



# THE UPLAND GAZETTE

North Carolina Small Game Notes

Winter 1996

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## Farm Bill Update

One way the wildlife community is working to improve conditions for cottontails and bobwhites is influencing programs offered by federal agencies administering the 1996 Farm Bill. Because farm bill programs have such a far-ranging impact on the landscape (influencing everything from crop-planting techniques, to reforestation programs, and pasture renovation), they are unparalleled in their potential for widespread small-game habitat improvements.

The Natural Resources Conservation Service and Farm Services Agency are reviewing biological recommendations for federal farm program improvements developed by Wildlife Commission biologists. Commission biologists met with county groups of farmers and agency personnel and found support for the effort.

Members of Quail Unlimited, Ducks Unlimited, National Wild Turkey Federation, North Carolina Sportsman's Alliance, the North Carolina Chapter of the Wildlife Society and the Wildlife Commission offered comments on the new farm bill during an input meeting in mid-October.

The farm bill has provided an opportunity for increased interaction between wildlife enthusiasts and farm agencies. A successful effort can't be measured until the practices are implemented. Increased small game numbers will not be achieved without major changes in the types of planting materials used, the amount and timing of farm maintenance, and the maintenance practices used. Continued teamwork and commitment are needed to reach the resources' potential.

## Quail Research Takes the Next Step

North Carolina State University researchers have completed a four-year study to determine the impacts of pesticides and ditch bank cover on eastern North Carolina quail populations. They are also initiating a new project. The completed research project, supported by the N.C. Wildlife Resources Commission and numerous others and conducted under the direction of Dr. Pete Bromley (NCSU Zoology Department), made significant advances in our knowledge of quail population biology on intensively-farmed landscapes.

Researchers learned that pesticides commonly used in row crop agriculture have minimal direct effects on young or adult quail. However, pesticides are implicated in the quail decline by reducing insects below levels required by young quail and by killing weedy plants that provide food and cover (Figure 1). The good news is that the additional structure provided in no-till crop fields increased

insect populations and quail chick feeding rates to a level comparable to high-quality brood habitat.

Studies using radio telemetry studies on an intensively farmed area in Dare County and farm surveys in Wilson County identified a lack of early summer nest and brood habitat as a serious problem on farmed landscapes. Limited availability of nest cover in early summer reduced the rates of nesting success and shifted reproduction to later in the nesting season.

Based on the findings from the first study, university researchers and Wildlife Commission biologists are cooperating to implement potential solutions on private farms across eastern North Carolina. Groups of farmers in Bladen, Hyde, Tyrrell, and Wilson counties have agreed to cooperate in a study designed to determine the effect of habitat improvements (field borders, no-till farming, and alternatives to

*(continued on back page)*

Figure 1. Amount of time quail chicks\* need to satisfy daily insect requirement.

Field or Field Border	Hours Required
No-till Soybeans	4.2
Fallow Fields	4.3
Soybean Field Edge	9.3
No-till Corn	11.1
Corn Field Edge	15.2
Conventional Cotton Field	18.1
Conventional Soybean Field	22.2
Conventional Corn Field	25.1

\*10-13 day-old chicks.

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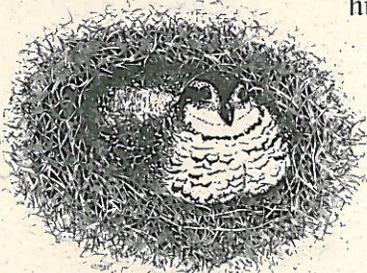
### Woods Birds

Those of you who hunt in the Southeast or Sandhills region of the state during the upcoming season may find more than the usual number of quail have become "woods birds". If you hunt near longleaf pine woodlands and have trouble locating birds along the typical field edge or clear-cut habitat, "take to the woods".

