



Old-growth forests of the Red Hills can offer unique insights for longleaf bird communities.

A Feathery Field of View

It's going to be a pivotal year for the **Stoddard Bird Lab**. The Brown-headed Nuthatch experiment we launched in 2012 comes to a close this year. A lot of data to collect this spring and summer, but the end is in sight. We will continue to study this fascinating and declining songbird on a portion of Tall Timbers, but we are also looking at some other exciting research opportunities.

One future project will focus on the cavity-nesting birds associated with old-growth pine forests of the Red Hills region. The Red Hills region contains some of the best managed old-growth tracts left anywhere on earth, and these sites provide a unique opportunity to study the many different birds that nest in cavities. Some excavate new cavities each year, while others reuse long-lived cavities that persist for decades. Still others don't excavate

—*Feathery Field continued on back page*

Hammering in the Woods

There's been an uptick in construction activity at Tall Timbers. There are no cement mixers, scaffolding, or cranes in the picture, but our Red-cockaded Woodpeckers have been hammering away to create lots of new woodpecker homes.

We reintroduced the Red-cockaded Woodpecker back in 2006 by taking birds that hatched elsewhere in the Red Hills region and moving them to Tall Timbers. [The progress has been steady](#), but one sure sign of success lies in the 23 natural cavities that the reintroduced birds have excavated, including 3 cavities that now make up a completely new territory.

Most of the natural cavities have been placed in shortleaf pines that are about 20" in diameter. The precise age is likely more than 100 years but is also difficult to say for sure because many are suppressed trees that spent a portion of their early years growing in competition with mature trees. Other shared qualities include a healthy number of dead limbs along the bole of the tree. The broken stubs are not actually healthy for the tree, but they provide an entry point for red heart fungus, which softens the heartwood and makes cavity construction easier.



Red-cockaded Woodpecker at a recently excavated cavity. Photo by Tara Tanaka

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Cultivating Appreciation

Thursday Evening Bird Walks

We'll be hosting 3 evening walks along the Stevenson Bird Trail this spring. In addition to the view from the Bird Window, we'll watch Red-cockaded Woodpeckers come to roost for the night. All walks will start at the Wade Research Center at 6 PM. Dates are April 13, May 18 and June 8.

Saturday, April 15

Bird Banding Demonstration—Wakulla Wildlife Festival at [Wakulla Springs State Park](#).

Saturday, April 22

Presentation on the Florida Breeding Bird Atlas project at the spring meeting of the Florida Ornithological Society in Ruskin, FL ([details](#)).

Saturday, May 6

Red-cockaded Woodpecker banding. Come watch the process of banding young Red-cockaded Woodpeckers. We'll meet at the Wade Research Center at 9 AM and take a wagon ride to a nest with young at the appropriate age.

Banding Together for Birds

Bird banding is an essential tool for studying small songbirds. The small-numbered bands clamped to a leg help to assess survival, movements, and use of different habitat types by individual birds, and this naturally feeds into development of conservation and management recommendations. The radio transmitters used on quail and larger birds of course gather similar information, but transmitters available for small songbirds typically die within weeks and end up tracking a very small portion (<3%) the animal's total lifespan.

The **Stoddard Bird Lab** organized a bird banding workshop in late January to provide training for state and federal biologists interested in using banding in their projects. Instruction was provided by Charlie Muise, an experienced instructor of over a dozen banding workshops.

The class was out setting up nets at 6:30 each morning and then spending 6-8 hours extracting and banding birds and learning more about the uses of banding information. Attendees learned how to age and sex netted birds and use specially designed software for tracking the use of bands. At the end of the 6-day class, most participants had extracted and banded scores of birds from the 32 species and 332 individuals caught — everything from Red-headed Woodpeckers to Eastern Screech-owls.

"I can't thank Tall Timbers enough for what was provided," said Grant Lykins, a reclamation specialist who works in the Tampa region. "It will take me a few times to really take in all of that information, but the class was excellent. Many thanks and a job well done!"

Tall Timbers Research Station owes its existence in part to bird banding. Samuel Prentiss Baldwin married Lillian Converse Hanna in 1898. Both were from prominent Cleveland families who came to the Red Hills region



Mary and James Dowdell assess the age and condition of a Swamp Sparrow at the banding workshop.

Zombie Zoology

Scientific collections are places where change is slow. Dead specimens are stored in air-tight cabinets to preserve the past, but the changing scientific landscape is providing new life for the specimens stored in many museums.

One of our current projects focuses on the ancient DNA bound up in some of the bird specimens in our Natural History Museum and Scientific Collections. Amie Settlekowski, a PhD candidate at Louisiana State University (LSU), is assessing whether changes in the distribution of Bachman's Sparrows have had an effect on the genetic variation this declining pineland bird exhibits today.

Bachman's Sparrows exhibit striking plumage variation, especially when comparing birds that breed west of the Mississippi River with birds that breed east of the river. Three subspecies were once recognized, but a recent study by LSU researchers Blain Cerame and Sabrina Taylor and the **Stoddard Bird Lab** found a dearth of genetic differentiation across the bird's range.

