birds favoring mature forests. Only 14 percent of these shrub-favoring species are increasing with 53 percent actually declining. For birds breeding in mature forests, 64 percent are stable or increasing.

“The best thing for a grouse is a log on a log truck.”

Fire and Early Succession Habitat

Prescribed fire has always been one of the best methods to maintain early succession habitat in the Appalachian Mountains. Fire is used along with silvicultural practices to maintain habitat for wildlife and to manage oak and hickory forests. Using prescribed fire to manage oak and hickory regenerations increases brooding habitat for grouse by increasing vegetation diversity, overall cover, and foods such as blueberries and huckleberries. Furthermore, sites maintained with prescribed fire show an increase in the number of insects (important food for grouse and other bird chicks) compared to sites where prescribed fire is not used. Fires conducted during

the dormant season (late winter) on rotations of two to four years stimulate herbaceous cover and protect grouse and other wildlife during the spring nesting season.

In the end, the implementation of sustainable silvicultural practices on private lands and National Forests can increase ruffed grouse numbers. The educational process of informing the public still needs to be a part of the solution. It brings to mind what a speaker said of ruffed grouse at a wildlife meeting more than 20 years ago “The best thing for a grouse is a log on a log truck.” That still holds true today.

Map and Pie Charts courtesy of Dessecker, Norman, and Williamson, “Ruffed Grouse Conservation Plan Executive Report,” 2007.

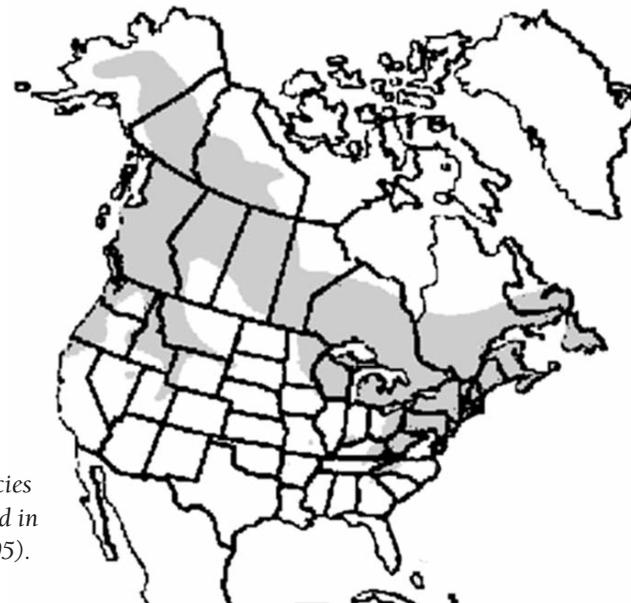
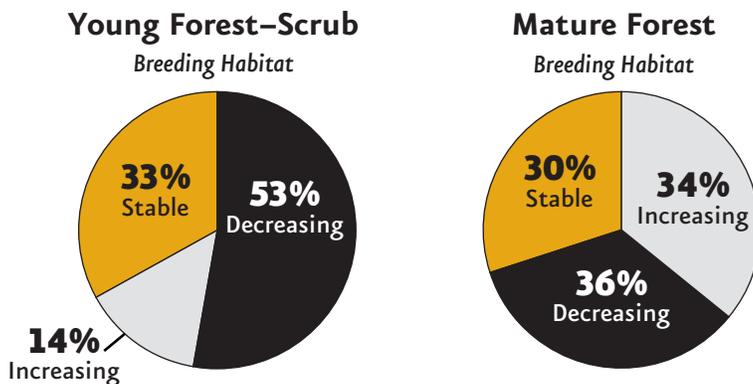
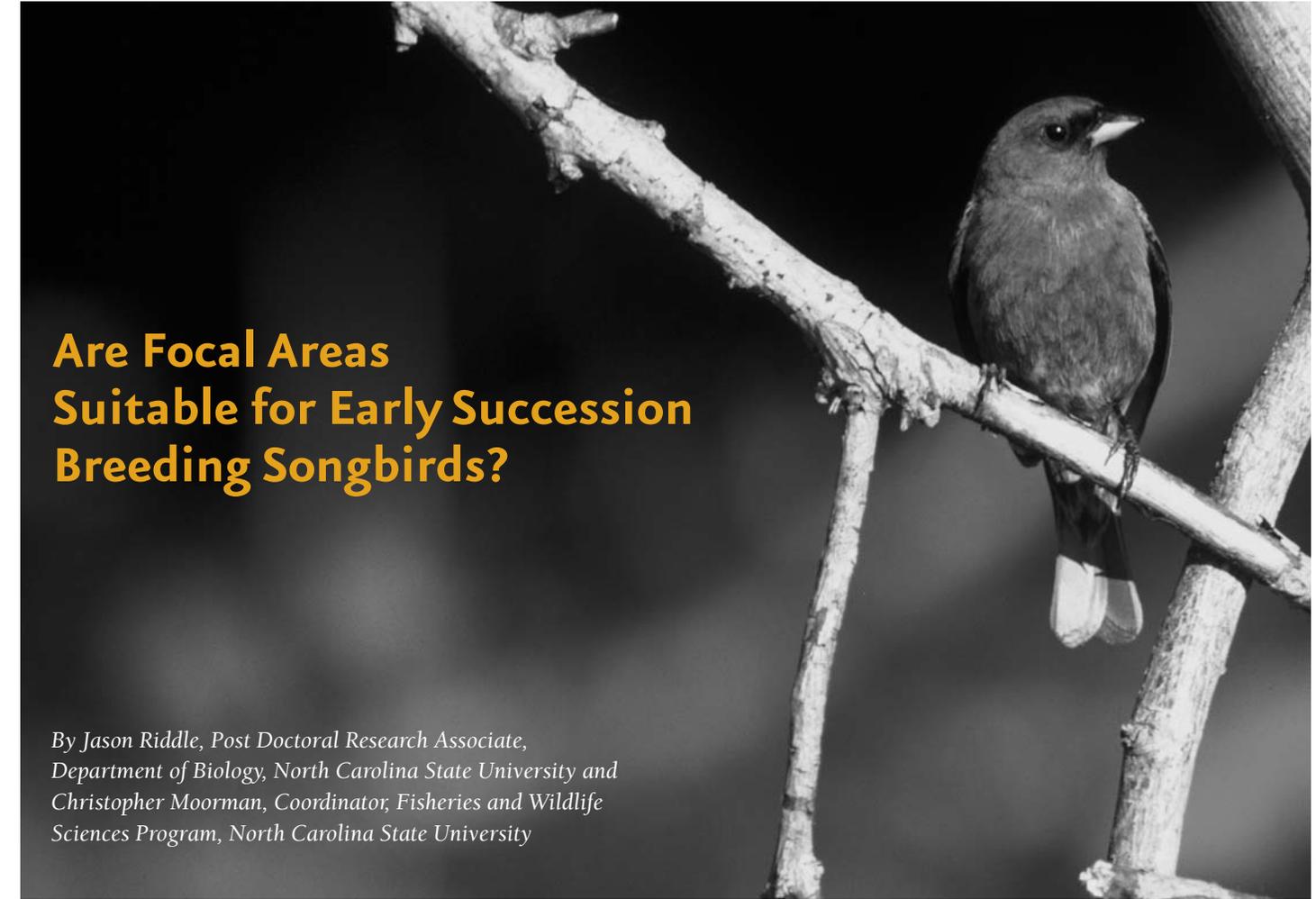


