Tall Timbers eJournal

SUMMER 2022

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Thursday, October 20, 2022

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—

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Benefiting the Tall Timbers Game Bird Program

November 10 & 11, 2022

Thomasville, GA

FEATURES

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FROM THE EDITOR

For the **Archives Corner** I wrote about some of the treasures I've discovered in the Archives as I explore its contents. Herbert Stoddard's legacy is stored on its shelves and pervade our researach.

In the Research & Land Management section, the contributions of some of our past Beadel Fellows are remembered. And, we get an update on the Eastern Black Rail study on the coast; this elusive bird was featured in the *Summer 2021 eJournal*.

Kevin McGorty, the Director of the Tall Timbers Land Conservancy will be retiring at the end of 2022. We look back at his many accomplishments. Another Conservation story is the success of the Regional Conservation Partnership Program in its the first year.

A feature in this issue, is an ode to the dog handler by guest author dogman Durrell Smith. The other feature is about "The 100-year Experiment" that is the quail lands of the Red Hills and Albany regions.

Finally, Bill Palmer, Tall Timbers President/CEO has the Last Word.

Because this is a digital publication, some articles include hyperlinks to websites that provide additional information. Click on text that is highlighted in color, *blue* this issue, which indicates a hyperlink.

If you frequent social media, follow our pages/feeds: Facebook, Twitter, Instagram and YouTube. Click on the icons at left to take you there.

In every issue I ask for feedback, so email me a note with your thoughts. I will include it in our next issue.

Rose Rodriguez

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TALL TIMBERS

On the cover a longleaf pine forest greening up after a prescribed burn. Photo by Brian Wiebler.

DEPARTMENTS

IN EVERY ISSUE

Top, the Archives before it was renovated in 2003; note the metal card cases that contained Herbert Stoddard's north Florida bird observations. Bottom, the current Archives with records stored on compact shelving. Stoddard's cards are now stored in archival record boxes. See story, page 6.

FLORA & FAUNA

RESEARCH & LAND MANAGEMENT

CONSERVATION

ARCHIVES CORNER

Treasures reside in the Tall Timbers Archives

BY ROSE RODRIGUEZ

Long-time Tall Timbers archivist Juanita Whiddon, who is closing in on retirement, has ceded archival duties to me as she focuses on our historical resources. I've been exploring the shelves in the archives to learn about its holdings. What is in all those boxes on the shelves?

The Tall Timbers archives holds institutional records from 1958 to the present. However, there are also private papers including diaries from 1891–1963 of Henry Ludlow Beadel and his wife Genevieve Dillon Beadel, as well as their extensive film collection. These records have been used by Juanita to interpret the Beadel House. There are also correspondence and field notes of Herbert L. Stoddard (1925–1966); correspondence, field notes and photographs of Edward V. Komarek and his brother Roy Komarek (1930s–1980s); as well has records for many of the Beadel Fellows who have contributed scientific and historical research while associated with Tall Timbers. (See article on Tall Timbers Beadel Fellows on pp 16–18)

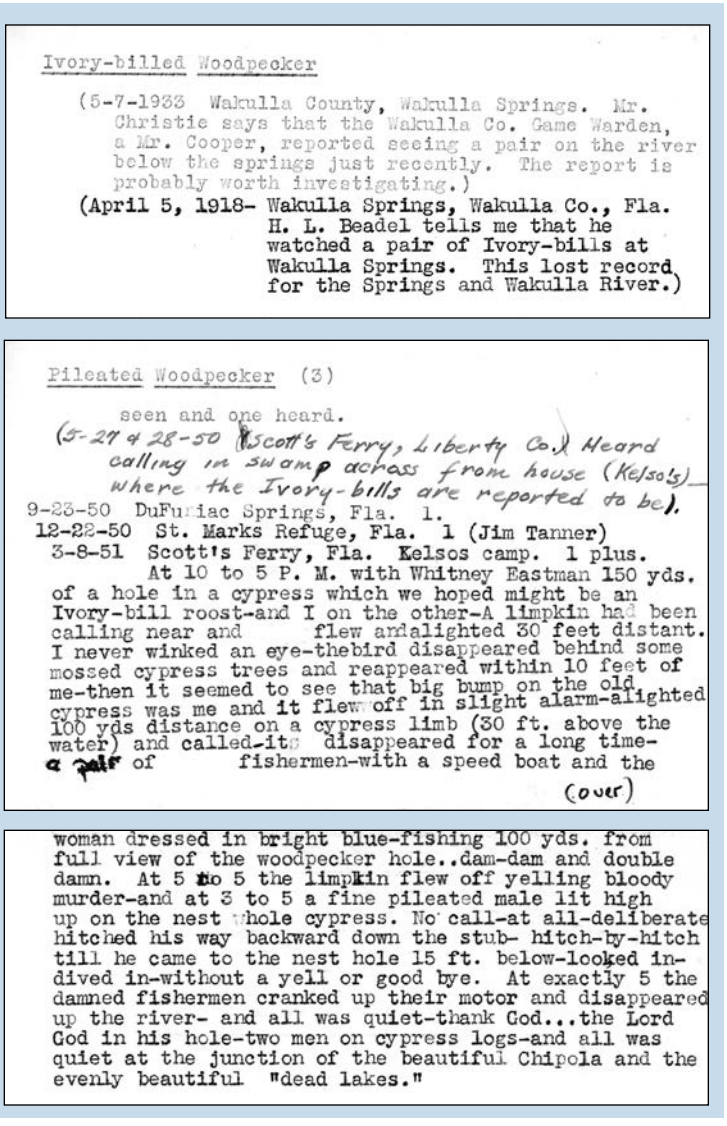
Stoddard Bird Observation Data Cards

While learning my way around the collection of records in the archives, I came across several metal card cases. The cases had belonged to Herbert Stoddard. Inside were 269 typed 4x6 cards with individual bird observations, most from 1931-1951; slips of paper labeled manuscript notes with bird observations from 1924-1929; some calendar pages; and small field notebooks and loose notebook pages. Stoddard made notes on many of the cards. Most of the bird observations Stoddard made were in north Florida. There are only seven observations noted from south Georgia; they were in Grady County and Thomas County. What a treasure of information!

The cards are organized by bird type: herons, ducks, vireos, warblers, sparrows, finches, birds of prey, game birds, shore birds, woodpeckers, swallows, etc. Each bird has its own labeled card divider; each card lists the county and date where the bird was observed.

In search of the Ivory-billed Woodpecker

My curiosity peaked, I looked for a card divider for the Ivory-billed Woodpecker. To my dismay, there wasn't one. But soon after, I was happy to find a data card for the Ivory-billed woodpecker in with the Pileated Woodpecker cards in the case. The card describes two Ivory-bill sightings, neither by Stoddard. However, one sighting noted was on April 5, 1918 at Wakulla Springs by H. L. Beadel, Tall Timbers benefactor and close Stoddard friend. As Beadel was a daily diarist, I checked the diary card for that date, and sure enough, he writes about the Ivory-bill sighting. The other sighting noted was in 1933, also at Wakulla Springs, by the Wakulla County game warden.



Ivory-billed Woodpecker

(5-7-1933 Wakulla County, Wakulla Springs. Mr. Christie says that the Wakulla Co. Game Warden, a Mr. Cooper, reported seeing a pair on the river below the springs just recently. The report is probably worth investigating.)

(April 5, 1918- Wakulla Springs, Wakulla Co., Fla. H. L. Beadel tells me that he watched a pair of Ivory-bills at Wakulla Springs. This lost record for the Springs and Wakulla River.)

Pileated Woodpecker (3)

seen and one heard.

(5-27 & 28-50 (Scott's Ferry, Liberty Co.) Heard calling in swamp across from house (Kelsos's) where the Ivory-bills are reported to be).

9-23-50 DuFuniac Springs, Fla. 1.

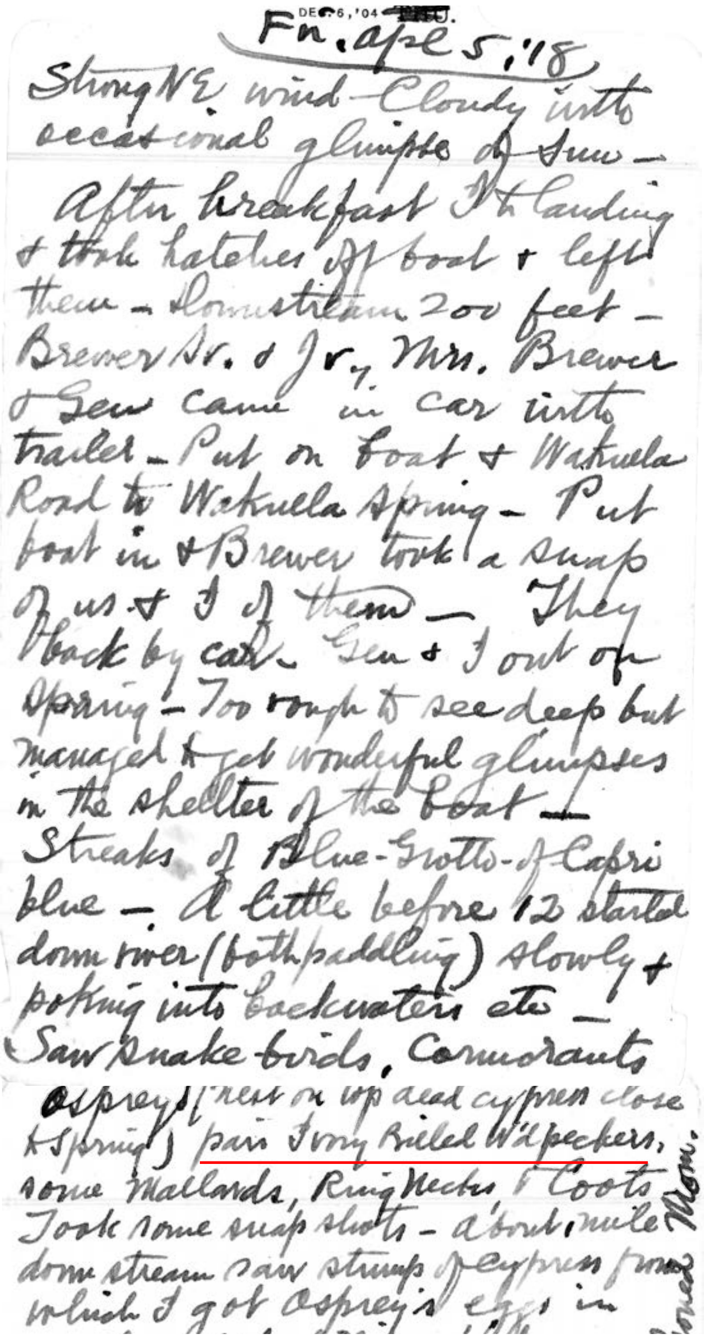
12-22-50 St. Marks Refuge, Fla. 1 (Jim Tanner)

3-8-51 Scott's Ferry, Fla. Kelsos camp. 1 plus. At 10 to 5 P. M. with Whitney Eastman 150 yds. of a hole in a cypress which we hoped might be an Ivory-bill roost-and I on the other-A limpkin had been calling near and flew andalighted 30 feet distant. I never winked an eye-thebird disappeared behind some mossed cypress trees and reappeared within 10 feet of me-then it seemed to see that big bump on the old cypress was me and it flew off in slight alarm-alighted 100 yds distance on a cypress limb (30 ft. above the water) and called-its disappeared for a long time- a pair of fishermen-with a speed boat and the

(over)

woman dressed in bright blue-fishing 100 yds. from full view of the woodpecker hole..dam-dam and double damn. At 5 to 5 the limpkin flew off yelling bloody murder-and at 3 to 5 a fine pileated male lit high up on the nest hole cypress. No call-at all-deliberate hitched his way backward down the stub- hitch-by-hitch till he came to the nest hole 15 ft. below-looked in-dived in-without a yell or good bye. At exactly 5 the damned fishermen cranked up their motor and disappeared up the river- and all was quiet-thank God...the Lord God in his hole-two men on cypress logs-and all was quiet at the junction of the beautiful Chipola and the evenly beautiful "dead lakes."

Henry Beadel Sees a Pair of Ivory-billed Woodpeckers at Wakulla Springs


Fri. Apr 5, '18
Strong NE wind - Cloudy with
occasional glimpse of sun -
After breakfast St. landing
& took hatches off boat & left
them - downstream 200 feet -
Brewer Sr. & Jr., Mrs. Brewer
& Gen came in car with
trailer - Put on boat & Wakulla
Road to Wakulla Spring - Put
boat in & Brewer took a snap
of us & I of them - They
back by car - Gen & I out of
Spring - Too rough to see deep but
managed to get wonderful glimpses
in the shelter of the boat -
Streaks of Blue-Grotto-of-Capri
blue - A little before 12 started
down river (both paddling) slowly &
poking into backwaters etc -
Saw Snake birds, Cormorants
Osprey (nest on top dead cypress close
to Spring) pair Ivory Billed W'dpeckers,
some Mallards, Ring Necks, & Coots
Took some snap shots - about mile
down stream saw stump of cypress from
which I got Osprey's eggs in

Above, a male Ivory-billed Woodpecker at entrance of nest. The photo was taken by Arthur A. Allen in the Singer Tract of Louisiana in April 1935. Photo from Wikimedia Commons. At left, Henry Beadel's diary card that mentions seeing a pair of Ivory-billed Woodpeckers on April 5, 1918.

Ivory-bills were believed to be extinct by the 1970s in the United States. As sightings of the Ivory-billed Woodpecker are reported (without definitive proof), the search for the existence of the bird in the Southeast continues, even as the U.S. Fish and Wildlife Service is ready to declare it extinct.

As previously stated, most of the bird observations were made in north Florida. Leon County, Jefferson County, Gadsden County, Wakulla County and Franklin County were close by to Stoddard's home, Sherwood Plantation in Grady County, Georgia. During the time period, Stoddard also made almost yearly visits farther away to Liberty County (Scott's Ferry), DeFuniak Springs in Walton County, Bay County, and a few times to an island off Pensacola.