The reason is simple: food. Longleaf pine is a masting species, producing almost no seeds in some years and bumper crops in others. This year is going to be one of the latter, according to the U.S. Forest Service which indicates this is a bumper cone year across the Southeast U.S. Bobwhites love the large longleaf pine seeds and when they are available will often feed in the safety of the woods rather than

venture to field edges where hunters in all forms tend to congregate.

If your longleaf lands are too thick to hunt, consider initiating a prescribed burning program to open up the stand. The birds will benefit from better ground cover, and you will have a more enjoyable time chasing them through the open woodlands. ♦



ILLUSTRATED BY KIMBERLY K.C. SCHOTT

Fox squirrels, larger and more colorful relatives of the gray squirrels in your yard, are coming to Cherry Point Marine Corps Air Station. The Wildlife Commission and the Cherry Point Department of Natural Resources are cooperating in a pilot project to restore this prestigious small mammal to



its native habitat. While fox squirrels are common throughout areas of the central Appalachian and Midwestern States, the Southeastern Coastal Plain subspecies has become restricted to isolated pockets of suitable habitat due to widespread loss of mature pine/oak forests with open understories. Such habitat degradation has resulted primarily from unrestricted logging in the early 20th

### Quail Unlimited Habitat News

A \$3,000 grant to North Carolina Quail Unlimited will be used to install permanent fire lines on Sandhills Game Land in Richmond and Scotland Counties. The Grant from Exxon Corp. is being matched by a cash contribution from the State Council of Quail Unlimited and in kind contributions from the N.C. Wildlife Commission.

The permanent fire lines will allow the Sandhills forestry staff to expand the burning program into areas which have been burned infrequently in the past because of poorly accessible fire-lines. Bobwhites and other grassland bird species inhabiting the longleaf pine forests on the game land will benefit. ♦

### The Fox Squirrels Are Coming!

century and a lack of controlled burning over the last 50 years. However, in some areas, suitable habitat has re-developed in the years following fox squirrel extirpation, and these areas, starting with Cherry Point, are where we hope to restore the species.

Camp Lejeune Marine Corps Base, Oak Grove Military Reservation, private lands along the Trent River and Sandhills Game Land are providing source squirrels for the restoration at Cherry Point. The techniques developed during the Cherry Point restoration can be used to restore fox squirrels to other suitable areas in the North Carolina Coastal Plain, perhaps even using Cherry Point as one source area. Fox squirrels will be trapped in nest boxes and relocated to Cherry Point during January and February 1997. Moving the squirrels in nest boxes during the winter months should result in less disturbance for the squirrels and increases the likelihood of moving pregnant females. We will let you know how the project proceeds in future issues of *The Upland Gazette*. For those of you who have the opportunity to visit Cherry Point during 1997, keep an eye out, because "the fox squirrels are coming".

—Mark Jones  
Assistant Small Game Project Leader

**"The Squirrel Hunter"**—A newsletter for squirrel hunters is being published by the newly formed "N.C. Squirrel Hunters Association." The first issues have helpful information on everything from planning a summer vacation to taking advantage of opportunities for summer squirrel hunting, sighting in the squirrel rifle, and recipes. For more information contact: N.C. Squirrel Hunters Association, 7136 Lisbon Road, Clarkton, N.C. 28433.

## The Passing Of Gentleman "Bob"

Bobwhite quail have long been an important and colorful part of life in North Carolina. Most North Carolinians growing up in rural areas during the first two-thirds of this century spent many pleasant days afield with dog and gun. During this time, "Gentleman Bob" also helped the Tar Heel State earn a reputation among wealthy Northerners as a fine place to spend the winter pursuing quail. North Carolina became highly regarded for quail hunting, field trials, and exceptional bird dogs. The famous ornithologist and quail researcher, Herbert Stoddard, visited the Pinehurst area in the 1930s and praised local hunters and landowners for their successes managing bobwhite.

Beginning in the 1970s things began to change as North Carolina's rich bobwhite heritage started a spiraling decline that has continued. According to U.S. Fish and Wildlife Service breeding bird surveys, quail have declined by 3.6 percent per year in North Carolina since the mid-60s. Further, quail declined by approximately 6.2 percent per year from 1982 to 1991.

