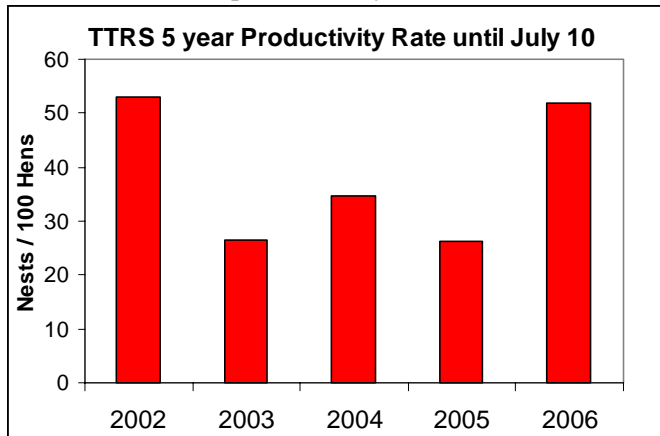


Solid Hatch Continues

On TTRS, we have observed an excellent beginning to the 2006 breeding season. Nesting started the end of April, remained constant throughout May, and hatching for early nests peaked on June 15. There are a large number of adults with chicks right now. Comparing this year's nest productivity rate to previous years (**Figure 1, below**) we are up almost 50% since 2003 and are on course to observe productivity rates similar to 2002.



In addition to strong nest productivity, TTRS has also seen very good chick survival, which is recorded during captures of 12 to 14 day old chicks. Chick weights and physical conditions are also very good with some chicks being able to make short flights after 12 days post-hatch. The overall dry hot summer with intermittent rain showers has created excellent environmental conditions for chick survival and growth. One interesting observation,



Blackberry stains on young bobwhite's bill.

many of the 12 day old chicks captured in June had stains around their bills from consuming blackberries, which are eaten to augment their typically insect dominated diet. If environmental conditions will remain stable for the second half of the breeding

season, the Red Hills should expect to see increases in autumn bobwhite populations.

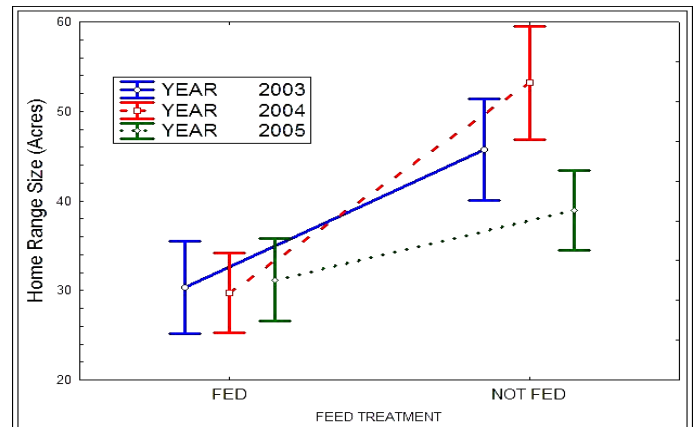
From the

GAME BIRD PROGRAM

by BILL PALMER and
SHANE WELLENDORF

More Benefits From Supplemental Feeding

We compared early breeding season home range sizes for adult bobwhites on TTRS from areas with supplemental feeding (milo) to areas without added food resources. For the years, 2003 – 2005, home ranges were significantly smaller on fed areas (**Figure 2, below**), and in 2004, home ranges on fed areas were almost half the size of unfed areas. Also, home range sizes on fed



areas were very consistent in size among years and much more variable on unfed areas. In general, smaller home ranges are advantageous for bobwhites by minimizing exposure to predators and is often a good indicator that all requirements of the bird are being satisfied. These results support the use of year around supplemental feeding, especially during the breeding season.

Additional Feeding Facts

We examined the diets of 120 bobwhites in February from sites both supplemented and not supplemented with grains (milo). While the number of seeds eaten by bobwhites was greater on unfed sites (wild foods are often smaller than grain), one bobwhite in particular had 1287 seeds in its crop alone of which 1159 were partridge pea. Several bobwhites had greater than 1000 seeds in their crops. While partridge pea is often available in late winter it is not a great energy food for bobwhites. Crop contents for bobwhites that had supplemental feed weighed more than birds that fed on natural foods and the supplemental fed birds weighed on average 4.5 grams heavier.