Multiple bird cards state that Scott's Ferry is in Liberty County, but the unincorporated town of Scott's Ferry is on State Road 71 in Calhoun County, which is bordered by Apalachicola River in the east and is bisected by the Chipola River. Liberty County is across the Apalachicola River to the east of Calhoun County. It's interesting to note that none of the bird cards have Calhoun County listed as an observation site.

–Archives Corner continued on page 8

Historic Photo Found of the 1947 Georgia–Florida Field Trials

When I was looking in a box of records on an Archives shelf, which included photos used in Herbert L. Stoddard's *Memoirs of a Naturalist*, I came across a photo that I hadn't seen before. I recognized a couple of people, including Herbert Stoddard, but it wasn't labeled, so I didn't have a clue as to when and where the photo was taken. On Juanita's advice, I checked with Kevin McGorty, director of Tall Timbers Land Conservancy, and indeed he remembered the photo from a newspaper clipping he had seen while doing research on Livingston Place. It ran in the *Tallahassee Democrat* on February 23, 1947; Kevin sent me a copy of the clipping, which listed the names of those present, including Mr. and Mrs. Gerald Livingston.

As the names are hard to read on the clipping, I looked at a copy of a book that is part of the library collection in the archives, *The Georgia–Florida Field Trial Club 1916-1948*, to verify the names. Luckily the photo is included there, with members clearly listed. It was taken on the steps of the old antebellum (Ponder) house at Sunny Hill Plantation in February 1947, at the annual Field Trial Club meeting. The original caption is below. While reviewing the book, I saw that Stoddard was the official timekeeper; there is a photo of him on horseback in this capacity.

Many of the last names in the photo are of families who are longtime supporters of Tall Timbers; through the years they have served on its Board of Trustees, made significant financial contributions, and even donated conservation easements. These benefactors have helped the organization carry out its mission, weather challenges, and thrive for over 60 years. ❖

AT GEORGIA–FLORIDA FIELD TRIALS—*Many plantation owners from this area and prominent winters visitors, who local residents seldom have the chance to see in a group, were among participants and spectators at the Georgia–Florida 31st annual field trials on New Jersey Gov. Walter Edge's plantation last Monday. Represented here are some of America's most prominent families, socially and financially. Members of the Georgia–Florida Field Trial club shown here, and their guests are: first row, left to right, Col. Lloyd C. Griscom, former U. S. diplomat and owner of the Democrat; Mrs. John H. Phipps, Walter C. Teagle, Ralph Perkins, Miss Frances Griscom and Mrs. F. Ambrose Clark. Second row: Griscom Bettle, Mrs. Steve Yates, Mrs. Griscom Bettle, Mrs. Udo Fleischmann, Mrs. George M. Humphrey, Mrs. Parker Poe, Mrs. Shephard Krech and Dr. Shephard Krech. Third row: Hendon Chubb, Mrs. Ralph Perkins, Gov. Walter Edge, Mrs. Hendon Chubb, Gerald Livingston. Mrs. Lloyd C. Griscom. Fourth row: John H. Phipps, T.T. Scott, F. Ambrose Clark, Mrs. Gerald Livingston, and Parker Poe. On the bannister right rear are Mrs. Walter Edge and Herbert Stoddard. In chairs on the porch are Louis Campbell, left, and William Flowers.*

Saving the Rare Plants of the Longleaf Pine Ecosystem

BY JEFF GLITZENSTEIN, PHD

The recent book, *Saving the Wild South: The Fight for Native Plants on the Brink of Extinction* by Georgann Eubanks (2021), highlighted the biodiversity crisis of rare native plants in southern United States. The book focused on a limited number of federally endangered species and discussed the threats faced by the species, and the individuals working to save them.

My wife Donna Streng and I are cited in the bibliography for the chapter on *Schwalbea americana* (American Chaffseed). We are among the leaders in the decades long fight to save this species. Among other accomplishments, along with collaborators, we (1) demonstrated the need for frequent fire in the management of this plant and the population crashes that occur with even slight reductions in fire frequency (Glitzenstein et al. 2001), (2) devised an uncomplicated propagation method that allows easy greenhouse production of numerous plants for out-planting (Gustafson et al. 2017), (3) were the first to publish on a successfully outplanted new population (Glitzenstein et al. 2016), and (4) have planted out several apparently successful populations in three southern states including Alabama, Florida, and South Carolina. In addition, I discovered the largest known population, in South Carolina in 2008, and along with two others, rediscovered the species in Alabama shortly thereafter. I also reviewed for the U.S. Fish and Wildlife Service (USFWS) the most recent version of the five-year review for recovery of the species (2019). Presently, Donna and I are working on a manuscript pertaining to indicator species and plant associations useful for surveying and outplanting *Schwalbea*.

Schwalbea americana occurs in a few remnant populations in eight states including Louisiana, Florida, Georgia, Alabama, South Carolina, North Carolina, New Jersey, and Massachusetts. The species was believed extirpated in Louisiana, Alabama, and Massachusetts, but was rediscovered within the last two decades. Like many other species of longleaf pine groundcover, the primary threat is fire exclusion or insufficiently frequent fire. Some observations suggest the recent shift from traditional dormant season burning to burning early in the growing season, e.g. in April shortly after emergence in the spring, may be negatively impacting the species, although this seems not always to be the case. Additional research is needed on season of burn, soil moisture effects, and effects of fire intensity variables. The species may be able to tolerate and even benefit from some limited amount of soil disturbance, but excessively frequent or intensive soil disturbance will eliminate it. More research is needed to understand impacts

***Schwalbea americana** in flower at outplant site in the Florida panhandle.*

– Continued on next page

Schwalbea americana *(with red flagging) at outplant site in Alabama.*

Glitzenstein and volunteers monitor ***Oxypolis canbyi*** *in South Carolina.*

of soil disturbance regimes. Donna and I will work with any landowner who wishes to manage or restore *Schwalbea*. Protections of the federal Endangered Species Act do not extend to private lands as far as plants are concerned, so landowners can do as they like with federally endangered plants on their property. This can be a positive, as well as a negative for rare plant conservation, since there is more flexibility for management and restoration.

In addition to *Schwalbea*, we have worked to save many other southern rare plant species. One species not discussed in Eubank's book is *Oxypolis canbyi* (Canby's Dropwort), a federally endangered plant of depressional wetlands embedded within longleaf pine savannas and woodlands. We were the first to successfully propagate this species and the first to outplant new populations.

Oxypolis canbyi *(tall white flowers) in flower in South Carolina.*

We also helped in restoring and managing a South Carolina population owned by the South Carolina Native Plant Society (SCNPS). When SCNPS acquired the site, the surrounding upland was a dense, low diversity loblolly pine plantation with a history of insufficient fire. SCNPS removed the loblolly, reinitiated a frequent fire regime, and planted longleaf pine, wiregrass, and other native groundcover plants in the uplands. In addition, wetland hardwoods were removed, and dense pond cypress thinned in the wetland itself. This restoration has been spectacularly successful; beginning with a couple of hundred stems, the *Oxypolis* population now numbers in the tens of thousands, and the planted wiregrass has reproduced and filled in the surrounding upland.

Restored wiregrass in upland surrounding ***Oxypolis canbyi*** *habitat in South Carolina.*

In concluding, we need to acknowledge some essential collaborators: Jason Ayers, April Punsalan and Jim Bates, with the U.S. Fish and Wildlife Service; Michael Jenkins with state of Florida's rare plant conservation program; Craig Iversen, and Liz Langston with Blackwater River

State Forest; Guy Anglin, landowner and retired botanist/ecologist with the US Forest Service and FL Department of Environmental Protection; Eric Soehren with Alabama Department with Conservation and Natural Resources; John Brubaker, a landowner retired from the Medical University of South Carolina; Whitney Costner of Bok Tower Botanical Garden; Grace Howell of Alachua Conservation Land Trust; Danny Gustafson, professor at the Citadel; Sharon Hermann, professor at Auburn University, retired; Sudie Thomas, USDA Natural Resources and Conservation Program; Joe Cockrell, Audubon Society, USFWS retired; Johnny Stowe and Allen Bridgeman of South Carolina Department of Natural Resources; and Seth Hunt and Jason Martin of Westervelt Corp.

*Collaborators Eric Soehren (Alabama Department of Conservation and Natural Resources) and Sharon Hermann (Auburn University, retired) make **Schwalbea** protection "cages" at the Alabama outplant site.*

About the author – Dr. Jeff Glitzenstein and his wife Dr. Donna Streng have been Tall Timbers plant ecology research associates for decades. They supervised the long-term study of the St. Marks Refuge fire plots from 1985–2006, when the study was terminated. And, they conducted an intensive plant study on the Stoddard Fire Ecology Plots from 2007–2008. Jeff and Donna have been Tall Timbers' Beadel Fellows since 2007.

***Oxypolis canbyi** habitat in Carolina Bay in South Carolina.*

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Red Quail, Revisited: How Herbert Stoddard's Specimens are Helping Solve a Centuries-Old Bobwhite Mystery

BY JESSIE F. SALTER

If, like me, you have ever found yourself scrolling through the Bobwhite Quail Breeders Facebook group (for purely academic reasons, I assure you), then perhaps you are already familiar with so-called "Tennessee Red" bobwhites. True to their name, both males and females of this gorgeous color morph sport all over auburn red plumage and a characteristic white patch in the center of their breast, and are among the most popular variety of bobwhites in the commercial market (along with other fantastic breeds such as "snowflakes," "Mexican speckleds," and "Wisconsin jumbos"). Unlike many of these other varieties, however, red bobwhites are known to occur occasionally in the wild (one was taken by a hunter in the Red Hills region last year). Now commonly used to train bird dogs, red bobwhites have a history that far predates our current era of online quail shopping and were, in fact, the object of much fascination and scientific study by Herbert Stoddard himself at Tall Timbers nearly 90 years ago.

*Gould's painting of **Ortyx castanea** from his 1850 publication **A Monograph of Odontophorinae, or Partridges of America**. Although Gould originally thought this was a new species from South America, it is now considered to be the first record of the rare red morph of Northern Bobwhites. Image in the public domain.*

History of Red Bobwhites

Stoddard compiled an excellent history of red bobwhites, which he first described in his seminal work *The Bobwhite Quail: Its Habits, Preservation, and Increase* in 1931, and later expanded upon in a 1949 publication in the ornithological journal *The Auk*. Stoddard traced the first description of this rare color morph to British ornithologist John Gould, who purchased a bobwhite with distinctive red plumage from a market in Manchester, England and described it as a new species in 1842. Gould named this species *Ortyx castanea* ("castanea" being the Latin root for chestnut), and although he originally believed it to be a previously undescribed species from South America, he later amended that it could instead be a rare mutation of a typical bobwhite from the United States.

The next record of a red bobwhite does not appear until 1921, when a single female with this unusual coloring was shot in King County, Virginia, but in 1927 reports of multiple coveys containing red birds began surfacing from the Ames Plantation in Grand Junction, Tennessee. The manager of Ames wrote to Stoddard in 1927, describing these birds and later published an article about them in *The American Field* (thus inspiring the name "Tennessee Reds"), which introduced red bobwhites to a much wider audience of hunters and ornithologists alike. Stoddard visited Ames in 1928 to see these red quail for himself, and described them as looking "almost brilliant" in direct sunlight. Capitalizing on this newfound public interest, Ames began a captive breeding and release program for their red bobwhites.

The timing of the rediscovery of red bobwhites coincided with a wave of genetic studies on domestic bird plumages in the early twentieth century. Just a few years earlier, geneticists at the University of Wisconsin published a study describing the inheritance pattern of a similar red color morph in domestic pigeons, and in 1930 several red quail from Ames were sent to the University of Wisconsin to repeat the experiments with bobwhites. The quail proved somewhat less cooperative than the pigeons, however, and the results of the study were stymied by the poor survival of the offspring.

Stoddard's Experiments on Red Quail

In 1934, Ames arranged to have the study repeated at Sherwood Plantation near Thomasville, Georgia under the guidance of Stoddard, who had established himself as the

One of the original red bobwhites sent to Stoddard from Ames (left); a bobwhite from an aviary showing intermediate "reddish" plumage; a typical bobwhite from Louisiana (right). Specimens were photographed in the Louisiana State University Museum of Natural Science. Photo by Jessie Salter

authority on bobwhites. Stoddard and his colleagues designed an elegant series of breeding experiments using red birds from Ames and bobwhites with typical plumage from the Red Hills region. Between 1934-1936, they performed 14 crosses and recorded the plumage of the resulting offspring.

Through these experiments, Stoddard and his colleagues discovered that when red bobwhites were bred with normal bobwhites their offspring had an intermediate, "reddish" plumage, a pattern known as incomplete dominance. They also demonstrated that unlike typical bobwhites, of which males and females can be distinguished by plumage, males and females with red plumage were seemingly identical.

These findings were significant because red plumage in pigeons was found to be a sex-linked trait, indicating there were multiple genetic pathways through which red plumage could be produced in birds. Stoddard and his colleagues eventually published the results of their study in *The Auk* in 1949, but despite the rise in popularity of red bobwhites among commercial breeders in the following decades, it appears their findings were largely forgotten by the broader scientific community.

I first learned about Stoddard's interest in red bobwhites when I visited Tall Timbers for the first time in 2018.

– Continued on next page

I had come to spend a few weeks working with and learning from the Game Bird Lab during their January trapping season. As a museum-based ornithologist who is often the only person in the room studying bobwhites, it was invigorating to be immersed in a community of fellow bobwhite enthusiasts who were kind enough to share their tremendous knowledge with me. One of the game bird lab members asked if I'd ever read Stoddard's study on red bobwhites (referring to the 1949 article in *The Auk*); I had not, but I read it that day and was immediately intrigued.

