

FROM THE QUAIL LAB...

BY BILL PALMER



Female bobwhite feeding

Quail Survival Better

With good cover, ample hard mast, and supplemental feeding, adult bobwhite survival has been good to excellent to this point. Mortality from hawk predation is about a third of what it was last year. While this bodes well for carryover and chick production next summer, we are not out of the woods yet as bobwhites often suffer high predation during March-April.

Testing drag to improve habitat

Quail populations often increase following soil disturbance cause by hardwood removal cuts. Three years after timbering and frequent fire open pine stands can develop a heavy grass ground cover which is less suitable, at times, to bobwhite. While disking in the woods to create field-like conditions is possible to increase weeds, disks are prone to breakage and they can tear up tree roots. We are testing a simple drag designed to disturb the top layer of the soil without breaking the soil. It may prove useful for rejuvenating stands that have become stagnated with grass.



A simple drag designed to disturb the top layer of the soil without breaking the soil.

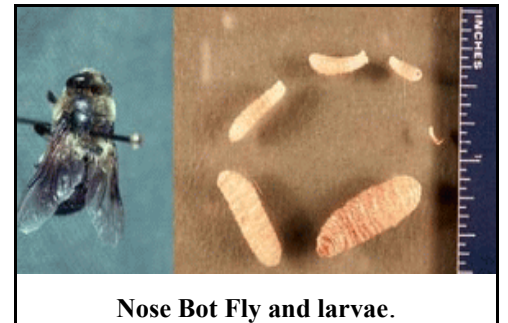
Avian Pox: We have observed a mild outbreak of avian pox this year. About 2% of bobwhites we have handled showed lesions on their legs indicating the infection with pox. This form of avian pox does not cause mortality unless a bird has a severe outbreak

that physically influences its ability to feed or see. We also have observed a small number of bobwhites with grayish, milky eyes. This appears to be a bacterial infection but the disease agent has not been identified at this point.



A bobwhite with grayish, milky eyes

Grubs in Deer: Hunters have reported seeing inch long maggots in the nose and throat of deer when cleaning harvested animals. These critters are likely nose bot fly maggots. Flies eject minute larvae into the nostrils of the deer. The larvae work into the nasal passages and retropharyngeal pouches in the throat where they attach and grow. When full grown they emerge from the mouth or nose and form a pupae that hatches in a couple weeks. Infected deer are only rarely harmed and are safe to consume.



Nose Bot Fly and larvae.

FIRE ECOLOGY

BY KEVIN ROBERTSON

Effects of Fire Suppression on Soils

We have completed the data analysis for a study on Tall Timbers comparing soils between frequently-burned old-field pinelands and "NB66", the 23-acre unit that has not been burned since 1967. In contrast to the surrounding open pinelands, NB66 is now a closed-canopy hardwood forest dominated by water oak, sweet gum, and black cherry. Pines no longer dominate the canopy.

We took multiple paired soil samples inside and outside the unit for comparison. The depth of topsoil was greater in the fire-suppressed area by an average of about 13 cm (5 inches), although soil texture was no different inside than outside of the unit. We also found that the available minerals: calcium, phosphorous, magnesium, and potassium were each higher in the frequently-burned than in the fire-suppressed soils.

We conclude that soil organic matter accumulates in the fire-suppressed hardwood dominated forest and results in a deeper, darker topsoil. However, frequent fire enhances nutrient cycling by releasing nutrients and results in a more fertile soil, at least in the short-term. Most of this research was conducted by our volunteer Christie Sloan.

Beginning Research on Red Hills Natural History

We are currently pursuing a project to interpret the original land surveys of south Georgia and north Florida, made from about 1805 to 1820, to interpret the pre-settlement distributions of natural communities in the Red Hills Region. These early surveys used "witness trees" to mark corners of sections and land lots, and they often included general descriptions of the vegetation along survey lines. The project will require a large amount of tedious work to collect the records from the state archives and form it into a useful dataset, but we believe that the effort will pay great dividends in additional knowledge of our unique region.

Some specific goals are to better understand how the landscape has changed, and to determine which forest communities are "natural" as opposed to a product of post-settlement land-use. Also, greater knowledge of the natural and historic conditions of the area will help us guide land management and habitat restoration efforts to be more appropriate and effective for specific sites. We look forward to having and sharing this peek into the past.

VERTEBRATE ECOLOGY

BY JIM COX

An explosion occurring in new home construction in the Red Hills!



Excavating a new home for Red-cockaded Woodpeckers.

Since November, more than 55 new homes have been excavated for Red-cockaded Woodpeckers in the Red Hills region. The housing projects were initiated on four properties with *Safe Harbor* agreements and will go a long way toward stabilizing the local population of this endangered species.

Safe Harbor agreements enable landowners to maintain and improve habitat for endangered species without incurring additional responsibilities under the *Endangered Species Act*. The flexible agreements also make landowners eligible for incentive monies provided by the Georgia Department of Natural Resources. Since 2001, Georgia DNR has distributed >\$250,000 to private landowners with *Safe Harbor* agreements. The funds help offset the costs of prescribed burning and hardwood removal and also may be used to compensate landowners for the commercial value of trees (\$250 each) where new woodpecker homes are created.

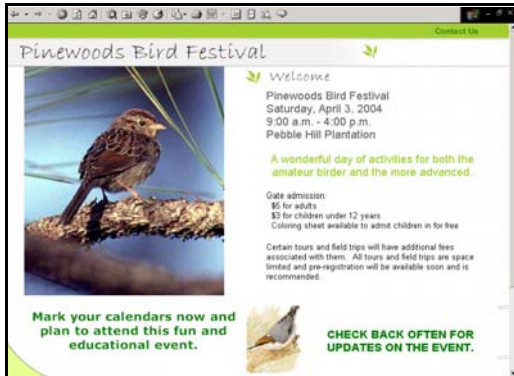
If you would like to learn more about this exciting program, contact Tall Timbers' woodpecker specialist Greg Hagan at (850) 893-4153 x 251, or greg@ttrs.org.