One possible reason for the genetic uniformity could be the long-distance movements that Bachman's Sparrows have to make to find the ephemeral, fire-dependent habitat conditions on which they depend. Sparrows are most common in areas burned within the past two years and become rare as the time since fire increases much beyond two years. They are also known to move miles within a single day, and this type of movement can break down any localized genetic structure that might occur.

Another possible answer lies in the dramatic changes that occurred in the distribution of Bachman's Sparrows. In the early 1900s, the sparrow expanded its range as forest lands were cleared for agriculture. At one point, this endemic pineland species ranged as far north as Illinois, but it has steadily retreated in recent decades as changes in agricultural practices have occurred. This process can also break down genetic structure.

To assess which process played the bigger role, Amie plans to compare the DNA found in museum specimens that died before the range expansion occurred with the DNA found among today's populations. Chiles High School extern Madison Yablonski collected the samples from our museum specimens and shipped them off last November. The samples will yield DNA from this bygone era and help to determine whether or not localized genetic structure once occurred.

Extern Madison Yablonski resurrects ancient DNA from a museum specimen.



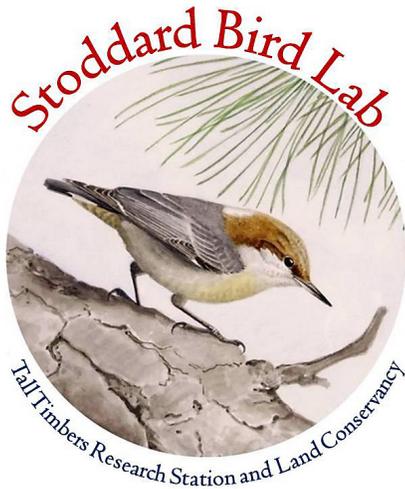
The eastern subspecies of Bachman's Sparrows have more grayish wing coloration than western subspecies.

Publications & Grants

Radzio, T.A., J.A. Cox, and M.P. O'Connor. *In press*. Hatching success and other reproductive attributes of gopher tortoises in southwest Georgia. *Chelonian Conservation and Biology*

Smith, L.L., J.A. Cox, R.A. McCleery, L.M. Conner, and E. Schlimm. *In press*. Chapter 13 Management and Restoration of Wildlife in Longleaf Pine. Jones Ecological Research Center, GA.

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The Stoddard Bird received a small grant from the U.S. Fish and Wildlife Service to continue work on captive breeding for Grasshopper Sparrows. The project will develop methods for returning young captive-bred sparrows to the wild in hopes the information that can assist in recovering the endangered Florida Grasshopper Sparrow.



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regularly during the early 1900s. Baldwin was a pioneer in the fledging science of bird banding, and he enjoyed banding winter sparrows during his visits to Inwood Plantation to help track their movements and longevity. He also suggested that factors affecting quail numbers in the region might best be understood through initiation of a banding study. Soon afterwards, key landowners provided support for such a study that brought Herbert Stoddard to the region and ultimately led to the establishment of Tall Timbers Research Station.

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cavities at all but instead rely upon the hard work of other species. Relationships among the cavity producers and cavity consumers are not well established for old-growth forests, and we plan to study these relationships on 4-5 different sites for at least two years.

A second project will focus on how fire can best be used to manage pine flatwoods. Working with the staff at St. Marks National Wildlife Refuge, we plan to set up replicated study plots where different burn regimes are applied consistently. Pine flatwoods support many rare species, but preferred conditions can often become overwhelmed by woody shrubs. Land managers regularly use expensive mechanical techniques to control such woody vegetation, but fire of course is our most efficient and natural tool, and recent research suggests the seasonal timing may play an important role in flatwood settings.



Pine flatwoods with a balanced mixed of grasses, forbs, and woody vegetation.

We also plan to focus new management efforts on the imperiled Red-cockaded Woodpecker. Changes in policies regarding woodpecker translocation have opened up new opportunities for expanding populations on private lands in the Red Hills region and beyond ([read more](#)).

Of course none of this could ever happen without the great support the **Stoddard Bird Lab** receives from you and the many other readers of the *Firebird Newsletter*. **Thanks** for making it all possible!

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A couple of the cavities also may provide insights on how the unique relationship between the Red-cockaded Woodpecker and use of living pine trees originally developed. The cavities were initiated at the scar of a dead branch. Rather than drilling a cavity on the bole of the tree, these woodpeckers pecked into the decayed limb to reach the heartwood—the route that some of their ancestors may have used before a dependence on living pines became so ingrained.

Construction of natural cavities should also provide benefits to other cavity-nesting birds. Northern Flickers, for example, preferentially use the natural cavities excavated by Red-cockaded Woodpeckers. Numbers of flickers and other cavity-nesting birds should grow as the handiwork of this reintroduced population continues to expand.



Woodpecker cavity excavated along a broken branch. Descending strands of sap shown around the cavity are maintained by the woodpeckers and fend off unwelcome guests.