Over the past two decades, advances in molecular techniques and computational analyses have facilitated a new wave of fascinating studies into the genetic basis of bird coloration, led by pioneering studies in species like pigeons, chickens, and *Coturnix* quails that have historically been the targets of selective breeding for plumage traits. This is no coincidence; the knowledge of the genetic basis of these traits provided by classic studies of human-associated species is invaluable in designing effective modern studies that in turn provide insight into the evolution of plumage color across the bird Tree of Life.

In the past few years, several studies have built upon centuries of breeder knowledge to describe in detail the genes and molecular pathways involved in producing numerous plumage mutations in pigeons, including the genes responsible for sex-linked red plumage. I wondered why no one had followed up on Stoddard's study on red bobwhites. There were still unanswered questions: Was Stoddard's hypothesis of incomplete dominance correct? What genes were involved in producing red plumage? And what about the red bobwhites being bred in captivity today—do all red bobwhites share the same genetic mutation, or has red plumage evolved multiple times independently?

The collection is a testament to Stoddard's exceptional commitment to documenting and preserving the natural history of the Red Hills region.

Herbert Stoddard Bird Collection

During that visit to Tall Timbers, I had carved out an afternoon to explore the Herbert Stoddard Bird Collection, which comprises nearly 4,000 bird specimens, many of which were collected and prepared by Stoddard himself. The collection is a testament to Stoddard's exceptional commitment to documenting and preserving the natural history of the Red Hills region. While digging through drawers of bobwhite specimens I made a fantastic discovery: here were

Many of the parents and offspring from Stoddard's 1930s breeding experiments are preserved as museum specimens, along with his hand-written notes, in the Herbert Stoddard Bird Collection at Tall Timbers. Photo by Jessie Salter

the very red bobwhites Stoddard and his colleagues described in their 1949 paper! They had prepared many of the parents and offspring from the crosses performed during 1934-1936 as specimens, and preserved them in the bird collection at Tall Timbers, along with Stoddard's hand-written notes describing the experiments. I immediately knew what a unique and valuable resource this was.

A lot has changed in the nearly 90 years since Stoddard performed his experiments with red bobwhites. We can use technology like spectrophotometers—devices that measure the wavelengths of light transmitted by an object—to objectively measure the color of feathers and identify the pigments they contain. By taking tiny pieces of skin from the toes of historical specimens—a technique that wasn't available even a decade ago—we can sequence the entire genomes of birds and identify the genes involved in producing different plumage colors. By using these modern methods on Stoddard's historical specimens, we can build upon the knowledge Stoddard contributed in his original study, and continue his pursuit to understand the evolution of these remarkable red quail.

New Genome Sequencing Techniques Confirm Stoddard's Hypothesis

Together with a team of scientists from Tall Timbers and Louisiana State University, we were able to use these new techniques to sequence the genomes of 34 historical

A selection of bobwhite specimens with plumage mutations (including a Tennessee red, far right) in the Herbert Stoddard Bird Collection at Tall Timbers. Photo by Jessie Salter

specimens of parents and offspring from Stoddard's original 1930s breeding experiments, including two of the red bobwhites sent to Stoddard from Ames. These historical specimens include bobwhites with red, intermediate "reddish", and typical plumage. We're not quite ready to publish our findings, but our results confirm Stoddard's hypothesis that red plumage is an incomplete dominant trait in bobwhites and suggest that the genes responsible for producing red plumage in bobwhites are not the same genes that produce red plumage in pigeons, but they are known from color morphs in chickens, *Coturnix* quail, and other species of passerine birds. Importantly, our results also suggest that different populations of red bobwhites produce red plumage through different genetic mutations. We're excited about these results and what they tell us about how color mutations evolve in bobwhites and other species, and we look forward to sharing our full findings in the near future!

Stoddard could not have known in 1934 that his specimens would one day have their entire genomes sequenced—the double helix structure of DNA wasn't even discovered until 1953! But, he knew the importance of museum collections for preserving a record of biodiversity, and he had the foresight to ensure that future generations of scientists could build upon his tremendous contributions to the fields of natural history, ecology, and ornithology.

Also preserved in the Stoddard Bird Collection are bobwhites with other unusual plumage mutations—like albinism, melanism, and one incredibly peculiar specimen with protruding discs of feathers on each cheek—that are still waiting to be studied. Some of these birds Stoddard collected himself, and others were sent to him by hunters and quail managers across the country who knew he would be interested in studying and preserving them. Nearly a century after he began his own observations, Stoddard's legacy as a naturalist and collector continues to shape and inspire our understanding of bobwhite biology.

About the author – Jessie F. Salter is a National Science Foundation Postdoctoral Fellow in Biology at the Natural History Museum of Los Angeles County. She received her PhD from Louisiana State University in 2021.

The Beadel Fellowships at Tall Timbers

BY ROSE RODRIGUEZ

In the history book about Tall Timbers, *The Legacy of a Red Hills Hunting Plantation*, coauthor Robert L. Crawford states, "Beadel Fellows have contributed immeasurably to research at Tall Timbers throughout the years. They provide wisdom and a storehouse of knowledge for station researchers."

What are the Beadel Fellowships?

Tall Timbers Beadel Fellowships are awarded from one to three years to researchers for a specific project related to the organization's mission. Beadel Fellows are provided a stipend that is funded by bequests to Tall Timbers Research, Inc. from benefactor Henry Beadel and his brother Gerald, when the organization was founded. Fellowships can continue beyond the initial award.

Nominees for the fellowships are recommended by Tall Timbers research staff and must be approved by the Science and Land Management Committee and the Board of Trustees. They are often retired academics who are still active in their field of research. Beadel Fellows are evaluated annually when they provide a written report on their project. Tall Timbers has benefited greatly from the interactions Beadel Fellows have with staff and the contributions they have made to our research mission.

Dr. Gordon E. Gates (Earthworms 1967-1975) and Dr. Andre F. Clewell (Botany 1967-1976) were the first researchers awarded Beadel Fellows. A distinguished list of fellows followed them, some for only a few years, but others like Dr. Henry M. Stevenson (Ornithology 1971-1991), Dr. Robert K. Godfrey, (Botany 1972-2000), Dr. William Brueckheimer (History 1973-1990), and Angus Golson (Botany 1994-2007) had long tenures. Their work is described here.

An Authority on the Bird Distribution for Florida

Dr. Henry M. Stevenson was considered the foremost authority on Florida's birds. Before he retired from the faculty at Florida State University in 1975, Stevenson was awarded a Beadel Fellowship that allowed him to continue his research on the distribution of birds in the southeastern U.S., especially in Florida and the Big Bend region.

During his tenure as a Beadel Fellow, Dr. Stevenson worked on *The Birdlife of Florida*, which was published posthumously in 1994 by University Press of Florida. Publicity for the book states, "For the last six years of his life, Stevenson worked with coauthor Bruce Anderson to complete this incomparable legacy, a reference of 665 detailed species accounts of all the state's avifauna, including the exotics. For each of the species accounts, *Birdlife* contains sections on world distribution and Florida status and, if appropriate, migration, breeding, Christmas Bird Count data, and haunts and habits. Other sections in some accounts include problems of identification, adverse factors, and variations (subspecies)." This 907-page book, is considered the authority on bird distribution for Florida.

Tall Timbers history author Robert Crawford wrote that Stevenson's Beadel Fellowship provided funds to work on his book, an office at Tall Timbers in the current archives building, and also allowed him to travel to museums to examine Florida specimens. It was in his office at Tall Timbers that Stevenson suffered a fatal heart attack in 1991, after the *Birdlife* manuscript was completed, but before it was published.

Henry Stevenson working at Tall Timbers. Photo by Bruce Anderson, Tall Timbers Archives.

In the history, Crawford states Henry Stevenson and Herbert Stoddard were research colleagues and that they shared an interest in the occurence of local birds. Stoddard's WCTV TV tower project provided an abundance of bird specimens for Stevenson to examine. The dedication page in *The Birdlife of Florida* states, "This book is dedicated to the memory of Herbert L. Stoddard, Sr. (1889-1970) whose contributions established an early foundation for Florida ecology and ornithology."

A Collaboration and Close Friendship

Beadel Fellows Dr. Robert Godfrey, affectionately called "Dr. Bob," and Angus Gholson were good friends who often botanized together. They "shared a love and concern for the dwindling natural areas in their region…" The two came from different professional backgrounds. Bob Godfrey was a retired botany professor from Florida State University, who had curated the university's herbarium, now named in his honor, and was the coauthor of several books on plants including the standard regional reference, *Trees of Northern Florida*. In 1988, Godfrey published *Trees, Shrubs, and Woody Vines of Northern Florida and Adjacent Georgia and Alabama,* which is dedicated to Angus Kemp Gholson, Jr. "Not to pay a debt but to acknowledge it." In the preface to the book, Gholson also acknowledged Tall Timbers and the Beadel Fellowship that sponsored the research for the book and provided him with staff and financial support including office space. Dr. Bob's tenure as a Beadel Fellow continued until his death in 2000. It was the longest –28 years.

Angus Golson, had a forestry degree from the University of Florida, and was retired from the U.S. Army Corps of Engineers, where he began in 1953 as an assistant resource manager at their Jim Woodruff Dam near Chattahoochee, Florida and retired as its manager in 1983.

A botanical survey was conducted before the impoundment of Lake Seminole and Gholson was assigned to accompany Dr. Robert Thorne of Iowa State University during this effort. The experience gave Golson a passion for botany, especially when he met Bob Godfrey. They began botanizing together in north Florida, south Georgia and south Alabama, collecting plants and noting their locations. Both men had a species of *Liatris* (commonly called gayfeather or blazing star), named after them: Godfrey's Blazing star, *Liatris provincialis godfrey,* found in sandhill habitat of Wakulla and Franklin Counties, and the rare Gholson's Gayfeather, *Liatris gholsonii*, which can be found in the bluffs and ravines along the Apalachicola River.

Robert Godfrey and Angus Gholson, ca. 1990. Photo by Sharon Hermann, Tall Timbers Archives.

Also named for Gholson, is the Angus Gholson Nature Park and Nature Trail found in the heart of his hometown of Chattahoochee, Florida.

For a 2002 newspaper article about the then 81-year-old Gholson* titled, "N. Florida is Gholson's Garden," environmental writer Craig Pittman interviewed another Chattahoochee, Florida native, the late Florida State University president Talbot "Sandy" D'Alemberte, who had known Gholson all his life. He stated, "Gholson was part of a dying breed, a citizen-scientist like Thomas Jefferson." The article ends with this quote from Gholson:

> "Three things are very important: air, water and food," Gholson says. "You can't do without air but for just a damn few seconds. You can't do without water or food for long, either. All of it comes from plants. I don't know what we're going to do when we cut them all down. We're going to have to plow up some of these interstates and plant corn."

**https://www.sun-sentinel.com/news/fl-xpm-2002-11-10-0211100129-story.html*

– Beadel Fellows continued on the next page

Beadel Fellows continued –

A Survey of Leon County's Hunting Plantations Led to Historical Research on Tall Timbers

Dr. William R. Brueckheimer, who had retired as chair of the geography department at Florida State University, was a coauthor of *Leon County Hunting Plantations: An Historical and Architectural Survey* published by the Historic Tallahassee Preservation Board. He had spent years researching the history and development of hunting plantations in the southeast, including the history of rural Leon County and its agriculture.

William Brueckheimer was a Beadel Fellow from 1973–1990. During this time, he researched and wrote a manuscript about the history of Tall Timbers—an outcome of his research on the Red Hills quail preserves and their land-use practices. His chronical of Henry Beadel and Tall Timbers began with the physical setting of Tall Timbers Plantation and ended with the establishment of Tall Timbers Research Station in 1958. The manuscript had languished in the Tall Timbers' library until author Robert Crawford was engaged to incorporate Brueckheimer's work into a comprehensive history of Tall Timbers. It was the basis for part one of *The Legacy of a Red Hills Hunting Plantation: Tall Timbers Research Station & Land Conservancy*, which was published by the University Press of Florida in 2012. Brueckheimer was given co-authorship as a result. He was very pleased to see that his years of work on the history of Tall Timbers was finally published.

Beadel Fellows continue to enrich Tall Timbers with their research and knowledge. They detail their activities in reports to the director of research who in turn shares them with the Board Science and Land Management Committee.

In this issue of the *eJournal,* current Beadel Fellow Dr. Jeff Glitzenstein writes about the work he and his wife and colleague, Dr. Donna Streng, are conducting to restore two rare plants to longleaf pine ecosystems sites in the southeast. See pages 9-11 in the **Flora & Fauna** section.

About the author – Rose Rodriguez is the Publications Coordinator at Tall Timbers, eJournal editor, designer, and frequent contributor.

Two Rare Liatris Species Named for Beadel Fellows Angus Gholson & Bob Godfrey

BY ROSE RODRIGUEZ

Liatris, commonly called gay feather or blazing star, is an herbaceous perennial wildflower with composite flower heads, and is in the Aster family. Several liatris species can found in the native ground cover of the sandhills, mesic longleaf pinelands, scrub and pine flatwoods communities in Florida. The plant ranges from 1–4 feet tall, with flower spikes that are 6–12 inches long; it blooms in the late summer/early fall, August to October. Two rare species can only be found in the Panhandle of Florida, *Liatris gholsonii* and *Liatris provincialis* Godfrey, and they are named for two of Tall Timbers' past Beadel Fellows, Angus Gholson and Robert K. Godfrey, respectively.

Liatris gholsonii, commonly called Bluffs blazing star or Gholson's blazing star, was discovered by Loren C. Anderson in 2002, and named for Angus Gholson. The habitat for this species is the bluffs and ravines of the upper Apalachicola River in the Florida Panhandle; Gholson's stomping grounds.