Archaeology Presentation

There will be a special presentation on Thursday, February 18 in the Ed Komarek Education Barn at Tall Timbers. Dr. Bonnie McEwan, Director of Archaeology at the San Luis Mission site in Tallahassee, will discuss life in the Red Hills region in the late 1600's. This was a time of transition when the Apalachee's traditional political structures and practices came under the influence of Spanish culture. A light social precedes the lecture starting at 7:00 P.M. The presentations will start promptly at 7:30 and be concluded by 8:30. To receive a reminder note, please send an E-mail to jcox@ttrs.org.

Pinewoods Bird Festival

The second annual Pinewoods Bird Festival takes place on Saturday, April 3, at Pebble Hill Plantation. This year's festival features exciting new field trips designed to showcase rare wildlife of the region. In addition to tours of ancient longleaf pine forests, Red-cockaded Woodpeckers, Bachman's Sparrows, and hummingbirds will be banded, special quail and fire forest tours will be given, and an activity area for kids sponsored by the Plantation Wildlife Arts Festival will be set up to send the imagination flying. For more information, visit the festival web page www.pinewoodsbirdfestival.com.



LAND MANAGEMENT

BY ERIC STALLER

Tall Timbers joined the Wheelin' Sportsman program with the National Wild Turkey Federation to coordinate hunts for disabled hunters in 2002. In the 2002-2003 deer season, the Wheelin Sportsman program provided 20 participants three hunting opportunities. Tall Timbers offered hunting opportunities to 15 of those participants.



Group photo of the Wheelin' Sportsman event January 2004.

This year, in the 2003-2004 season this program provided 32 participants three hunting opportunities. Tall Timbers offered hunting opportunities to 22 of those participants. Our plans are to expand this program to incorporate more Georgia residents. On behalf of everyone involved, we would like to recognize and thank the generosity of those landowners who allowed us the use of their beautiful properties for this year's event: Miss Kate Ireland (Foshalee Plantation); Mr. and Mrs. E. A. Davis

(Willow Oak Plantation); Mr. and Mrs. C. Martin Wood, III (Live Oak Plantation); and Mr. and Mrs. Richard A. Corbett (Pinkney Plantation). For more information about the Wheelin' Sportsman Program or Land management at Tall Timbers, call Eric at (850) 893-4153 x 240 or erics@ttrs.org.



Participants receiving safety training prior to sighting in their rifles.

FORESTRY

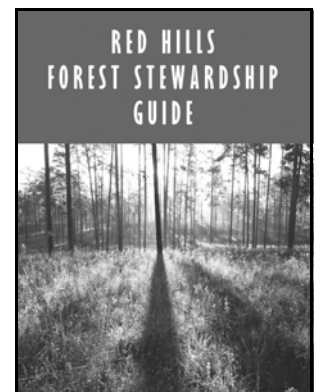
BY STUART JACKSON

This winter we have completed the tree inventory on the Anders North hunt course. Nearly all of the upland pine portions of the Hanna and Plantation hunt courses have been sampled using tenth-acre plots. Half of these winter plots will be revisited during the growing season to take the groundcover measurements. These initial timber data along with a subsample from five other courses are being shared with the other departments. The diameter distributions of different hunt courses show some interesting differences in stand development. Some show distribution characteristics of uneven-aged stands and others show characteristics of even-aged stands.

Intern Vanessa Logsdon has been doing a tremendous job assisting in the inventory project. Her skills as a mechanic and interest in plant identification have been wonderful assets. Forestry has also been aided by two Florida State students who are in work study programs. Jonathan Oravetz and Cayten Clark both work 10 hours per week assisting with inventory and data entry.

New Publication!

Red Hills Forest Stewardship Guide is available at \$25.00 per copy online at www.ttrs.org under **Publications** or by calling (850) 893-4153 x 241. This guide is unique because it involved landowners and land managers along with Tall Timbers' research and conservation staff in interactive sessions to produce the outline for content. Together we developed conceptual guidelines for a sustaining commitment to conservation and the perpetuation of the Red Hills ecosystems. A great buy! **Get yours today!**



Your Gift Makes the Difference!

BY VANN MIDDLETON
DEVELOPMENT OFFICE

Over the next four issues of *Research Notes*, the Development Office would like to highlight some critical needs of each of the four research programs at Tall Timbers: Fire Ecology, Vertebrate Ecology, Ecological Forestry and the Game Bird Program.

Some of these items have suffered from unfortunate but necessary budget cuts for 2004, while others are important enhancements to the future research projects of the individual program.

Tall Timbers Fire Ecology Program "Wish List" Dr. Kevin Robertson

■ Nomex	\$ 300	■ Soil Analysis expenses	\$ 280
■ Fire Measuring equipment	\$1,040	■ Professional conference expenses	\$ 700
■ Hardware for Burn Evaluations	\$ 500	■ Statistical software license	\$ 800

If you would like to help supplement one or more of these items, please feel free to give us a call or send your generous contribution to:

*Tall Timbers Research Station
Fire Ecology Program Support
13093 Henry Beadel Drive
Tallahassee, FL 32312*

Remember, no contribution is too small and every little bit helps! Thank you for your continued support of the research and conservation programs of Tall Timbers. We hope that you have a wonderful 2004!



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