FIRE ECOLOGY

by KEVIN ROBERTSON

Fire in the Bottomlands

This year's extraordinarily dry spring resulted in fire crossing

hardwood drains and bottomlands that usually serve as firebreaks. We took advantage of the dry conditions to study the effects of fire in our own Woodyard Hammock old-growth beech-magnolia bottomland forest. All trees greater than 3/4 inch in diameter at breast height (DBH) in a 11-acre area have been censused every two years since being established by Dr. William Platt in 1978, providing a long data history on forest dynamics in the absence of fire. In 1985, Hurricane Kate felled many trees and doubled the number of tree stems because of recruitment in light gaps.

Since the hurricane, the increase in trees has mostly been two understory species, hophornbeam (*Ostrya virginiana*) and bluebeech (*Carpinus caroliniana*), to the exclusion of most canopy species. We considered that infrequent fire, during dry years such as this one, might tip the balance of tree dominance by having a differential effect on the various species seedlings and saplings.

During March we burned a total of half of the research plot in a checkerboard pattern of half-hectare areas. After about one month, we recensused all of the trees greater than 3/4 inch DBH in the burned areas. We found that almost none of the trees had been killed, although many were partially scorched. We



*Intern Joao Tome lighting
in Woodyard Hammock.*

observed that most of the seedlings in burned areas were topkilled and have resprouted, but it is not clear if there was a species-specific effect of the fire at present. This study will be able to determine the longer-term effect of fire on forest dynamics as we compare the burned and unburned areas over time.

Common Garden - of Trees

The Fire Ecology Program is participating in a "common garden" experiment to test the hypothesis that trees in a given species are more resistant to

insects at lower latitudes. We have planted a few hundred seedlings of white oak, red maple, and tulip poplar germinated from acorns sent from 12 different states and Ontario, Canada. Tests on leaf chemistry and herbivory rates will be used to test the hypothesis. Sister sites are being planted in Alabama and Rhode Island. Thanks goes to Land Management for helping us establish this significant orchard of guest trees.

RESEARCH ADMIN

by RON MASTERS

Longleaf Pine Cone Prospects for this Fall are Good



The forecasts for longleaf cone crops are now out for 2006 and 2007. The crop for the Red Hills region looks very good for this fall but likely will be poor to fair in 2007 based on the lack of flowers this past spring. This data is compiled every year by Dr. Dale Brockway, Southern Research Station, U.S. Forest Service. The survey samples sites from Louisiana to North Carolina and includes samples from the longleaf-wiregrass area that Tall Timbers manages on Pebble Hill. The data in this article are taken from Dr. Brockway's report.

Cone crop estimates from Pebble Hill (57 cones/tree) are above the southeast regional average (45 cones/tree) for longleaf and should provide more than adequate seed to meet regeneration needs this year. Typically 30 cones/tree is considered to be the minimum requirement for successful regeneration of longleaf. The 40-year regional average is 28 cones/tree. However, in 2007 the predictions are for about 16 cones/tree based on flower counts. Observations of cones from Tall Timbers and other properties in the Red Hills are generally in concurrence although in some areas the cone crop was spotty.

If you have plans to capture natural regeneration this fall, be sure to check with your consultant forester about the cone crop on your property and specifically in the stands where you are seeking to develop regeneration. You will need canopy gaps of 0.25 – 2 acres for successful regeneration. Also burning to capture the seed crop on mineral soil is best accomplished prior to seed fall during the late growing season in September. Some regeneration can be successfully captured with May through August burns, but may be marginal for situations

(continued)

Longleaf Pine Prospects, Cont'd.

Seedling germination in the fall. Photo courtesy of: USDA Forest Service Archives, USDA Forest Service, www.forestryimages.org

with emphasis on timber management over other resource values. Longleaf typically release seed in mid-October through early November over a 2-3 week period. The seed will generally germinate 2-3 weeks later.