Liatris gholsonii *observed in Liberty County, Florida. Observation © lillybyrd · some rights reserved. Inset,* ***Liatris gholsonii*** *closeup. Photo by Cami Adams used with CPC Permission.*

This area of the Panhandle was heavily damaged by Hurricane Michael in 2018. A 2019 assessment by the Florida Natural Areas Inventory to the Florida Park Service of the forest damage at Torreya State Park, which is situated on the high bluffs overlooking the Apalachicola River, noted that "many hardwood forests along the uplands at the tops of the ravines likely developed through decades of fire exclusion or fire not burning all the way to the edge of the ravines. Additionally, a rare plant species, Gholson's blazing star (*Liatris gholsonii*), occupies this ecotone area along the upper slopes between sandhill and the sloping hardwood dominated ravine and could potentially benefit from restoring fire to these areas."

Liatris provincialis Godfrey was discovered by Robert Godfrey on Alligator Point, in Franklin County in 1959. Its habitat is the transition zone between coastal scrub and flatwoods and between sandhill and flatwoods near the Gulf coast of Franklin and Wakulla Counties where it is endemic, and primarily found on protected sites at the St. Marks National Wildlife Refuge.

***Liatris provincialis* Godfrey** in bloom at St. Marks National Wildlife Refuge. Photos by Alan Cressler

Searching for North America's Most Secretive Bird

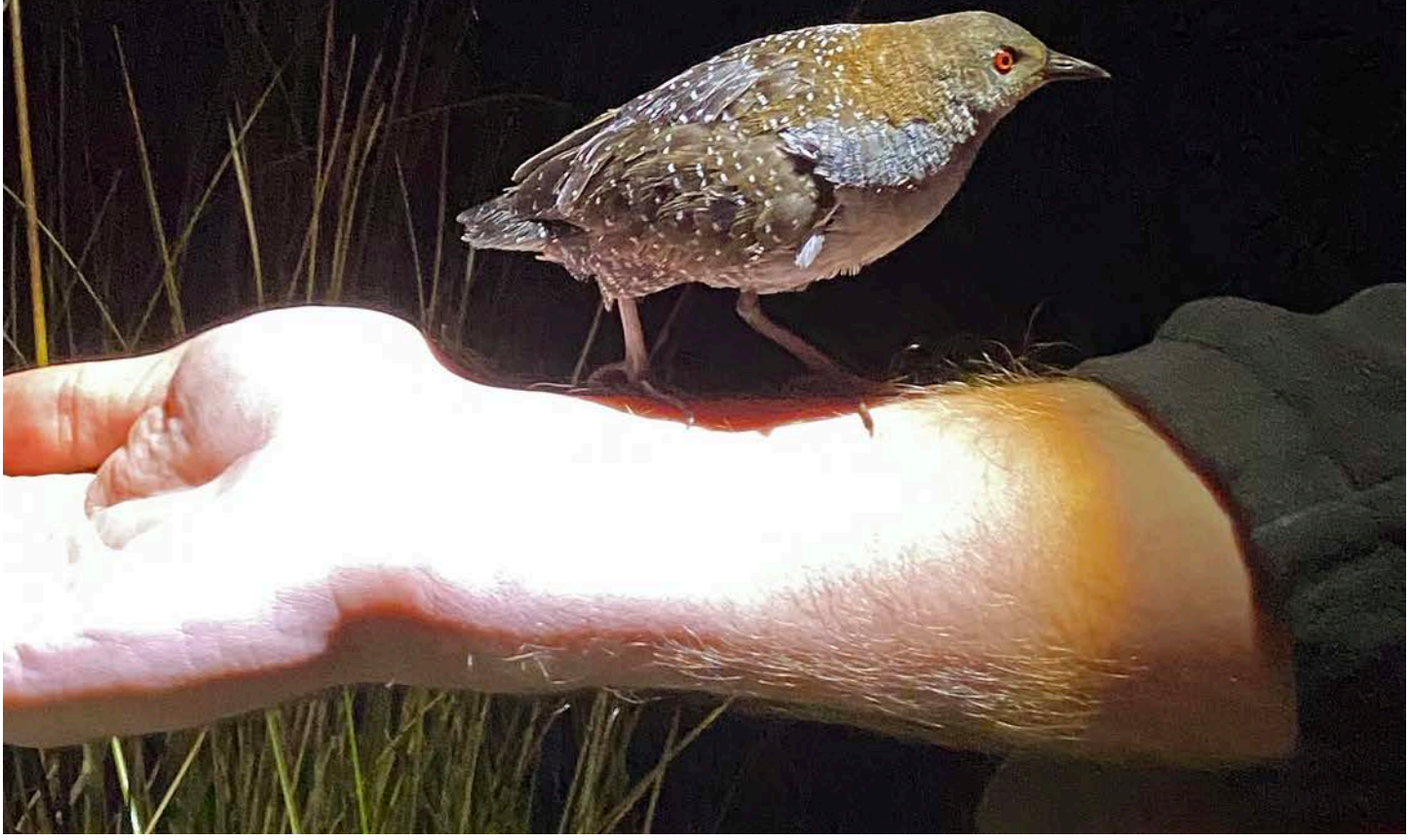
BY HEATHER LEVY

The Eastern Black Rail, a subspecies of the Black Rail, is a white whale to many bird enthusiasts due to its elusive nature. Rarely seen in flight, it acts more like a mouse than a bird, shuffling underneath thick marsh vegetation. It is also crepuscular, meaning it is mainly active in the hours of dawn and dusk.

Despite challenges in detecting this secretive bird, surveys indicate severe population declines across its range over the past 20 years resulted in the Eastern Black Rail being listed as threatened under the Endangered Species Act in 2020. The Eastern Black Rail may also be one of the first birds listed with climate change as the primary threat.

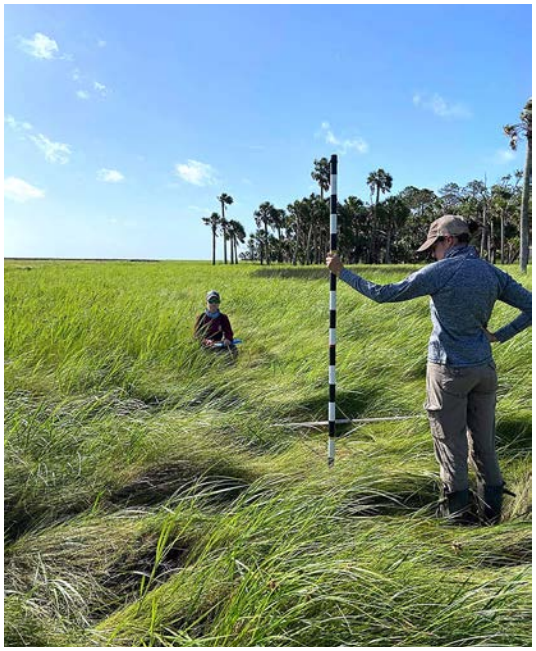
About the size of a sparrow, Black Rails are the smallest rail species in North America. They are mainly gray to black and have chestnut backs with white speckling that have been poetically referred to as a constellation. Perhaps most notable are their bright red eyes. Their most common territorial call is an excited 'kickeedo,' but they also produce aggressive growl sounds and other calls to communicate.

Eastern Black Rails occur along the Gulf Coast states, inhabiting coastal prairies, saltmarshes, and impounded wetlands. Although they occur in both coastal and inland settings, the majority of records come from the coast. The high marshes the birds inhabit are infrequently inundated by water and are nestled between the dry uplands and the regularly flooded low marshes. High marshes are dominated by species of cordgrass, needlerush, and saltgrass. In addition to habitat loss and fragmentation, on an elevational scale, high marsh faces threats from both below and above.



Fire suppression allows for woody encroachment from the uplands, and on the other end, climate change is driving sea level rise, causing low marshes to push further into the high marsh. For Black Rails, microtopography is a key element, allowing for some areas of shallow water that provide foraging habitat. They have a narrow niche and require appropriate water levels, vegetation structure, and vegetation composition in order to persist.

Since 2020, the Tall Timbers Stoddard Bird Lab became involved in a NOAA RESTORE Science Act project assessing occupancy of Black Rails, and the influence of prescribed fire on high marsh habitats suitable for Black Rails across the Gulf Coast states. This project, nicknamed Firebird, has over 15 partnering entities and is the largest to focus on Eastern Black Rails across a huge swath of their range. Key questions of the fire component include determining which burn interval provides the most suitable vegetation composition and structure in high marshes. We have also partnered with the Geospatial Lab here at Tall Timbers to create burn severity maps that assess the influence of habitat patchiness and vegetation composition on the intensity of prescribed fire. In addition, we are sampling areas outside of the experimental fire regimes to determine regional occupancy and habitat use.



Last breeding season (March–July) was a pilot season to determine the most productive survey techniques and to identify areas within the panhandle that support Black Rails. We surveyed for breeding birds at 147 public sites from Franklin to Pasco counties across state parks (Florida Department of Environmental Production lands), national wildlife refuges (US Fish and Wildlife Service lands), and wildlife management areas (Florida Fish & Wildlife Conservation Commission lands). Of the 147 sites visited, 15% were occupied by Black Rails. If a site was occupied, there was a 20% chance of detecting it during any given visit. We generally detected more birds in the morning surveys than those in the evening, but this was not statistically different. Peak detection occurred in May and June.

At left, an adult Eastern Black Rail being released after measurements were taken. All birds handled as part of this project are under proper state and federal permits. Photo by Heather Levy. Above, Heather Hill (left) and Heather Levy (right) measure vegetation thickness with a marked PVC pole. Photo by Destinee Story Braden

The breeding season fieldwork is currently in full swing, and we're detecting several more birds this year than we did last year during the same time. After experience from a full field season last year, the reasons are likely due to a few things—better understanding of their habitat, and observers that are more familiar with some of the obscure vocalizations these birds make. But most importantly, it's likely also a product of desirable habitat structure from prescribed burns applied in the past two years. Many of the sites where we're detecting birds are now between 1-3 years post-burn.

In addition to conducting call-broadcast surveys, we are also testing the utility of acoustic recording units (ARUs) to detect Black Rails by partnering with researchers from the K. Lisa Yang Center for Conservation Bioacoustics, housed within the Cornell Lab of Ornithology. We are working to help train their algorithm by providing data and manually reviewing processed output. ARUs can be set out in the marsh to record continuously, or during pre-selected times throughout the day for weeks at a time, depending on the make and model. They have become popular in the secretive marshbird world, but there are still a lot of questions that need to be answered before ARUs can be implemented effectively for long-term and large-scale Black Rail monitoring.

A portion of the Black Rail population in the Gulf Coast are short-distant migrants, but the ratio of migratory to resident birds is unknown, as are potential differences in their overwintering and breeding microhabitat. To answer these questions, we sample for birds over the winter using a slightly more tactile approach. Several nights a week crews of 4-8 go out in the evening outfitted with a 15-meter-long rope and spotlights. After sunset, the crew lines up along the rope and walks it slowly across pre-determined transect lines, hoping to flush birds. When a bird is located, a handheld net is then gently placed over the bird. We caught several rails this winter; a single aluminum band was placed

– Black Rail continues on next page.

on each bird in case it is re-captured in the future. Once captured, we take general morphometric measurements in addition to fecal and feather samples. Fecal and feather samples are shipped off to a collaborator for processing to investigate diet and stable isotope analyses that inform us which birds are migratory. Very little is known about overwintering ecology and behavior, so we were intrigued when at one site we flushed two females and a male at the same spot, and at another location we had a female/male pair together on two separate occasions.

An example of coastal high marsh, dominated by saltmeadow cordgrass and desert saltgrass. Photo by Heather Levy.

Both winter and breeding season are accompanied by vegetation monitoring in areas where we've detected rails, and areas randomly chosen around where we are sampling for birds. The method involves classifying habitat type, and assessing species composition and vegetation thickness at the height where the vegetation is growing, in addition to vegetation thickness a few centimeters off the ground.

From a bird's eye view (well, if you're a bird that flies), the grasses that dominate these marshes appear too thick for birds to easily move through, but if you look closely underneath and peel back the grasses, many of them grow in bunches and provide railways for small animals. Quantifying these characteristics will also help inform the proper fire regime, in addition to identifying potentially suitable areas for rails where presence is not known.

Throughout the project, in addition to monitoring occupancy, we've developed questions we hope to answer for Florida in the coming years, such as home range size, microhabitat structure for both breeding and overwintering birds, and movement ecology. Despite the unique challenges associated with studying such elusive creatures, we're hopeful the information we're gathering will feed directly into conservation and management plans with a goal of habitat and monitoring improvements across the coastal range of the Eastern Black Rail.

About the Author – Heather Levy is the Avian Research Specialist at Tall Timbers. She studys influences of habitat management on coastal marshbirds and pineland endemics.

Stoddard Bird Lab

The Stoddard Bird Lab conducts problem-solving research designed to reverse the population declines observed for many birds associated with fire-maintained ecosystems. Over the decades, the lab also has provided important information on the bird mortality associated with communication towers and the unique characteristics of rare old-growth pine forests, and special monitoring programs developed by the lab are used to track rare birds on scores of public lands.

The lab also makes use of innovative tools that have been developed to help conserve habitat on private lands. This effort focuses primarily on the large population of endangered Red-cockaded Woodpeckers found in the Red Hills region and extends to over 130,000 acres in Georgia and Florida. The lab also has received numerous awards for other scientific contributions, conservation initiatives, and effective outreach.

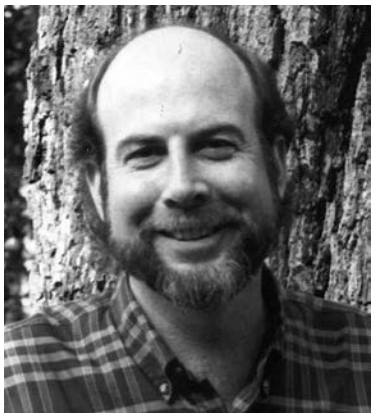
Donations are essential for developing data-driven solutions to the problems confronting many pineland birds. To learn more about the Stoddard Bird Lab and to contribute to the program, visit the lab's web pages.

Photos courtesy of Tara Tanaka.

