

## FROM THE QUAIL LAB...

BY BILL PALMER

### Bobwhite Populations

Covey call counts in the Red Hills indicated bobwhite populations were equal to or slightly lower than bobwhite populations last November. The drought during April and May followed by heavy rains in June and throughout the summer in some areas resulted in lower than expected summer survival of adults and chicks. We expect similar hunting success to last season, but warm conditions may reduce covey finds early in the season which will suggest bobwhite populations are lower than they actually are.



### Large differences between fed and unfed area on TTRS:

Bobwhite populations respond to habitat created by thinning and burning upland forests, or fallowing fields. The degree of response, however, depends on many factors, including weather conditions, predator type and abundance, alternative prey items for predators, food supplementation, and their own abundance on an area. Habitat provides the opportunity for bobwhites populations to thrive but doesn't always guarantee it each

year. This year, on Tall Timbers, our call count estimate indicated a 30% decline on courses without food supplementation, versus a 10% increase with food supplementation.

### Quail/Ranchland Initiative Gains Momentum

Financial assistance is now available to landowners in Charlotte, DeSoto, Glades, Highlands, and Sarasota counties interested in improving bobwhite habitat. This historic opportunity was made possible by a collaborative partnership (USDA NRCS, FWC, TTRS, UGA and UFL) to recover bobwhite on ranchlands in Florida and is funded through the USDA, Environmental Quality Incentives Program (EQIP). The goal of this project is to improve bobwhite and songbird habitat on 54,000 acres of native rangelands. These counties are currently part



Ranchland in South Florida.

of a regional project focusing on increasing quail populations in Florida. The financial incentives will be in the form of cost-share payments for conservation practices: prescribed burning, brush

management (double-drum roller chopping, disking, herbicide application), and range planting (plantings for wildlife habitat).

### Predator management

#### Project switches areas:

After three years of reducing nest predator populations on Pebble Hill, the bobwhite population increased each year. This year, we stopped trapping predators on Pebble Hill and began on Tall Timbers for three straight years. On Pebble Hill, high adult mortality resulted in the lowest nesting and chick production in four years. On Tall Timbers, nesting success was the highest we have measured in the Red Hills, 85%. The long-term population response to these changes has not yet been measured. However, after switching the predator management treatment the second pair of study areas in Albany, Georgia administered by the Albany Quail Management Project, also demonstrated similar results.



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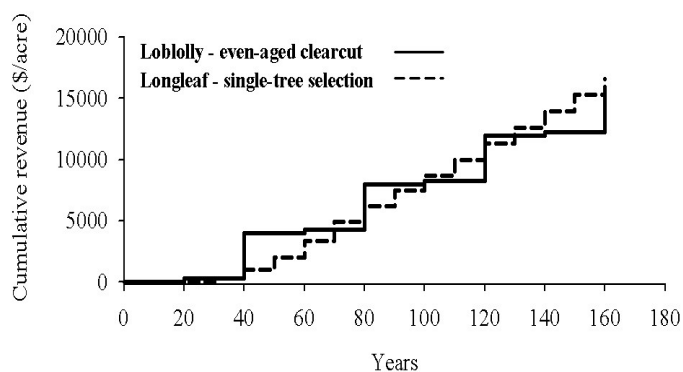
## FIRE ECOLOGY

BY KEVIN ROBERTSON

### Economics of natural longleaf pine management

Sustainable harvest of longleaf pine forests through single-tree selection is a long-standing tradition in the Red Hills. However, most landowners throughout the south would like further evidence of its economic potential before deciding to maintain or restore naturally-structured pinelands. I conducted research to compare the potential economics of a 40-year rotation single-aged, densely-stocked stand of loblolly pine (*Pinus taeda*) with uneven-aged management of longleaf pine stand (*Pinus palustris*) thinned every decade to 60 ft<sup>2</sup>/acre. The analysis considered the higher percentages of high quality products produced by longleaf, such as utility poles, clear wood, and high density wood, as well as the lower risk of pathogen and insect attack, management costs, and the value of alternative land uses, including pine straw harvest and hunting leases.

Considering timber values alone, the analysis predicted that at 40 years post-planting at Site Index 80, the revenue gained from clear cutting loblolly pine was almost four times greater than that from thinning and single-tree selection of the longleaf stand. However, projected cumulative revenue was comparable at about 80 years and greater for natural longleaf thereafter. When moderate pine straw harvesting was included for longleaf, cumulative profits for longleaf exceed loblolly after 60 years and maintained a 25 % advantage thereafter.



In the future, easements for carbon credits may offer around \$10 per ton of carbon sequestered on newly planted stands. Also, native seed harvest promises to be a profitable business. Hunting leases for quail and bird watching may be much more valuable than those for deer and turkey. Thus, a shift to ecologically-sensitive forest management may in the long-term be more profitable than traditional pine plantations while making invaluable contributions to native species habitat, soil conservation, and greenhouse gas sequestration.

### Participation in LANDFIRE program

In response to severe fuel and fire conditions in many parts of the country, the federal government developed the National Fire Plan, implemented by the U.S. Forest Service and Department of

the Interior. A large part of this plan is the LANDFIRE project, which is a multi-agency effort to provide geographical data on vegetation, fire fuels, and the status of ecosystems throughout the country. The Fire Ecology lab and Research Director Ron Masters are participating in LANDFIRE by developing ecosystem computer models for certain southeastern communities. Also, we will provide detailed data on local fuels collected during our Pineland Fuels Study, putting the Red Hills on the map in this national effort.

