

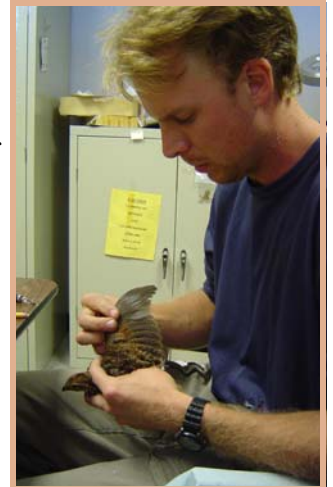
FROM THE QUAIL LAB...

BY BILL PALMER

COVEY CALL COUNTS--

We completed covey call counts on several plantations between Thomasville and Tallahassee the weekend before Thanksgiving. As a result of the late hatch this year, covey formation was very late, and peak calling occurred during mid-November rather than late October. Because of this, covey sizes were noticeably small during September and October, but by the end of November were normal (10 to 20 birds/covey) as groups coalesced. All but one property we surveyed indicated a decline from last year.

We aged young of the year bobwhites captured in traps this past November. We found that a larger than normal proportion of young bobwhites were hatched from late nests. On TTRS and PH, 27% and 33% of young were hatched during September and October. However, where supplemental feeding was taking place, a greater proportion of young were from June – August nests, with only 7 - 12% of young from late September nests; which was similar to hatch dates in 2002. Our telemetry data showed the same pattern of chick production as the wing data.



Aging bobwhites



Supplemental feeding using tractor and broadcast spreader

--SUPPLEMENTAL FEEDING

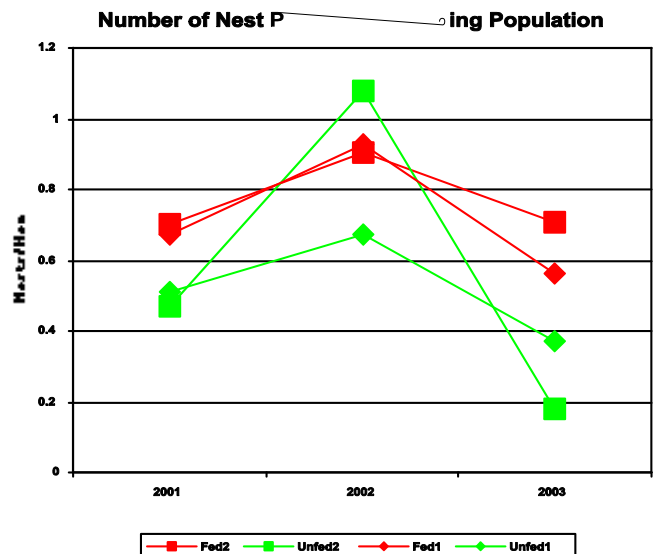
Supplemental feeding through the summer may have lessened the impact of excessive rainfall this past summer. On our TTRS feeding study, quail populations declined approximately 21% on our fed study area. On the unfed portion of the study area populations declined approximately 35%. One difference was a greater number of nests per hen. Note the graph showing how nesting by hens varies much less year to year on fed areas than on unfed areas.



Aging bobwhites by feather growth and replacement

BOBWHITE NUMBERS--

Across our properties, the greatest declines in bobwhite numbers occurred on areas with higher timber densities. We also noticed that large blocks of unburned "2-year roughs" were not utilized by our radio-tagged birds. We suspect rank cover in 2-year roughs was unsuitable to bobwhites during the wetter and cooler than normal summer. Also, the shade created by higher amounts of timber likely extenuated these unfavorable weather conditions for quail chicks. Although this may seem counter to conventional logic, we suspect that shade negatively influenced micro-climate conditions for chicks for the unique set of weather conditions we had this past summer. We recommend burning more than half (60-70%) the area each spring unless a drought is expected.



FIRE ECOLOGY

BY KEVIN ROBERTSON

SHORTLEAF-OAK-HICKORY - A NATURAL COMMUNITY?