Kevin McGorty – a Leader in Southeast Land Conservation – Will Leave a Legacy of Accomplishments When He Retires

KIM SASH & BRIAN WIEBLER

Kevin McGorty is truly a champion of conservation throughout the Southeast and beyond. With a background in historic preservation, a deep land ethic, and the organizational know-how to tackle big projects, Kevin has helped shape the future of the Red Hills and Tall Timbers along with it. Kevin has announced that he will be retiring from Tall Timbers in December of 2022. Join us for a look back at just a few of his accomplishments and ways he has been a steward of landscapes, structures, and our organization.



Before joining the Tall Timbers staff in 1994, Kevin was the director of the Historic Tallahassee Preservation Board, where he served as a key member of the Red Hills Consortium, the group that developed and brought to life the concept of forming a conservation easement program at Tall Timbers. Originally known as the Red Hills Conservation Program, it was renamed the Tall Timbers Land Conservancy in 2006, recognizing that land conservation had become an integral part of Tall Timbers' land stewardship mission.

Daphne Flowers Wood, Tall Timbers Trustee and Board Secretary, expressed it clearly, "As Chairman of the Easement Review Committee, it has been my honor and pleasure to work closely with Kevin for 28 years. His remarkable depth of knowledge, passion for preservation and easy, low-key, confident manner helped Tall Timbers land tens of thousands of acres of sensitive habitat easements that otherwise might well have been unprotected." Mrs. Wood also noted that, "without question, had Kevin not written three compelling grant requests to the State of Florida on behalf of the John Russell Pope mansion restoration at Livingston Place in Monticello, Florida, it would never have happened."

Practicing a Holistic Approach

With a persistence that some might call stubborn, Kevin consistently calls for a holistic and long-term view of what it means to be a steward. This approach has resulted in a model land trust program that keeps the big picture in focus, while also diving into the details needed to close on key accomplishments.

Acres conserved is the classic metric for a land trust, promoted like the fundraising goal at a telethon. Kevin has never lost sight of acres, and the tally board for permanently protected land has risen to over 153,105 acres of high-quality wildlife habitat— about 40% of the Red Hills region. However, Kevin has never stopped at acres, recognizing that saving great places means going beyond boundary lines and program silos.

Media mogul and conservationist, Ted Turner, was the featured speaker at the 2007 Red Hils Spring Dinner. From left to right, Kevin McGorty, former Tall Timbers Trustee Kate Ireland, Ted Turner and former Executive Director Lane Green. Photo by Rose Rodriguez

As Steve Small, a leading authority on private land protection and author of Preserving Family Lands put it, "Kevin has been a pioneer in the field and has been a leader in taking Tall Timbers/Red Hills through an enormous and successful period of growth."

In 2002, Kevin secured board support and community funding to hire an urban planner to work collaboratively with local governments and the private sector in support of smart growth that benefits local communities, economies, and land conservation. This proactive approach helps reduce the outward development pressure that consumes and fragments natural lands.

Kevin McGorty with Tall Timbers' President/CEO Bill Palmer, and some of his Land Conservancy team at Livingston Place for the 2022 Red Hills Spring Dinner. From left to right, Kevin, Conservation Coordinator Shane Wellendorf, Bill, and Planning Coordinator Neil Fleckenstein. Photo by Kim Sash

Kevin's push for a professional planner on staff continues to reap benefits as Tall Timbers successfully responds to threats from coal-fired power plants, landfills, bottled water companies, industrial poultry farms, petroleum pipelines, and toll roads. All while continuing proactive work with local leaders and elected officials to communicate the significant economic benefit of hunting lands in the Red Hills. This work lead to research with Florida State University, revealing that Red Hills hunting properties provide more than $194.1 million in local economic impact — valuable information for elected officials balancing economic and environmental needs.

In 2013, Kevin worked with stakeholders to support new outreach and education efforts focused on the Red Hills. Thanks to his leadership, Tall Timbers has worked with teachers to develop conservation curriculum for use in local classrooms, longleaf-wiregrass educational plots — complete with fire — were established on school grounds in Florida and Georgia, and the biennial Red Hills Fire Festival was launched in 2018. The Fire Festival has been hosted three times at Tall Timbers, reaching a high of over 1,600 people in attendance, taking in a wide variety of fire education opportunities. The event was so popular that staff from Tall Timbers consulted with partners in Gainesville, Florida to host a similar fire festival on the off years between the Red Hills events. These long-term investments in public support for conservation and prescribed fire reflect Kevin's orientation to a long arc of time.

In 2016, recognizing the need for additional tools, Kevin assisted in creating a land conservation opportunity fund to help landowners in the Red Hills offset easement costs. The Red Hills Land Conservation Opportunity Fund is currently a $1 million revolving fund, with a fundraising goal of $5 million. First used in 2017, the Opportunity Fund helped secure the purchase of 160 acres of old growth cypress along the Aucilla River. This tract was slated to be clear-cut, but Tall Timbers, working with the timber company, a private donor, and other conservation partners, purchased the ecologically important parcel and transferred ownership to the State of Florida.

In 2020, Kevin's leadership facilitated the creation of a biological monitoring position that helps link the land trust and research functions at Tall Timbers. While land conservation is the ultimate goal, it is important to understand what is being protected. This increased focus on monitoring lead to the discovery of a striped newt population — the last known functioning western population in Florida. Newts from this population are now being captive bred in seven zoological institutions for reintroduction on public lands.

The expanded biological monitoring work also includes surveys for gopher tortoises to determine robust population estimates, and aid to landowners through Safe Harbor Agreements that protect red-cockaded woodpeckers. In the Southeast, the Red Hills region is the stronghold for red-cockaded woodpecker and gopher tortoise populations on private lands. These strides to connect research and conservation are unique in the land trust movement, and Kevin has created the model to show their importance.

– McGorty continued on next page

Kevin McGorty gives a tour to a group at Livingston Place who were on a Red Hills' architecture study trip. Photo by Jessica Coker

McGorty continued –

Preserving Cultural Resources

The holistic approach that Kevin practices goes beyond the structures and functions he has helped establish in the Land Conservancy. Spend enough time with Kevin and you are likely to hear reference to a location having a "sense of place." We won't do it justice here, but if you listen to Kevin, it's clear that he wants to conserve whole places. This means considering cultural resources that reflect the human history of an area, in addition to the natural resources.

Kevin McGorty talks about the restoration of the Jones Family Tenant Farm with a Leadership Tallahassee class. Photo by Brian Wiebler

Kevin's experience with cultural resources was instrumental in restoring the historic Livingston Place Mansion in the middle of a 9,125-acre property donated to Tall Timbers in 2013. The 14,000-square-foot house was designed by John Russell Pope in 1936. Pope was the foremost classical architect of the twentieth century, who also designed the Jefferson Memorial and National Archives in Washington D.C.

Kevin authored three grants for the Livingston Place Mansion, all funded by the Florida Department of State's Division of Historical Resources and matched by private donations. This resulted in more than $1.2 million to support the restoration of this landmark building. To round out this effort, he also led the nomination process for the January 2022 designation of the entirety of Livingston Place on the National Register of Historic Places—considered the largest designation in Florida.

His 2002 restoration efforts for the Jones Family Tenant Farm at Tall Timbers began when Kevin submitted a grant proposal to the Florida Department of State, Division of Historical Resources. His proposal was ranked first that year for funding out of 117 projects submitted! Kevin highlighted that recognizing a diversity of historical contributions—not just those of the wealthy—is part of a holistic approach. For the tenant farm restoration, Kevin knew the importance of not only restoring the house and corncrib, but of also hiring skilled carpenters who grew up on tenant farms in the Red Hills. Working with Tall Timbers' historian Juanita Whiddon, he also knew it was important to collect oral histories from the Jones family members that grew up in the house. This restoration project not only preserved the Jones Family Tenant Farm, but also preserved

what it was like to grow up there using the oral histories to create interpretive exhibits for visitors.

Supporting the Land Trust Movement

Kevin has worked closely with the Land Trust Alliance for years to help advance land conservation nationally. He served two terms on the Land Trust Accreditation Commission to build and recognize strong land trusts, foster public confidence in land conservation and help ensure the long-term protection of land. Aiding land trusts in the important work of accreditation, while also going through accreditation twice with Tall Timbers, Kevin truly realizes the importance of this work and primarily the importance of proper policy and procedures for land trusts to ensure conservation in perpetuity.

Steve Swartz, a past member of the Accreditation Commission, noted that "The success of the accreditation program as it exists today is in no small measure the product of the Commission heeding and respecting Kevin's voice and putting his message into practice."

Kevin also serves on Land Trust Alliance Leadership Council. This elite group of nationally recognized leaders is working to foster the next group of land trust leaders. He has attended nearly every Rally — the appropriate name for Land Trust Alliance conferences — and attending with

Kevin McGorty is the "Big Cheese" at a Land Trust Alliance Rally. Photo by Kim Sash

Wilson Baker and Kevin McGorty riding in June White's vehicle while touring her property called Old Growth Woods, a 2018 conservation easement project. Photo by Kim Sash

Kevin is not for the shy. Each Rally is a whirlwind of activity and people, as Kevin coordinates with peers from across the country to address the next threat or opportunity in conservation. "Kevin's legacy is his role in raising the professional standards of the private land conservation movement through the Land Trust Alliance," explained Lawrence Kueter, Esq., legal counsel to the Colorado Cattlemen's Agricultural Land Trust.

"Kevin McGorty is the epitome of land conservation leadership through a career of unwaveringly thoughtful, innovative, and collaborative leadership in both his home base at the Land Conservancy of Tall Timbers and in his dedication to the land trust community at the national scale," explained Michael B. Whitfield, former Executive Director of the Heart of the Rockies Initiative and Teton Regional Land Trust.

As past treasurer for the Alliance of Florida Land Trusts, Kevin works at each level to build alliances with land trusts to help save special places. In 2003, Kevin was honored as Florida's Land Conservationist of the Year by the Florida Wildlife Federation for his outstanding achievements and dedication to land stewardship. His passion for conservation has not wavered in his 28 years at Tall Timbers. He inspires those around him to seek creative solutions for conservation, and works together with any partner to help solve problems that arise.

By teaching people to connect to the land they call home, conserve the lands that they love, and invest in the region they live in, Kevin McGorty has had a remarkable and everlasting impact on conservation in the Southeast.

About the Authors – Kim Sash is the Biological Monitoring Coordinator with the Tall Timbers Land Conservancy. Brian Wiebler is th Communications Director for Tall Timbers.

Tall Timbers Enrolls 34 Landowners in the Regional Conservation Partnership Program During its First Year of Conservation Work Funded by NRCS

BY TYLER MACMILLAN

Flowing from Thomasville, Georgia south into Florida through the Red Hills, cutting swaths through the Cody Scarp before falling into the Coastal Plain and eventually reaching Apalachee Bay, the St. Marks/Wakulla and Aucilla River watersheds contain some of the most unique water features on the planet. At points along their paths, these rivers and their tributaries drop underground into "swallet" holes joining with groundwater in the massive Floridan Aquifer, and re-emerge down-gradient as springs that flow to tidewater, where an incredibly diverse coastal ecosystem has evolved in this mixture of fresh and salt water.

Tall Timbers has long had an interest in the northern reaches of these river basins and in the past few years has expanded its conservation efforts toward a more holistic watershed approach. Toward that end, funding opportunities were explored and, in 2020, the US Department of Agriculture's Natural Resources Conservation Service (NRCS) awarded $7,066,083 to Tall Timbers to implement conservation work in the Aucilla and St. Marks River watersheds in Georgia and Florida. The work is funded through the Regional Conservation Partnership Program (RCPP), a five-year, partner-driven program that leverages funds to solve natural resource challenges on both natural and agricultural lands through the 2018 Farm Bill. This award was an outgrowth of Tall Timbers' Strategic Plan priorities to pursue funding resources for strategic conservation transactions, conservation management, and land stewardship; emphasize prescribed fire as an essential land management tool; and increase community awareness about exemplary land stewardship.

The RCPP project seeks to improve water quality, wildlife habitat, and economic opportunities in the Aucilla and St. Marks River watersheds. The project will accomplish these goals by funding the purchase of conservation easements, cost-share for habitat management on private forest and agricultural lands, community events to raise awareness about the watershed, and even an experimental program in the Gulf of Mexico to benefit the oyster industry through improved water quality and new oyster reefs.

Tall Timbers is working with a wide range of partners to implement the project. These partners include the Suwannee River Water Management District, Aucilla Research Institute, Florida Fish and Wildlife Conservation Commission, St. Marks National Wildlife Refuge, Apalachee Audubon Society, the Tallahassee Community College Wakulla Environmental Institute, and numerous private landowners.

After working through the contracting process, the program kicked off in 2021 with Tall Timbers hiring two full-time program staff: Conservation Program Liaison,

Above, two paddlers enjoy a ride down a set of rapids on the Aucilla River. Photo by Tyler Macmillan.

Tyler Macmillan, and RCPP Field Biologist, Rebecca Armstrong. The RCPP team immediately started working to enroll landowners in Florida and Georgia in the cost share programs for habitat management, while also identifying properties for the potential purchase of conservation easements. Coordination with various partners occurred as well as outreach efforts to explain the program and the benefits of exemplary land stewardship within these watersheds.

The initial sign-up for land management cost-share assistance resulted in the enrollment of 21 Florida properties in Leon, Wakulla, Jefferson and Madison Counties, and 13 Georgia properties in Grady, Thomas and Brooks Counties. These stewardship projects include:

- **3,252 acres** of prescribed burning, including fireline installation;
- **156,122 longleaf pine trees** being planted on **235 acres**, including site preparation;
- **1,083 acres** of forest stand improvement practices; and
- **152 acres** of invasive exotic plant treatment.

In keeping with the objectives of the program, a number of the properties will implement practices that allow prescribed burning to be initially introduced or reintroduced in fire-dependent habitats. Many private landowners in the region are interested in prescribed burning, but their properties cannot be burned in their current condition due to fuels build-up, excessive hardwood intrusion, and other factors. The RCPP program provides cost-share and technical assistance opportunities to implement projects like brush control, firebreak installation, and various timber stand improvement practices that facilitate future prescribed burning.