Figure 1. The proportion of species that is increasing, decreasing and stable: for bird species that breed in shrub-dominated and young forest habitats, and for bird species that breed in mature forest habitats in the eastern portions of the United States and Canada (1980–2005).



Are Focal Areas Suitable for Early Succession Breeding Songbirds?

By Jason Riddle, Post Doctoral Research Associate, Department of Biology, North Carolina State University and Christopher Moorman, Coordinator, Fisheries and Wildlife Sciences Program, North Carolina State University

The N.C. Wildlife Resources Commission has concentrated the CURE program in agriculture-dominated landscapes also known as focal areas. These areas were chosen because of the high potential they offered for restoring quail and, presumably, songbirds, which depend on similar early succession habitat. Several studies from North Carolina State University (NCSU) as well as data from the Commission support the assertion that creating and managing early succession habitats such as field borders in focal areas can dramatically increase numbers of summer quail, fall quail coveys, and winter songbirds. Less is known, however, about the potential of agriculture-dominated focal areas for breeding songbirds that use early succession habitats. So, just how suitable are these focal areas for early succession breeding songbirds?

NCSU Breeding Season Songbird Study

In 2004, we began a study of the effects

of field border shape (linear vs. nonlinear) on farms in focal areas and non-focal areas. Non-focal areas were forest-dominated landscapes. We monitored songbird density on 24 Murphy-Brown, LLC farms in the Coastal Plain for three years (one year before the establishment of field borders and two years after their establishment). We were mainly interested in a handful of “focal species” that we considered most likely to respond to the establishment of field borders. This colorful (literally) group of birds included indigo bunting, blue grosbeak, red-winged blackbird, common yellowthroat, eastern meadowlark, grasshopper sparrow, and field sparrow. On half of the farms, we also located and monitored nests to determine how successful songbirds were at fledging their young. We focused on locating and monitoring indigo bunting and blue grosbeak nests because they were easy to find and abundant.