These statistics are frightening, and the situation is even more foreboding when one considers that quail hunting also dropped markedly over these same years. Before the 1970s, quail hunting was one of the top three hunting activities in North Carolina with more than 175,000 hunters annually harvesting between 2.2 and 2.8 million birds. But last season, Tar Heel quail hunters numbered only 28,000, and harvested just 225,000 birds. Additionally, our quail hunters are not as enthusiastic as they once were. The average hunter today only hunts half as often as during the mid 1960s. One of North Carolina's most noble traditions is in danger of extinction.

While it will not make you feel any better about the situation,

you should be aware that the bobwhite quail decline is not limited to North Carolina. According to records by state game departments and the U.S. Fish and Wildlife Service, bobwhites have experienced long-term declines in 22 of 28 states with significant populations, and populations in five of the remaining states were stable but not increasing.

Yet the problems are not limited to quail. Over half of the grassland/shrub guild of birds—13 nongame species with similar life history requirements to the bobwhite—have declined in 23 of 26 states. These statistics obviously point to a serious problem with landscape conditions.

What has caused this decline and can it be reversed? Volumes of research from both game and nongame perspectives generally agree that habitat is the driving force behind the nationwide decline of bobwhite quail and associated species. In proper habitat, bobwhites and similar birds, which biologists refer to as "r-selected" species, can reproduce at very high rates and are naturally adapted to withstand very high annual mortality. Nonetheless, in the poor habitat available today in most areas, predation, pesticides, weather, and other factors become more serious and take a higher toll than would be normal under "natural" conditions.

Numerous published accounts have documented changes in the landscape over entire regions in the past 30 to 40 years. Although, many quail hunters in North Carolina believe that an area has not changed in the last generation, hunters must carefully consider the entire landscape around



ILLUSTRATED BY KIMBERLY K.C. SCHOTT

their farm or hunting spot. Consider ages and overstory condition of forested stands, the amount of early-succession vegetation, and agricultural practices. Depending on the area of the state, it's a good bet that in many instances you can point out closed-canopy pine plantations that used to be clear-cuts, thick unburned forests that were once regularly burned woodlands, cleanly mowed ditch banks that were once overgrown tangles of "quail-friendly" weeds and briars, or fescue pastures that once contained native grasses, lespedezas and weeds. Even if small areas of farms are intensively managed for bobwhites, the poor habitat characteristics on surrounding land can adversely impact quail on islands of good habitat through time.

The only hope we have for improving the state of bobwhites and related birds is to change the way people manage land on a large scale. That is why programs such as the 1996 Farm Bill (see farm bill article in this issue) are so important. We will keep you updated on what the Wildlife Commission is doing to influence land management for bobwhite quail.

To those dedicated individuals who still pursue "Gentleman Bob," hang in there and happy hunting!

—Mark Jones

Assistant Small Game Project Leader

## Tar Heel Squirrel Hunting Offers Traditional Challenge

Whether you are slipping through the bottoms down east, walking the hardwoods of the piedmont, or working that feist in the mountains, squirrels are still a favorite game animal for many of us. Compared to many of our small game species, gray squirrels are holding their own, if not thriving. Yet, even though most of us cut-our-teeth hunting squirrels, the vast majority no longer pursue this small but tough and agile quarry.

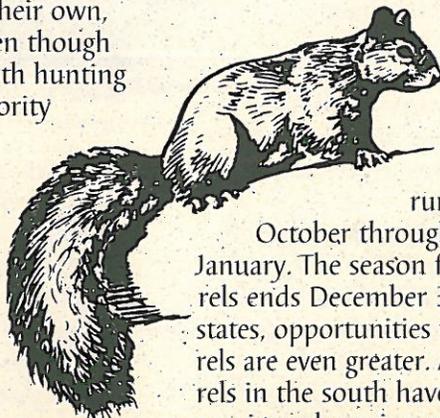
Squirrel hunting is an American tradition. Frontiersmen developed their shooting skills by hunting not deer, bison, or elk, but the gray squirrel. For example, in 1834, two teams of fifty men each participated in a three day shoot. Although no one knows the total number of squirrels taken, the top two hunters shot 900 and 783 squirrels apiece. Those days are gone forever, as well as the hardwoods that supported them, but for the modern small game hunter faced with low populations of other upland game, it's squirrels that fill the bag.