A stand of recently-burned longleaf pine. This stand, and many others like it, will benefit from additional prescribed burns funded through this project. Photo by Peter Kleinhenz.

The RCPP program has an emphasis on working with "historically underserved" landowners, which include any of the following categories of farmers or ranchers:

- veteran farmers or ranchers,
- socially disadvantaged farmers or ranchers,
- limited resource farmers or ranchers,
- beginning farmers or ranchers.

– RCPP continued on the next page

A volunteer with the Wakulla Environmental Institute raises an oyster dome out of Oyster Bay. The RCPP program will fund the installation of additional domes, to help restore the native oyster population. Photo by Tyler Macmillan.

Ten of the 34 landowners enrolled in the RCPP land management program fall within one or more of the historically underserved categories.

An important component of RCPP programs nationwide is to measure environmental, social, and economic "outcomes" associated with the projects that are implemented. Environmental outcomes are monitored through pre- and post-project biological assessments that are developed to measure the specific activity being implemented. Social and economic outcomes will be measured through pre- and post-project surveys that will be used to assess attitudes towards conservation, land management practices, and the relevant entities that landowners will be working with. Plans and protocols were developed for the biological monitoring, and pre-activity surveys were completed on a number of properties.

RCPP staff have interacted with a variety of groups that are doing similar work with landowners in the area including the Suwannee River Partnership, the Florida Fish and Wildlife Conservation Commission's Landowner Assistance Program, Golden Triangle Resource Conservation and Development Council, Florida Forest Service County Foresters, Northwest Florida Sentinel Landscape, Apalachicola Regional Stewardship Alliance, and a number of private contractors who provide forest management and prescribed burning services.

A group of landowners interested in the purchased conservation easement component of RCPP have been identified, with lands that run the spectrum of ecological offerings. A mature longleaf pine forest with intact groundcover in Wakulla County, portions of land along the Aucilla River, and sections of historic hunting plantations right on the outskirts of Tallahassee are just some of the exciting projects in the queue. RCPP funds have enabled Tall Timbers to reach new landowners interested in conserving their land in corners of these watersheds that the Tall Timbers Land Conservancy has rarely worked within prior to this project. These areas harbor incredible natural resources, but also face rapid development, so staff looks forward to achieving their goal of conserving at least 5,000 new acres through the lifespan of this project.

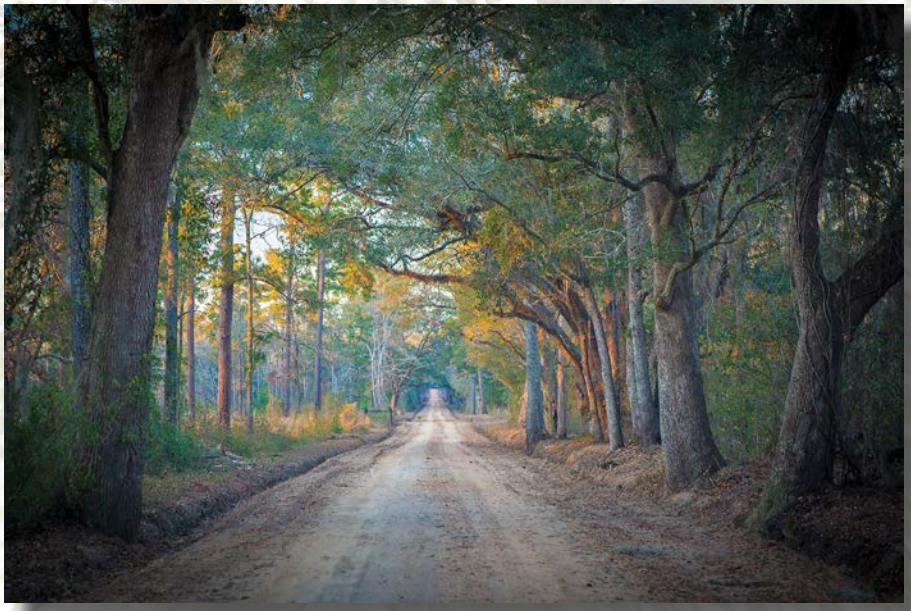
Outreach and educational activities include sponsorship and participation with the Aucilla Research Institute's conference in March of this year; an agricultural/private landowner-focused event at the Florida Capitol; Tall Timbers feral hog program meetings; a Tall Timbers prescribed burn planning workshop; a prescribed fire workshop near Albany, Georgia; and field trips for Leadership Tallahassee, Leadership Thomasville, and Leadership Florida.

Many old growth bald cypress trees still exist along the Aucilla, thanks to conservation efforts along its banks. Photo by Tyler Macmillan.

Applications to participate in the land management cost share program are accepted year-round, with cutoff dates usually in the late summer/fall timeframe. Landowners in the Aucilla and St. Marks River watersheds in Georgia and Florida can contact Tyler Macmillan at *TMacmillan@TallTimbers.org* for application information. Landowners interested in the purchased conservation easement component of the program should contact Peter Kleinhenz at *PKleinhenz@TallTimbers.org*.

Tall Timbers Land Conservancy

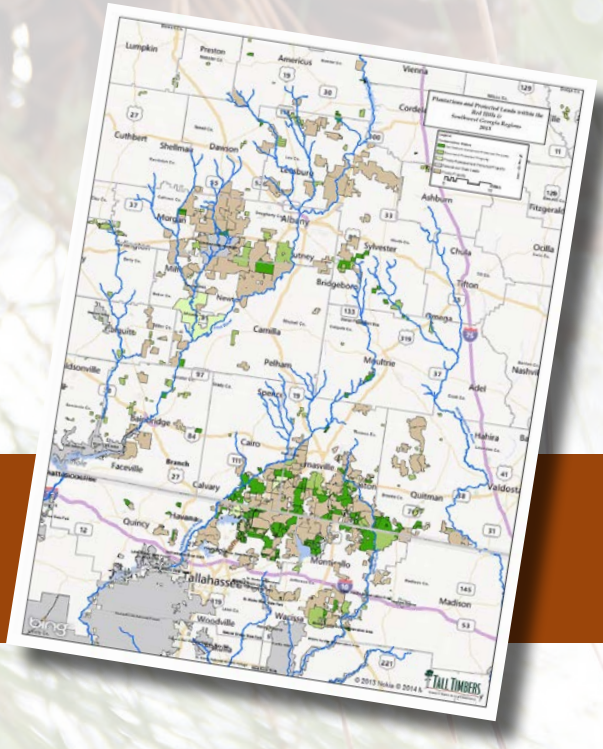
LAND CONSERVATION



Established in 1990, the nationally accredited Tall Timbers Land Conservancy has become one of the largest regional land trusts in the country, conserving over 153,000 acres of land from Tallahassee, Florida to Albany, Georgia. Our conservation easements protect working lands that provide critical upland wildlife habitat and intact wetland ecosystems, vital to the health and well-being of the region. The public benefits from these easements as they serve to protect the region's water quality, clean air, wildlife and distinctive canopy roads.

REGIONAL PLANNING, ADVOCACY, & EDUCATIONAL OUTREACH

The Land Conservancy also works closely with communities on "smart growth" planning and advocacy, and assist with the Greater Red Hills Awareness Initiative to enhance local awareness and understanding of the importance of the Red Hills region and increase support for its long-term conservation.



To learn more about the Tall Timbers Land Conservancy or to contribute to its programs, please visit, talltimbers.org/landconservancy.html

All Hail the Handler

BY DURRELL SMITH

PHOTO BY CHRIS MATHAN

The big man knew the dog wasn't lost, but there was a growing sense of skepticism in the woods. He was a hollerin', sqallin' man. He touted a big booming voice that called back to Howlin' Wolf himself . . .

"Ahhh OOOOHHHH!!!!"

And his song rang, savage and illustrative, his lyrics violently weaving the fibrous pinestraw. Last time he saw the dog was moments after the old neck leather left the lead. Last words he spoke to the dog was "Get Out!" The guests hadn't seen the dog since then, and maintained a nervous assurance that their handler knew the lay of the land and were forced to admit internally their own diminishing sense of trust. They had to give in, there was much to the unknown. The pineywoods were the abyss, and the dog seems lost to oblivion.

"Trust the dog, ain't much else to it" the big man said.

"Was he lost?" The guests wanted to know, but didn't want to appear rude.

"Naw…just way gone. Likely on point somewhere."

It was just after the first crack of daybreak and the big man sat high in his trooper saddle. He pointed with his eyes, sending a far-flung gaze that his scout knew all too well. The young man knew that the dog was in the area and to go find him in the direction of his gaze. He raised that dog from the bottle. He saved the dog from getting stuck in his mother's birth canal. The dog was born on the road as his dam was rushed to the vet. He knew the ins-and-outs of that dog, Jack. He loved that dog for that connection, he put confidence into him as a puppy, and ever since, the dog hailed to his handler.

"I put my hands on that dog. He's out there getting the job done."

The big man came from a school of hard knocks and knew nothing else. His days were long, started early and always ended well into the nightfall. His dogs were all calibrated, dialed in, and tailor-made to his liking, but not fit for the impatience of a trigger-happy clientele. They too must hail to the model of patience, a dogman in his element.

His dog then cut back into view, quickly, an apparition between pine stands. His range was big as the day was long. He was a leggy, sixty-pound two-year-old that charged the woods with an exuberant performance that is only witnessed by a select few, yet appreciated by all. His grace contradicted the brashness of his master's bellowing. And as the call cut deep, echoes lost to the distance, the dog cut hard and kicked dirt. His tail rising high in harmony with an already rising sun.

"That sir, is your point." The guests approached and the covey rose.

Two shots rang, feathers fell, blanketed by the coolness of Lord's whisper. There was worship going on here, all hailing to the handler.

Durrell Smith is on a Mission

BY BRIAN WIEBLER

PHOTO BY WILLIAM HEREFORD

Artist, writer, teacher and birddog fanatic Durrell Smith is on a mission to bring the unlikely to the outdoors. Durrell and wife Ashley Smith co-founded the Minority Outdoors Alliance in 2020, and together from their home base near Atlanta they are working to cultivate inclusivity in a healthier outside. Their collective efforts are wide-ranging, seeking ways to help people of color explore and enjoy the benefits of connecting with the great outdoors. Durrell's specific passion for dogs and bobwhite have brought him in contact with Tall Timbers and our conservation partners. Here is a short list of connections that is sure to grow.

The ***Sporting Life Notebook Podcast*** is one of Durrell's many creative outlets. He covers everything from dogs and guns to Jay-Z vs Kanye, including *Episode 137 with Jim Cox*, Stoddard Bird Lab Director at Tall Timbers, after a presentation at the 2021 Wildlife Arts Festival in Thomasville.

Dogmen, presented onX, is a short film that explores the past, present, and future of African American dog handlers on quail properties in the Red Hills through Durrell's eyes as an up-and-coming dog trainer and advocate for inclusion in the outdoors. The film includes conversations with immediate past Tall Timbers Trustee, Mr. Charles Chapin.

Theodor Roosevelt Conservation Partnership (TRCP) has welcomed Durrell as a member of their Policy Council, and highlighted him in TRCP's "In the Arena" series about individuals who "strive valiantly in the worthy cause of conservation," as Roosevelt so famously said.

Orvis recognized Durrell's work to include more Black and Brown voices in conservation with their *2021 Breaking Barriers Award*. Durrell also shares his own voice as an Orvis Hunting Blog contributor.

About the Author – Brian Wiebler is the Communication Director at Tall Timbers.

Special thanks to *Jon Kohler & Associates* for sharing this story.

Tall Timbers thanks our sponsors of the 2022 Red Hills Spring Dinner!

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PHOTO BY ROSE RODRIGUEZ

The 100-Year Experiment

BY BILL PALMER

Imagine if you were tasked to develop an experiment on the cultural, economic and ecological effects of frequently burning large landscapes. A daunting task at first, but with a bit of planning you'd likely be able to wrap your head around it.

First you would have to decide on the size of the landscape needed for the experiment. Ten thousand acres seems way too small a scale; 100,000 acres at minimum would be needed to capture the dynamics of the wildlife, ecology, and people. You land on closer to a half-million acres as a minimum area needed to run the experiment, and to fully capture the dynamics.

What about the length of the experiment? A decade is not enough time to let fire do its work on the vegetation, soils, and wildlife. Probably at least 30 years for fire to change the vegetation and soils and wildlife, and to effect timber and agriculture and waterways; maybe more like 50 years would be needed, or 100? It would take a bit of time, and you would need the landowners in the region to agree to the experiment and to allow their lands to be burned. You would also need to budget for a pile of fire practitioners to put in the fire breaks and conduct the burning, not to mention the equipment and people to measure the outcomes.

To be realistic it would need to interface with rural and urban communities to assess the human dimension side of the study—smoke management and society's willingness to participate in a fire-maintained ecosystem. The experimental design and proposal would no doubt be thought a masterpiece! It would be a collection of ideas that once accomplished would provide relevant and needed information on the impact of prescribed burning to the world.

Considering the need for and value of this information, a billion-dollar budget shouldn't raise anyone's eyebrows considering the Apollo space program cost $26 billion (in 1960 dollars). But, perhaps this is just smoke and no fire—for finding the time, space, willing landowners, and resources to complete this experiment—it may be impossibly difficult. Fortunately for us, this "100-year experiment" has already been completed; in fact, it is on its second 100 years—with no end in sight.

A Landscape Managed with Fire

Since the Pleistocene, there are only a handful of places on earth where frequent fire has never left the landscape. One of these rare gems is the quail properties of the Red Hills of Georgia and Florida. Here, fire has been a land use practice since people first traversed the landscape some 14,000 years ago. Taking over what nature provided in the form of lightning set fires, indigenous people used fire for hunting, clearing, agriculture, and Europeans and Americans for ranching and forestry, and now again—hunting. Over the last 135 years or so, sportsmen and women have managed the landscape with fire. Through this span of time, each intentional fire was lit by someone, unknowingly perhaps, but happily collaborating in the 100-year experiment.