Surprisingly, we documented no effect of field border establishment on focal

species density or nest success. We believe this was because of the overall low acreage of field border habitat spread across all 24 farms as well as the scarcity of shrubs for nesting substrate in the borders. Despite the lack of field border effect on songbirds, we discovered some interesting and encouraging patterns on farms in focal areas.

Drum Roll Please...

Target songbird density was 55 percent higher on farms in focal areas than on farms in non-focal areas. Moreover, combined indigo bunting and blue grosbeak nest success rates were 129 percent higher on farms in focal areas! These results are encouraging. First, the combination of higher songbird density and higher nest success rates of two of our most common target species indicates that the management potential for breeding early succession songbirds is quite high in focal areas. Perhaps more important, these findings indicate that the same landscapes with

Birds of a feather: These songbirds all benefit from early-succession. Opposite page: indigo bunting. Right: yellow-breasted chat, indigo bunting and blue grosbeak.



CHRIS MOORMAN/NCSU



CHRIS MOORMAN/NCSU



CHRIS MOORMAN/NCSU

high-management potential for quail have high management potential for early succession songbirds during the breeding season.

Why are Focal Areas Suitable for Early Succession Songbirds?

We believe the nest predator community likely differs between agriculture-dominated focal areas and forest-dominated non-focal areas. Potential nest predators range from raccoons and opossums to crows, blue jays, and grackles. In recent years, more attention has been given to the importance of snakes as nest predators, especially black rat snakes. Based on the location and condition of depredated songbird nests in our study, we believe that black rat snakes were the primary nest predators. Radio-telemetry studies of black rat snake movements reveal two important patterns. First, black rat snakes seem to prefer to remain in close proximity to woody/forest cover and forest edges. Second, black rat snakes seem to be extremely reluctant to cross large open spaces such as agricultural fields (probably out of fear of becoming a meal for a hawk). If black rat snakes were the major nest predator in our study, then their preference of woody habitats and avoidance of open fields probably explains the major difference in nest success rates in focal areas and non-focal areas. Specifically, the agriculture-dominated focal areas provide less-preferred habitat (forests and forest edges) and greater prevalence of more hostile features (large, open fields) for black rat snakes. As such, the influence of black rat snakes on early succession songbird nests in these landscapes may be much less important.

What's Next?

We hope to confirm our suspicions about the relative importance of black rat snakes as nest predators for birds in focal and non-focal areas with an additional study in the near future. This new project will use special wildlife cameras to record nest depredation events. If black rat snakes are the primary nest predator for many of these songbirds, and black rat snake activity indeed is concentrated in close

proximity to forest edges, then simple modifications in field border design (such as width and placement) may reduce the impact of this nest predator on songbirds in both focal and non-focal areas. In the meantime, landowners and participants in field border programs can rest assured that the landscapes being targeted for quail management by the Commission also appear to be good landscapes for early succession breeding songbirds. ♣



JASON RIDDLE/NCSU

Blue grosbeak nestling preparing to fledge from its nest in a field border.

“... fire is a necessary part of the natural world.”

levels by prescribed burning, and we can benefit native and fire-dependent plant and animal species in the process.

Another advantage of prescribed burning is that it can be targeted during weather conditions that reduce the likelihood of a damaging fire. Hazard reduction burning can and will cause problems, such as smoke settling around houses and occasional fires escaping, but these problems are small compared to those caused by unplanned wildfire coming with the wrong weather.

In extreme cases, unplanned fire causes not just property damage but also loss of human life.

History tells us that the forests of our state will eventually burn. The question is will they burn under controlled circumstances in a beneficial manner, or will they burn in a large-scale catastrophic fire like the one in Yellowstone in 1988?

Most forestry, wildlife, and conservation groups are in favor of using fire as a silvicultural tool. The North Carolina Prescribed Fire Council, an organization with members from private interests, as well as state, federal, and local government, is pulling together to build an alliance in

support of prescribed burning. You can learn more about their efforts, and prescribed fire in general, at their Web site, <http://ncprescribedfirecouncil.org/>.

Despite a bad reputation in public discourse, fire is a necessary part of the natural world. Finding ways to use prescribed fire on our landscape is critical for maintaining healthy populations of fire-adapted plants and animals like longleaf pine, bobwhite quail, and red-cockaded woodpeckers. Moreover, keeping fire in the 21st century toolbox is important to the future of our state economy and the long-term safety of our citizens. The next time you hear people refer to fire as “bad,” please help educate them about the complexities of this necessary force of nature. ♣

New Farm Bill Passed in June

Three Programs Will Help Wildlife in Coming Years

After months of debate and delays over the Farm Bill, the president and Congress agreed to disagree in June and passed the “Food, Conservation, and Energy Act of 2008.” Much of what has been written or said about the new Farm Bill should be considered preliminary because interpretation of the new Farm Bill’s content and rule-making is still underway inside the Washington, D.C. beltway. With that in mind, here is some information about three programs and what assistance they might bring to small game and other wildlife during the next five years.