A crusty old upland game hunter once said, "You *shoot* birds, but you have to *hunt* squirrels." Well, things haven't changed much since. Squirrel hunting is big on the basics. Stealth and a keen awareness of your quarry, a .22-caliber rifle and some cartridges, an old woodlot and your set. Talk some old friends into joining you and things couldn't get much better.

Although millions of squirrels have been eaten over the years—a testimony to the quality and flavor of the meat—most hunters despise having to skin them. One simple solution is to skin them on

the spot. When warm, they skin easily, without any fuss. It only takes a minute or two. Place the carcass in a plastic bag (a bread bag works fine) and your ready for the next one.

In North Carolina, seasons are long, with liberal bag limits (8 per day for grays, 1 per day for fox) and generally run from mid-



October through the end of January. The season for Fox squirrels ends December 31. In some states, opportunities to hunt squirrels are even greater. As most squirrels in the south have two litters, one in early spring and then again in late summer, seasons are set to allow hunting between these two periods, generally in May through July, as well as in the general fall hunting season. Thus, dedicated squirrel hunters in these states can hunt almost all year.

The variations in squirrel populations are related to food availability. The fall mast or "nut" crop has the strongest influence on squirrels, although a late spring frost that kills early buds and flowers can also wreck havoc with the early litters of spring.

In times of good mast production, populations increase as squirrels produce more and healthier young. Following a poor mast

year, some females have only one litter, or they don't breed at all.

As we cannot control the weather or mast crops, our only management alternative is to provide adequate food and shelter for squirrels on our property. Here are some things we can do:

- Select for mast-producing trees such as oaks, hickories, and beech. Select for a variety of oaks, both red and white if possible, to insure some mast production every fall.

- Leave hardwood corridors along streamsides and in drainages unsuitable for pines.

- Protect understory trees, shrubs, and vines, as they too provide food sources.

- Leave any large-cavity trees, both living and dead. Even though squirrels will build leaf nests, they prefer cavities. Without these "den" trees, management is difficult. Artificial nest boxes greatly improve gray squirrel production. These nest boxes should be 2 feet deep, 10 inches square, and have a three inch diameter opening at the very top next to the trunk of the tree. One per acre is a good number.

Landowners and hunters alike should remember that both gray and fox squirrels depend on hardwoods and that any forest management decisions, once carried out, are not quickly changed and can have very long-term impacts on squirrels and squirrel hunting.

—Tom Padgett

District 4 Wildlife Biologist

Some good sources for additional information on squirrels and squirrel hunting are:

*The Natural History of Squirrels*, by John Gurnell. 1987. Facts on File Publications. New York. 201 pp.

*All About Small-Game Hunting in America*, by Russell Tinsley, ed. 1976. Winchester Press. 308 pp.

*Sportsman's Guide to Game Animals*, by Leonard Lee Rue III. 1968. Outdoor Life Books, Inc. 655 pp. (a new edition has been published).

We are working to expand our mailing list to include other interested landowners and sportsmen. Please pass along your copy to friends who may be interested. Send names of others who may find the information useful to: The Upland Gazette, Division of Wildlife Management, N.C. Wildlife Resources Commission, 512 N. Salisbury Street, Raleigh, N.C. 27604-1188.

(Note: Hunters who participated in last season's Avid Quail and Grouse Hunter Survey will automatically be included in future mailings and do not need to reply.)