## VERTEBRATE ECOLOGY

BY JIM COX

### The influence of the Red Hills region continue to spread

In October, the Vertebrate Ecology section took four juvenile Red-cockaded Woodpeckers from properties in the Red Hills and moved them to new homes at the Jones Ecological Research Center.

This brings the total number of Red Hills woodpeckers moved to the Jones Center to 17, and conditions at the Jones Center have reached the point where the population can be left to grow on its own. The Vertebrate Ecology Program would like to thank Mrs. Cindy Webster (Dekle Plantation), Mr. Warren Bicknell (Sinkola Plantation), and the Sedgwick Family (Millpond tracts) for allowing us to monitor woodpeckers for this important augmentation work.

The spate of hurricanes that passed through in August and September appeared to have only slight impacts on old-growth longleaf pines on the Wade Tract. A cursory survey conducted in late September found approximately four large trees felled per ten acres, and most downed trees had signs of root rot or else were weakened by severe scars at their bases.



Hurricanes had minor impact on old-growth longleaf pines on the Wade Tract.

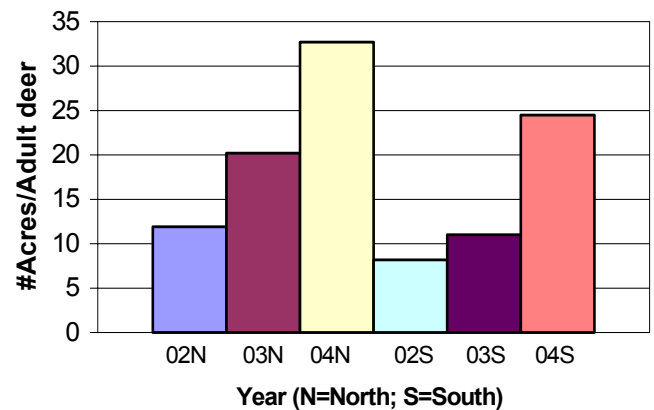
We dodged a bullet, as they say; the last major storm to hit the Wade Tract felled greater than 15% of the mature canopy trees.



## Two new properties sign *Safe Harbor Agreements*

Two important new properties have signed Safe Harbor Agreements to help maintain their woodpecker populations and take advantage of habitat-management incentives available through the Georgia Department of Natural Resources. The additions of Longpine Plantation (Ford family) and Boston Place (Wilford/Whitney families) bring the total area of Red Hills properties under Safe Harbor to 61,600 acres, and the properties include greater than 50% of the known woodpecker territories in the region. The Vertebrate Ecology Program hopes to have over 70,000 acres enrolled by the end of 2005.

## TTRS 2002-04 spotlight census



## FORESTRY

BY RON MASTERS

### Best wishes to Stuart

Stuart Jackson our Station Forester, will be leaving Tall Timbers at the end of this year. Stuart has been instrumental in starting forest inventory work on Tall Timbers and working with historic canopy cover assessment. Both of these projects are an important basis for long-term research at the Station. He has also worked on research about the influence of fire and thinning on loblolly pine growth rates. We will miss Stuart and wish him all the best.



## Midstory hardwood encroachment

We are currently evaluating midstory hardwood encroachment at Pebble Hill Plantation. We expect to map the areas and take efforts in early 2005 to rectify the problem. Other duties included annual photo points, fall disking, and blocking of the quail census areas. The annual photo points are helpful in documenting vegetation changes over time as depicted below.



Annual photo point 46 East on 11-2002 (top) and 11-2004 (bottom)

## LAND MANAGEMENT

BY ERIC STALLER

### 2004 Deer Census Completed

Each year we use the standard protocol used by the Florida Wildlife Conservation Commission to census deer on Tall Timbers. We travel the same ten-mile route ten times per census period and alternate the direction in which we drive the route each time. We use ocular estimates of distance on each side of the route to determine the area sampled. As seen from the graph below our deer densities have been decreasing each year. The most plausible explanation is that Tall Timbers has been more intensively managed for bobwhite in the last three years, hence the overall lower vegetation stature and structure has removed the escape and bedding habitat and has caused the deer to move into the drains and hammocks. We will be examining our visual estimates more critically in the coming census periods.



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## Your Gift Makes the Difference!

**BY VANN MIDDLETON**  
Development Office

As 2004 draws to a close; we wish to thank each of our loyal members for their generous financial support of the research and conservation programs of Tall Timbers. It is because of special members such as you that we have achieved tremendous success in advancing our mission of promoting good land stewardship through research, conservation and education. Throughout the year we hope that you have enjoyed the benefits of membership at Tall Timbers by attending one of our research or conservation field days; ordered one our research publications; or implemented land management advice offered by our professional staff. As the tax year draws to a close, we hope that you will consider making an extra gift to help us reach our annual fundraising goal. Contributions to the annual fund allow our programs to continue to grow and attract the best scientists and conservation professionals to the station. Regardless of the size of your contribution, the most important benefit you will receive is the knowledge that your gift truly makes a difference. We thank you for what you have already done and hope that you will always consider your investment in our future a worthwhile and meaningful endeavor.

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Happy



Holidays!