CRP (Conservation Reserve Program)

Although nationwide enrollment for CRP has been reduced, reauthorization of CRP allows continuous enrollment of cropland in high-priority upland habitat practices like Habitat Buffers for Upland Birds (CP33), Restoring Longleaf Pine

(CP36), and the new Grassland Bird Habitat (SAFE, CP38e).

The new law also opens up a possibility for providing new incentives to improve wildlife habitat on existing CRP forest contracts using wildlife thinning and prescribed burning. Since loblolly pine plantations are North Carolina’s most common CRP cover type (in terms of acreage), those incentives could be an especially important opportunity to enhance a large amount of habitat.

EQIP (Environmental Quality Incentives Program) and WHIP (Wildlife Habitat Incentives Program)

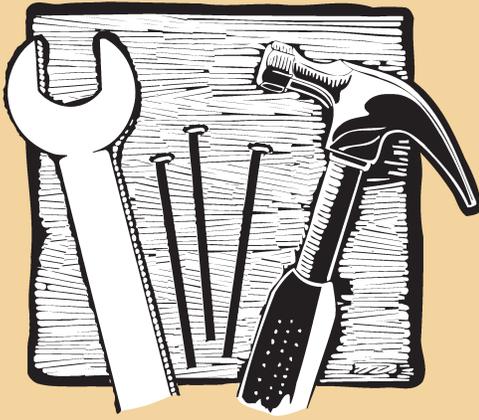
In North Carolina, expect the role of both programs to expand in the direction of providing incentives for stewardship management of private non-industrial forests. Incentives for implementing a forest-management plan involving wild-

life thinning, prescribed burning, mid-story control, restoration of savanna habitats, or cut-back woods edges are examples of things likely to be offered by those two NRCS programs.

Considering the on-going drought problems in western North Carolina and drought damage that occurred throughout the state, the Commission and NRCS are hopeful that EQIP can be used to convert fescue and other exotic grass pastures to hardy native warm-season grasses like big bluestem and Indiangrass. Growth in that trend was apparent earlier this year; let’s hope this continues.

At this point, it is hard to provide more information. Perhaps by the time the Spring 2009 issue of the *Upland Gazette* is published, a more thorough update on final Farm Bill rules can be provided. ♣

By Matt Flint, Wildlife Biologist,
Natural Resource Conservation Service



Land Managers' **TOOLBOX**

Many private landowners have an interest in managing their pine forests to promote an open forest with a grass-dominant understory for the benefit of quail and other wildlife. Many have concerns, however, about attracting the federally endangered red-cockaded woodpecker (RCW) that also likes mature, open pine forests. Because RCWs are classified as endangered, their presence on a property requires landowners to provide a minimum acreage of suitable habitat for the birds and to protect any existing RCW cavity trees. Therefore, many landowners have become fearful that their habitat management might attract RCWs to their pine forests, and instead, they avoid management that might create good RCW habitat.

In response to these fears, the North Carolina Wildlife Resources Commission requested and received authorization in December 2006 from the U.S. Fish and Wildlife Service to administer a Statewide RCW "Safe Harbor" Program for North Carolina landowners.

What does Safe Harbor require?

Landowners must allow a baseline survey of the property to determine whether or not RCWs are currently using the property, and they must be willing to sign a Safe Harbor Management Agreement (SHMA). If no RCWs are present, the baseline will be zero. If RCWs are present, landowners will be required to maintain habitat for those birds.

In both cases, landowners will not be legally responsible for any RCWs that move onto the property after signing a SHMA (above-baseline RCWs). They also may make any lawful use of their property, even if it results in the incidental take of those above-baseline birds. In this situation, landowners must notify and allow the Commission and/or U.S. Fish and Wildlife Service the opportunity to move any above-baseline RCWs. Other requirements include allowing access to the property, implementing one or more beneficial management techniques, and completing an annual report with help from the Commission.

What qualifies as beneficial habitat management techniques? The most common habitat management practices implemented on enrolled properties are controlled burning, mechanical/manual hardwood removal, precommercial/

commercial thinning, planting longleaf pine, and chemical hardwood control.

Who should apply? Any landowner with property in the Piedmont or Coastal Plain regions of North Carolina with at least some pine forest and an interest in managing these pines with controlled burning or other means to create and maintain a mature and open, park-like forest should apply.

How do I get more information?

For more information, you can contact Jenna Begier at 252-514-0170 or jbegier@embarqmail.com. You can also download and print factsheets at www.ncwildlife.org under Wildlife Species and Conservation >> Wildlife Diversity Program >> Projects >> Red-cockaded Woodpeckers. ♣

By Jenna Begier,

Red-cockaded Woodpecker Biologist

North Carolina Wildlife Resources Commission



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