VERTEBRATE ECOLOGY

by JIM COX

Vertebrate Ecology Gets a Big Lift

The generous loan of a gas-powered lift by Mr. Gene Phipps is quickly helping us get Tall Timbers in shape to receive Red-cockaded Woodpeckers this Fall. Tall Timbers' new woodpecker specialist, Joshua McCormick, is using the lift each morning to excavate three to four artificial woodpecker cavities in anticipation of an exciting plan to move woodpeckers to Tall Timbers this September. The sight of the strange, dinosaur-like equipment stretching into the midstory caused a



Joshua McCormick and Phil Spivey take aim on a new cavity tree on Tall Timbers.

lot of heads to turn during the first week it was being used, but the tremendous time-saver will enable us to complete our work on Tall Timbers by early August and is infinitely safer than ladders. Many thanks to Mr. Phipps for this very generous loan and his continued support of our woodpecker work.

Joshua McCormick may be spending a lot of time up in the trees, but he'll also be traveling soon to meet with land managers and landowners with Safe Harbor Agreements. Joshua replaces Greg Hagan (who remains with Tall Timbers coordinating the Upland Ecosystem Restoration Project (UERP) in Florida), and is here to help you develop contracts for incentives payments for burning and hardwood control as well as to discuss

the Safe Harbor Program for those who have not yet signed on. Support for this valuable program comes from the Private



Stewardship Grants Program of the U.S. Fish and Wildlife Service. Joshua worked as a woodpecker intern in Louisiana last year in a setting very similar to the Red Hills (private lands and very tall cavity trees). His family also has a farm in southeastern Georgia, so he's very familiar with issues affecting private lands.

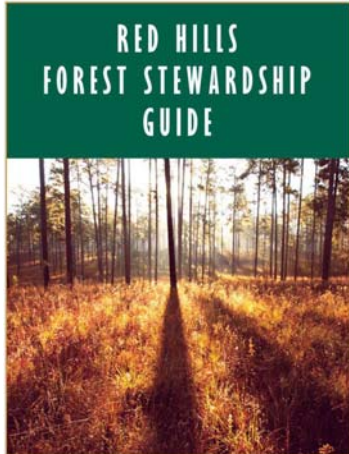
Stewardship Grants Program of the U.S. Fish and Wildlife Service. Joshua worked as a woodpecker intern in Louisiana last year in a setting very similar to the Red Hills (private lands and very tall cavity trees). His family also has a farm in southeastern Georgia, so he's very familiar with issues affecting private lands.

Florida's Safe Harbor Program Starts Late July

There's some great news on the Safe Harbor front for Red Hills landowners in Florida. Florida's Safe Harbor Program is scheduled to start in late July, so now everyone in our region has a chance to participate in this program that rewards good land stewardship. Tall Timbers Research Station is helping to organize a special ceremony to commemorate the arrival of the Florida program on September 28 (think cooler weather). We'll be sending out invitations soon, and, if you might be interested in this exciting new development south of the State Line, please contact Joshua McCormick at (850) 893-4153 ext. 224 (Joshua@ttrs.org).

Red Hills Forest Stewardship Guide Reprint

Development Office
by VANN MIDDLETON



The Red Hills Forest Stewardship Guide was funded by a grant from the Turner Foundation in 2003. This 78-page publication is the result of collaborative interaction between Red Hills area landowners, managers, foresters and Tall Timbers research and conservation staff. The Guidebook has become a landmark educational tool for those interested in managing their lands with a responsible stewardship ethic. Through stunning visual illustrations and rich descriptive text the publication serves as a roadmap for developing a concrete long-term management plan, with particular emphasis on wildlife habitat management, forest and timber management, and the importance of conserving historic, aesthetic and special natural values of the land.

Since our initial printing of the publication, we have been overwhelmed with requests from area landowners for additional copies of the *Red Hills Forest Stewardship Guide*, however there are only a handful of publications left from this first printing. In order for the *Forest Stewardship Guide* to be available for future requests, a second printing will be necessary, but it comes with a hefty price tag. We need your help!

If you would like to make a contribution to help fund the reprinting, please contact Vann Middleton at (850) 893-4153 (ext. 343), vann@ttrs.org or send us your tax-deductible contribution made out to Tall Timbers. Please note the expressed intent of your contribution so that we may adequately account for your gift.

Thank you for your continued support of Tall Timbers. Have a great “*rest of the summer*”!



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