We are in the final stages of a project comparing soil characteristics between longleaf pine-wiregrass forests and mature shortleaf pine-oak-hickory forests in the Red Hills. The purpose is to test the hypothesis that the shortleaf pine-oak-hickory forest type represents a local natural community reflecting soil texture, depth to the clayey subsoil, and/or nutrient levels in the soil. Soil cores were collected at a total of 14 locations (7 for each forest type) on properties throughout the Red Hills, including Tall Timbers and Pebble Hill.

Soil texture and depth to clay were not related to the presence of mature shortleaf pine forests as predicted. However,



Shortleaf pine-dominated forest, River Ridge Plantation.

nutrient levels in the topsoil were consistently higher on shortleaf than on longleaf sites. The great majority of both longleaf and shortleaf sites showed relatively deep layers of dark topsoil, in contrast to eroded soils usually associated with old-field pinelands.

Results of this study present the possibility that certain shortleaf pine-dominated areas within the Red Hills are remnants of a natural community type that occurred where soils have higher mineral nutrient levels than longleaf pine-wiregrass areas. The shortleaf pinelands studied are similar to those common in the Piedmont region and parts of Arkansas, Louisiana and Texas. We are indebted to the hospitality of the several local land owners who cooperated to make this project possible.

NATIVE VS. OLD-FIELD VEGETATION

We have begun surveying vegetation on Pebble Hill Plantation to determine differences in plant species composition between wiregrass-dominated and old-field pinelands. In addition to improving our knowledge of wildlife habitat, the project will help us understand the origin of old-field vegetation. Specifically, we will learn which old-field plants re-invade from native habitats and which are weeds introduced through agriculture. It will also help us identify indicator species that will improve our ability to delineate high-quality natural areas.

VERTEBRATE ECOLOGY

BY JIM COX

SPECIAL PRESENTATIONS ON ANTS AND ANCIENT PEOPLE

Tall Timbers Research Station will host 2 special natural history seminars this winter that everyone should mark on their calendars: **January 15, 2004, Dr. Walter Tschinkel, "Big Trees, Small Ants"** and **February 19, 2004, Dr. Bonnie McEwan, "The Apalachee at Mission San Luis."** Both presentations take place in the *E.V. Komarek Education Center (Barn)* and are made possible by the *Red Hills Wildlife Endowment Fund* at Tall Timbers.

The first lecture Thursday, January 15, 2004, features those small, squirmy creatures that rule the world: ANTS!

The speaker is Dr. Walter Tschinkel from Florida State University. Dr. Tschinkel's talk is entitled "**Small Ants, Big Trees**" and will focus on a common ant (*Crematogaster ashmeadi*) that plays an



important role in certain pinewood food chains. He also will talk about some of his recent research on fire ants and harvester ants. If you've ever wondered why harvester ants gather bits of charcoal, this is your chance to find out.

In February, the speaker will be Dr. Bonnie McEwan, Director of Archaeology at the San Luis Mission site in Tallahassee. Dr. McEwan will discuss life in the Red Hills region during the Spanish mission period based on her work



at Mission San Luis de Apalachee. This mission was the western capital of the mission system in La Florida from 1656 to 1704. The settlement boasted a population of over 1,400 Apalachee Indians who resided at the

hilltop mission center. It was also a time of transition when the Apalachee's traditional political structures and practices came under the influence of Spanish authorities and 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@trrs.org.

FORESTRY

BY STUART JACKSON



Perhaps you have noticed the Stewardship Forest sign at Tall Timbers' entrance. Besides being represented as an exemplary Stewardship Forest, we are also Forest Stewardship Coordinating Committee (FSCC) members for the state of Florida. This committee is responsible for Florida's Forest Stewardship Operating Plan, the Forest Land Enhancement

Program (FLEP), and Florida's participation in the federal Forest Legacy Program.

FLEP is a government cost share program for small private landowners. Assistance money may be obtained for prescribed burning, reforestation, and general forest improvement.