Consider that fire was a cultural practice across the United States, and world, even into the 1950s in some places. However, a combination of factors, mostly after

Dixie Crusaders ca. 1920s. Courtesy of the American Forests Archives.

the 1920s, began to reduce rural communities use of controlled burning across the Southeast. The Dixie Crusaders funded by the U.S. Forest Service roamed through rural southern communities teaching that prescribed fire was damaging our forests, practiced by the uneducated, and needed to be stopped. On the rangelands of central Florida, Bahia grass was introduced in 1913 — a sod forming grass less reliant on fire than native grasses for raising cattle. Across the upper south, cool season grasses like fescue were being introduced to ranchers and farmers — a completely fireless grassland. The herbicide 2-4D was first introduced in 1944, and soon after came other herbicides that, along with fertilization, mechanization, and genetics fueled the green revolution in agriculture. The timber industry relied on prescribed burning for site preparation and vegetation control into the 1980s, but soon after, systems of "Total Control" and improved genetics became the recipe taught to foresters. Quickly the use of controlled burning all but disappeared from rural communities across the country.

At the same time on our public lands, "let it burn" and prescribed burning philosophies were replaced by suppression policies. All the forces of society seemed to be largely working against the use of fire as a land management tool. The only resistance was coming from a few places — Tall Timbers among them. Through these changes, the 100-year experiment was very quietly carrying on. People in the Red Hills weren't boasting about it; it was just their way.

At first, it was a fascination about how to manage for bobwhites that drove Herbert Stoddard and the landowners who funded his study. His landmark study on bobwhites helped keep fire on the landscape of the Red Hills and Albany regions, but soon morphed into much more than just for quail. Stoddard also was fascinated by how low-intensity prescribed fires sustained the diversity of life in the woods, and how animals were intricately evolved to cope with, and more often than not, benefit from fire. He found that fire was critical to growing a superior timber product, while maintaining the native ecosystem. As early as 1959, he set up experiments on Tall Timbers to demonstrate how important frequent prescribed burning was, but he had been contemplating it for nearly three decades. (Stoddard called for the need for an independent fire research center in his book on bobwhites published in 1931). "Calling the shot" on how the country was headed for severe wildfire problems, Stoddard and his colleagues knew what was to come. His genius, foresight and warnings would not be fully appreciated, expect by a few foresters and biologists, for nearly 80 years.

There is a reason there are few 100-year experiments, the biggest reason being scientists have a 60ish-year professional life span. However, the passion for wild quail hunting has helped to maintain a strong interest in applying frequent fire. So, despite the many scientists that have come and gone, the experiment continues. And, every experiment has response variables, those characteristics of interest that are measured in response to the treatment being applied. In this case, if you compare the Red Hills to other forested ecosystems across the country at the 500,000-acre scale over the past 100 years, the trends are clear.

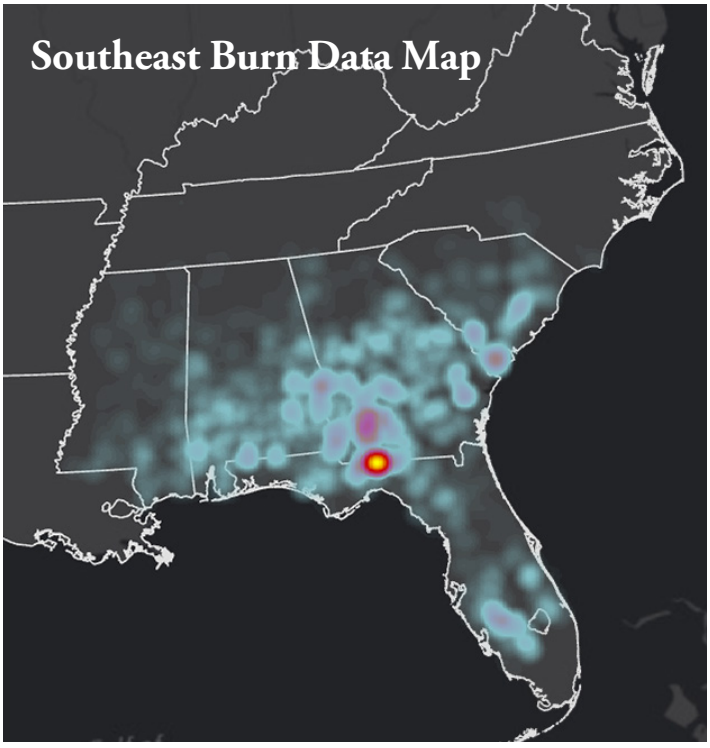
In the Red Hills, fire can be used year-round and burning can occur under almost any conditions (even in light rain in some systems), because the fuels are light but flammable. Equipment needed to burn is minimal, again because of low fuel loads. With frequent fire, the Red Hills has maintained high biodiversity in the soils, vegetation, and wildlife communities. The Red Hills has the only remaining huntable wild quail population of this scale in the eastern U.S., and the largest red-cockaded woodpecker population on private lands. Water quality of our rivers and streams is high, along with a high level of water recharge to the aquifer. Carbon storage is high and the frequent prescribed fires have a neutral carbon footprint — that is the forests sequester what they release during a burn. There has not been a wildfire of note over the course of the 100-year experiment. In the Red Hills, when there is an escape from a prescribed fire, or a rare wildfire, it is contained within a few acres. When quail lands are managed for longleaf and other pines, they

– Experiment continued on the next page

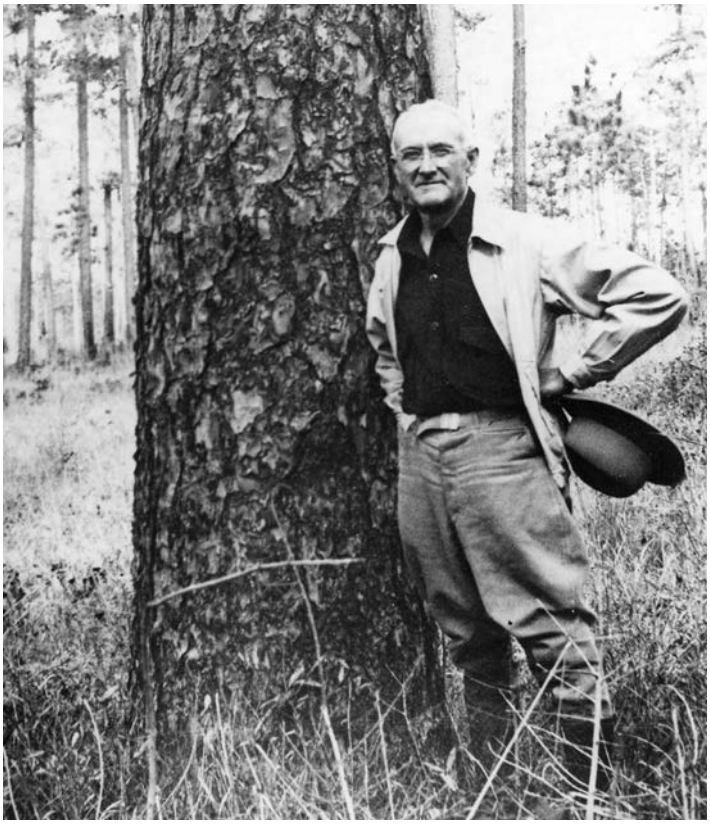
produce high quality timber products for generations, without losing the forest cover.

The cultural response variables may be the most fascinating of them all. State and local governments fully support the safe use of prescribed fire, and have developed training and permitting systems that help people burn; they do not hinder the use of fire. And, the public donates to non-profits that study the use of prescribed fire and its benefits! On the daily news programs, weather forecasters discuss if it is a good "burn day" and let communities know if they may or may not smell smoke in the air that day. Teachers at the local schools educate students on why prescribed fire is beneficial. State legislators have knowledge of the importance of prescribed fire, and sustain public policy to support it. On public lands, fire is used to reduce dangerous fuels that could build up and cause wildfires, and also to sustain biodiversity and outdoor recreation. Prescribed fires are set on the edges of towns to protect those towns.

Contrast this to the same response variables of any other 500,000-acre forested landscape that has not been maintained by frequent fire — the results are clear. You don't even need a p-value to help determine the answers. The data show that game birds and songbirds, reptiles and butterflies have all declined severely on these landscapes. Erosion and runoff reduce water recharge and water quality. Forest and rangeland fuels have built up to make burning difficult without serious planning and expensive equipment. The season of fire is reduced because of high fuel loads, making it harder to implement fire. The backlog of prescribed fire encourages larger sized fires, which have less value for sustaining biodiversity and wildlife.



A map of burn permit data shows how much prescribed fire is used in the Red Hills region (red circle), versus other private lands. Map is from the Geospatial Lab at Tall Timbers.



Herbert L. Stoddard, Sr. Photo by Wallace B. Grange, Tall Timbers Archives

While carbon sequestration of these systems can be high, if they do catch fire, they are threatened by complete combustion, soil sterilization, soil erosion, and even desertification. Worst of all, when a prescribed fire escapes, or wildfire occurs, the result is large areas that are uncontrollably destroyed — threatening people and their homes. Culturally, fire is considered a threat, and a problem. Communities suffering extreme air quality problems from the smoke that wildfires have caused have little patience for smoke from a prescribed fire. State and local agencies have a defensive posture towards prescribed fire, with a focus on suppression and tightly controlled permitting systems. It is a negative feedback loop that is only now beginning to be broken.

When Herbert Stoddard was hired to study bobwhite quail ecology and management, he had an inkling of where to first strike. He had knowledge from watching with a keen eye towards, and passion for, ecology and

NB66: A Large-Scale Fire Exclusion Experiment on Tall Timbers

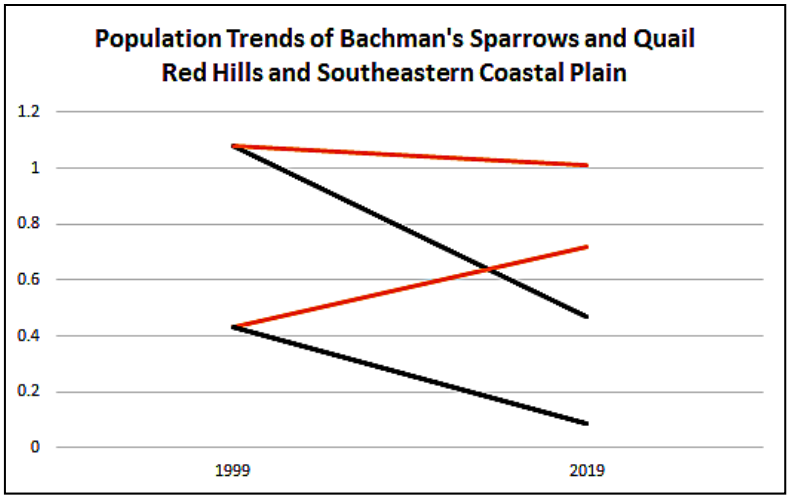
NB66 was designed to document succession in plant and animal communities on a previously annually burned pine ridge after fire exclusion on a large scale.

Left top: NB66, the large-scale fire exclusion experiment area on Tall Timbers, in March 1967. Photo by Roy Komarek.

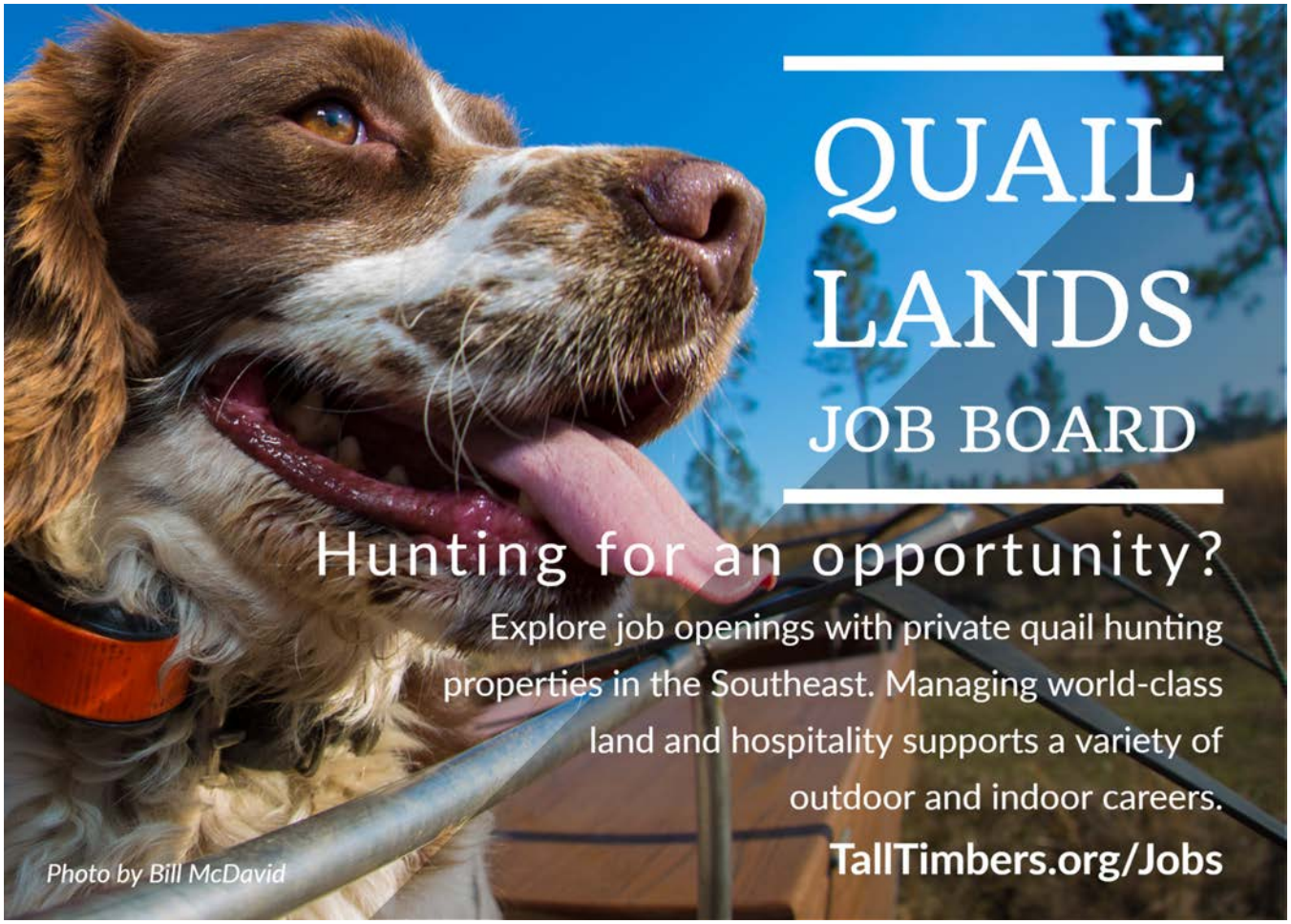
Left bottom: NB66 photographed in February 2003 from the same point it was photographed in March 1967 by Roy Komarek. The X marks the same tree in each view. The 23.3-acre plot has not been burned since the winter season of 1966-1967. Photo by Todd Engstrom. Photos from Tall Timbers Archives.

wildlife. He helped make the case for continued use of prescribed fire in the Red Hills region that continues today, 100 years after he grew up in Central Florida and first saw fire used on the land. The lessons from the experiment he helped devise, and that landowners and managers of the Red Hills and Albany regions implemented, are now seen as the path forward for much of the country. Stoddard and the residents of the Red Hills have shown in their quiet and respectful manner that there is a better way to manage our forests.