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Name \_\_\_\_\_

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### Big-Game Hunters Support Small-Game Effort

Safari Club International provided funding for the initial issue of *The Upland Gazette*. Safari Club International (SCI) is a worldwide organization that promotes wildlife conservation through responsible utilization. It also is the world's largest and most active international big-game hunting organization with more than 140 chapters on six continents. Its motto is "Conservation of Wildlife, Protection of the Hunter and Education of the People." In addition to the International Wildlife Museum in Tucson, Arizona, SCI operates the American Wilderness School near Jackson, Wyoming, and apprentice hunter's program in Texas, and publishes the award-winning *Safari* magazine and *Safari Times* newspaper.

SCI and its chapters have spent more than \$21 million on wildlife conservation projects around the globe over the last 22 years. Collectively, SCI members contribute \$34 million annually to wildlife and habitat conservation. The Carolinas Chapter, founded in 1979, accepts members from both North and South Carolina. The Chapter's activities raise money to benefit local and national conservation organizations. The chapter hosts functions several times a year and is proud to be one of the most successful chapters in the United States. Although many members of SCI hunt worldwide, American hunting is an important focus of the organization. Membership in the Carolinas Chapter of SCI provides a network for big-game hunters to exchange information and experiences on hunting and travel destinations. Social

and field events organized by the chapter are always popular and well attended.

If you have an interest in applying for membership in the Carolinas Chapter of SCI, please contact Mr. Tod Thorne, club president at (704) 846-1472. A membership application will be forwarded to you along with additional information about the National Chapter and Carolinas Chapter of Safari Club International. ♦

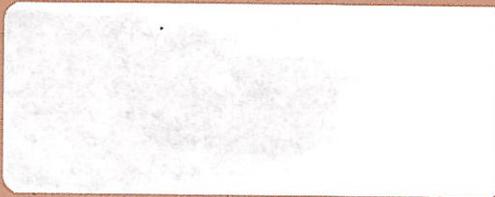
### Farm/Wildlife Workshop

A Farm/Wildlife Workshop is being conducted January 23 from 3:00 p.m. - 7:30 p.m. at the Cunningham Research Center near Kinston. Contact Charles Albriton (Contentnea Creek Quail Unlimited) at 919-747-5411 or 919-522-1994 for details. ♦

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### Quail Research *(continued)*

mowing) alone and in combination with the removal of nest predators. University and Commission personnel will evaluate the response of quail and songbird populations to this innovative management technique as well as its acceptance by farmers.

The goals of the new project are to develop and implement techniques of habitat improvement that will increase quail production and be economically feasible and socially acceptable to farmers and landowners in eastern North Carolina. Project coordinators are working closely with county, state and federal agricultural agencies. It is hoped that the savings in topsoil and in the costs of ditch maintenance and mowing, as well as improved water quality and increased wildlife populations, will encourage similar habitat management throughout the

crop-growing areas of the state. The ultimate goal of the project is to encourage neighbors to adopt the same practices that prove beneficial on participating farms. We are already seeing an increased interest in these practices from farmers in Wilson County where N.C. State and Wilson County Cooperative Extension personnel began the early stages of the project about one year ago.

If the project is successful and widespread changes are made to farming, quail populations will increase. We will keep you updated on the project as new developments arise. ♦

### Sugar Creek Habitat Project

Early-succession forest wildlife will benefit from a new long-term, landscape-scale habitat project being planned for U.S. Forest Ser-

vice lands in Jackson County. Ruffed grouse, woodcock, and a number of nongame species that are declining are among the wildlife species that will be helped.

The Southern Appalachian Chapter of the Ruffed Grouse Society has been the primary force behind the project. Unfortunately, the project has been held up due to complications with management area alignments, personnel changes and other "red tape" matters associated with working with the federal government. Representatives of the Ruffed Grouse Society, the N.C. Wildlife Resources Commission, and the USFS recently held a very positive meeting concerning the project's future. We will keep you informed of progress on the project. ♦

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