FSCC's sub-working group has completed its first phase in the federally funded Forest Legacy Program - the Assessment of Need to determine targeted criteria for lands to be protected from the threat of deforestation. After receiving public input at eight locations around the state, FSCC prioritized forest features in this order:

- Fish/Wildlife
- Watershed
- Threatened and endangered species
- Water recharge
- Floodplains
- Conversion threat
- Sustainable forestry
- Connectivity
- Wetlands
- Natural communities

Forested lands threatened by deforestation may be considered for fee simple purchase or conservation easement purchase through the Forest Legacy Program. They will be evaluated for possible selection based on these criteria. In addition, the tracts to be protected through purchase or easement must have 25% of the dollars provided by a partner agency other than the federal Forest Legacy Program. The partner agency would then holds the land easement.

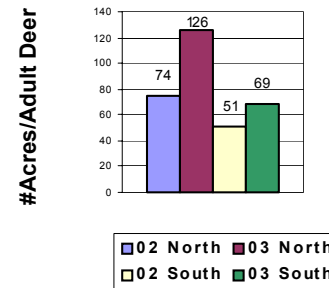
LAND MANAGEMENT

BY ERIC STALLER

DEER CENSUS INDICATES DROP IN DEER DENSITY

The results from our recent deer census on Tall Timbers (TTRS) indicates that deer density on the South side of TTRS remained the same. However, the deer density dropped by nearly half on the North side. Although we did not have a confirmed case of EHD or Blue Tongue on the Station it has been confirmed in other areas in the Red Hills. This is our leading hypothesis to explain the drop in deer density at TTRS in such a short period of time.

TTRS 02-03 Spotlight Census



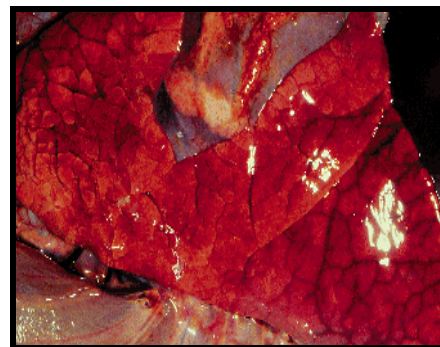
E p i z o o t i c Hemorrhagic Disease (EHD) or Bluetongue is an acute, infectious, often fatal viral disease of some wild ruminants including white-tailed deer. The mode of transmission of EHD is from a biting fly, no-see-um, or gnat. All documented outbreaks of EHD have occurred

during late summer and early fall (August-October) and have ceased abruptly with the onset of frost. During the early stages of EHD deer appear to lose fear of man, lose their appetite, grow progressively weaker, often salivate excessively, develop a rapid pulse and respiration rate, and elevated fever. The high fever



associated with the **Sloughing or irregular shaped hooves of a deer with EHD.**

deer thirsty resulting in dead and dying deer found near water. As the disease progresses, deer may have bloody discharges from the nose, lesion or sores on the mouth and swollen blue tongues, and may have sloughing or irregular shaped hooves.



Lung of deer that died from EHD showing internal bleeding and fluid accumulation.

Useful aids in obtaining a diagnosis are the epizootic nature of the disease, its seasonal occurrence, and its hemorrhagic lesions. The hemorrhages range from pinpoint to massive in size, and involve different tissues and organs in the individual animals. No organs

appear to be exempt from hemorrhages, with the most regularly involved being the heart, liver, spleen, kidney, lung, and intestinal tract. Because of its very high mortality rate (40-90%), EHD can have significant effect upon the deer population in a given area. There is no effective treatment of control of EHD. EHD can infect domestic animals but rarely causes disease. In all probability the virus does not infect humans.

Your Gift Makes a Difference—Annual Contributions!

BY VANN MIDDLETON
DEVELOPMENT OFFICE

We have accomplished quite a lot this year and it is because of special members such as you who continue to be so generous. As the tax year draws to a close, please consider an extra gift to help us reach our annual fund goal of \$300,000. We are almost there! Contributions to the annual fund allow our programs to continue to grow and attract the best scientists and conservation professionals to our campus. 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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