When you sit back and consider the 100-year experiment, so many things come to mind—how the rare ingredients of this study came together, and how it was largely free to society. It now seems they are listening.



Relative population trends of Bachman's sparrows and northern bobwhite quail on Tall Timbers in the Red Hills region versus the southeastern coastal plain breeding bird survey data. The data were scaled to start at the same point. Red lines represent the Red Hills, the black lines the coastal plain. Top line is Bachman's sparrow and the bottom lines are quail.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The Game Bird Program's mission is to conduct pragmatic research advancing the science of game birds, and transferring that science-based knowledge to general land use practitioners.

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The science-based information collected helps to calibrate and refine management practices which are tested on multiple study sites throughout the Southeast. More importantly, these methods are applied and verified on over 1 million acres of managed lands by talented managers and landowners in the Red Hills and Albany regions, Central Florida, Alabama, the Carolinas and the Pineywoods region of Texas, Louisiana, and Arkansas. We owe much of our ideas and success to them!

To learn more about the Game Bird Program visit, *https://talltimbers.org/game-bird-program/*

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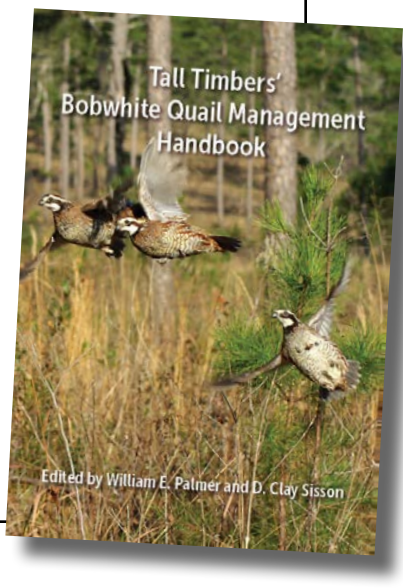
TALL TIMBERS

Tall Timbers' Bobwhite Quail Management Handbook

Edited by William E. Palmer and D. Clay Sisson

"The Tall Timbers Bobwhite Quail Management Handbook is an essential tool for anyone wanting to understand the ecology and management of bobwhites in their eastern range...."

The original Tall Timbers quail management handbook, Bobwhite Quail Management: A Habitat Approach, was written in 1985 by Larry Landers and Brad Mueller at about the time the first radio-tags were being deployed by the Tall Timbers Game Bird Lab. The third edition update was printed in 1992, and stated "we plan to update this material as we gain more information from ongoing studies." Since that time, the staff of the Tall Timbers Game Bird Program has radio-tracked over 25,000 wild quail on study areas in five southeastern states. A great deal of research and management experience has been gained and shared at meetings, through publications, and at field days since 1992. What has not been done, and is attempted in this book, is to boil all this research and experience down and present it in one place. These are the tried and true techniques backed by research that have proven successful for wild quail on hundreds of thousands of acres. Our target audience for this handbook is the same now as it was then: land managers, landowners, and hunters in the southeastern coastal plain. And, while not a scientific publication per se, the information presented was developed from long-term research and therefore we hope will be of interest to wildlife managers and biologists across the entire bobwhite range.



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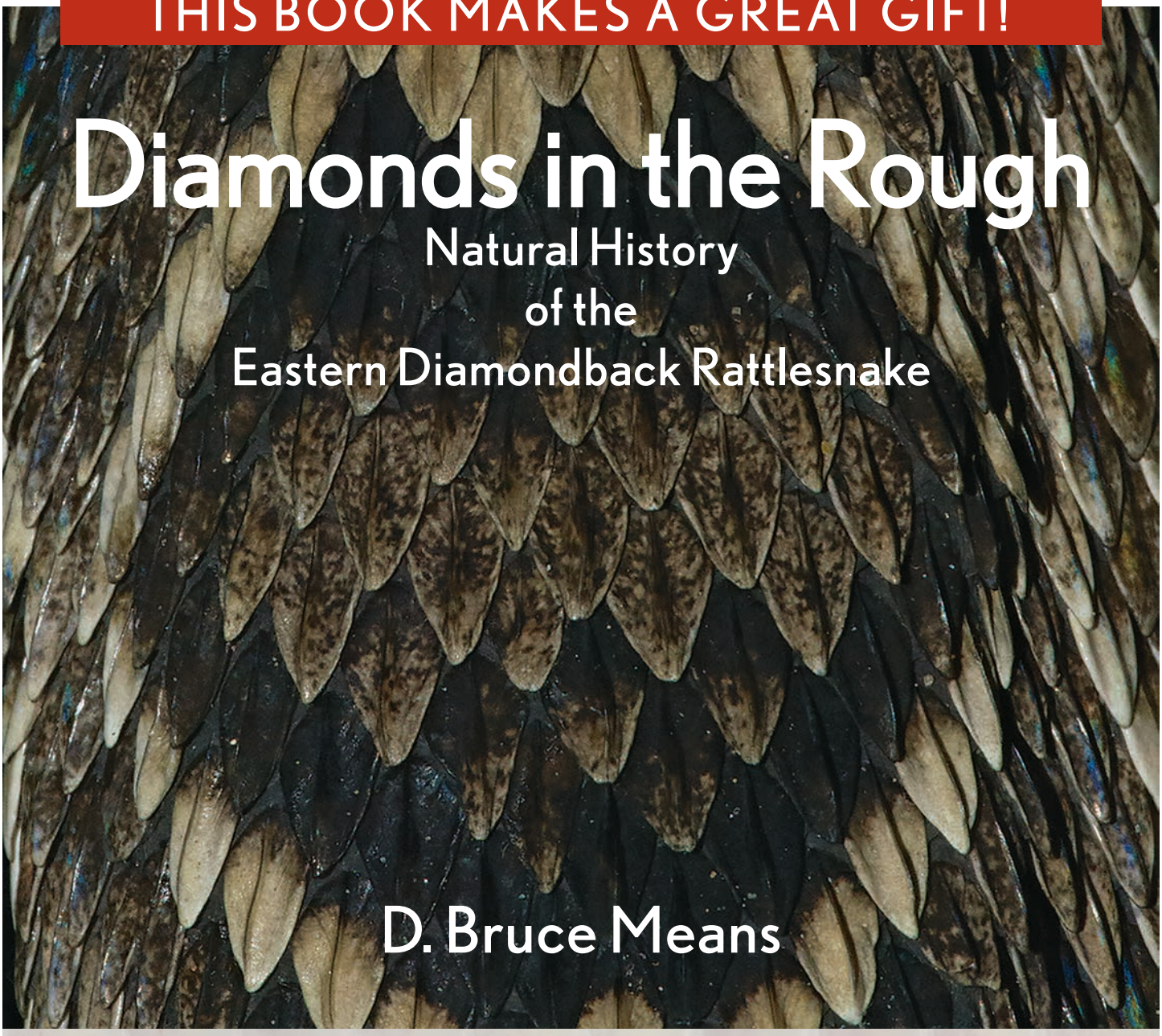

Diamonds in the Rough

Natural History of the Eastern Diamondback Rattlesnake

D. Bruce Means

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George M. Sutton's Watercolors for Georgia Birds: A New Look

By Robert L. Crawford and Rosalie Rodriguez

George M. Sutton (1898–1982), an esteemed ornithologist, was also one of the preeminent bird artists of the Twentieth Century. He was asked by his friend Thomas D. Burleigh, who worked on his manuscript for *Georgia Birds* during the 1940s and '50s, to provide the illustrations. Sutton painted a series of individual portraits of a select group of Georgia birds shown in their natural habitats. Sutton arranged to spend the spring and summer of 1952 with his friend Herbert L. Stoddard at Stoddard's Sherwood Plantation in southern Grady County. They made a field trip to the Georgia coast near Savannah and Brunswick to study shore birds. Otherwise Sutton sought, studied, and painted birds in Stoddard's backyard. Sutton described his experiences with Stoddard and his Meridian Road neighbors in an affectionate essay in the front matter of *Georgia Birds*, and in charming one-paragraph vignettes for each painting. Sutton gave the original *Georgia Birds*' watercolors to Stoddard, whose son later donated them to Tall Timbers; they are part of the Stoddard Collection.

Burleigh's *Georgia Birds* was published in 1958. Sutton was disappointed in the reproduction of the color plates in the book as a result of the engraving process used. Robert L. Crawford and Rosalie Rodriguez have collaborated on a new book, *George M. Sutton's Watercolors for Georgia Birds: A New Look*, which features the paintings beautifully reproduced and Sutton's original essay and vignettes.

Herbert Stoddard and George Sutton at Sherwood Plantation.

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THE LAST WORD

National Fire Use — The Risk Demands the Best Training Possible

In much of the Southeastern Coastal Plain the prescribed fire practitioner community does a great job applying prescribed fire. We are fortunate to have reasonable weather and topography, yes, but our history of fire use and cultural acceptance of fire are critical to its continued successful application. There are occasional errors, but overall 99.84% of prescribed fires result in the desired outcome to manage vegetation, promote biodiversity, sustain wildlife populations, and minimize the chances of severe wildfires. Significant structural damage from prescribed fire escapes are exceedingly rare, only a few times per decade.

Unlike the southeast, much of the country has lost its culture of fire, and in efforts to return it to the landscape, mistakes have greater impacts and result in unexpected backlash. The recent wildfire in New Mexico that started from an escaped prescribed fire is still under investigation, but it is likely an example of the need for advanced prescribed fire training, and advanced decision support tools to decide when and how to ignite a prescribed fire. Now the U.S. Forest Service (USFS) has placed a moratorium on all fires on Forest Service lands — nationwide. It is perhaps an understandable reaction given the size of the fire and the damage it has caused, however, one that we in the Red Hills and southeast believe is overly reactive.

Burning is a day-to-day decision based on vegetation and weather conditions and risks of escape. Fire can vary across counties, not to mention across the U.S. By halting burning of National Forest lands in the southeast, we have set back efforts for conservation, forestry, and fuels management.

I do agree with Forest Service Chief Randy Moore's call to use the best available science, technology, and decision tools to assist prescribed burners to assess risk, and make better informed decisions. Ramping up prescribed fire is important to reduce the chances of wildfire. But, the complex landscapes and conditions we ask people to apply fire to requires a new approach. We need all-hands-on-deck to help develop a cohesive and collaborative path forward. No one agency or organization can do it. There is tremendous knowledge and ability in all the agencies, as well as universities, and yes, non-profits!

At Tall Timbers, the efforts of our Fire Science Applications department are geared towards the Chief's request. In collaboration with colleagues across the country, including the USFS, Los Alamos National Laboratory, and US Geological Survey (USGS) scientists, they have developed a new generation of decision tools ready to be put to the test. Tall Timbers helps to train fire practitioners to use these tools, and through the efforts of our partners in the National Interagency Prescribed Fire Training Center, students not only learn to apply fire, but will one day soon learn to apply these latest tools and technologies.

We are proud to build the new Leigh Perkins Conservation and Education Center to provide state of the art training facilities, to host more of our nation's future prescribed burners, and to help train the literal army of burn practitioners needed to apply more fire safely.

So, Tall Timbers **IS** deeply involved to help resolve the wildfire issues by collaboration; we provide leadership based on our research legacy and culture of fire. It is important as prescribed fire is ramped up across the country that we help assure it is done wisely and safely. Mistakes happen, but they need to be minimized so that our use of fire is not threatened by over reactions to them. We all need to work together to keep fire on the land.

BILL PALMER

Need Fire?

Fire Ecology Research Scientist Kevin Roberston, above, directs the Fire Ecology Program at Tall Timbers. Photo Rose Rodriguez

The Fire Ecology Program needs your support to help you keep fire on your land.

Prescribed fire faces many challenges that can only be met with sound science. The Fire Ecology Program conducts research to provide the public with applicable, science-based information on the appropriate use of fire for maintaining natural plant communities while protecting the health and safety of the public. Research focuses on both plant ecology and fire science, including fire behavior, emissions, remote sensing, and fire effects on soil.

Contributions made directly to the Fire Ecology Program at Tall Timbers will be used to help supplement the program with internships, supplies and capital needs.

To learn more about the work of the Fire Ecology Program and make a donation to the program, visit.

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