



THE LONGLEAF LEADER

LONGLEAF REFLECTIONS:

LOOKING BACK,
TAKING STOCK,
MOVING FORWARD

NUTRA GUARD

Available Exclusively from
Meeks' Farms & Nursery, Inc.

NUTRA GUARD uses
encapsulated CRF
released as a function of
time/temperature

Unique and proprietary
blend of controlled
release fertilizers
incorporated into the
growing media



NUTRA GUARD plugs
are loaded with 12
essential elements

12-14 months release
cycle providing your
seedlings an important
jump start in the
transition from nursery
to newly planted forest

Get your seedlings off to a fast start.
Insist on NUTRA GUARD from Meeks Farms and Nursery, Inc.

Meeks' Farms & Nursery, Inc.
Kite, GA

Sales 877.809.1737

Regional Sales:

Pensacola, FL
850.572.3932

Holly Ridge, NC
910.512.1743

Swainsboro, GA
478.455.0808

TABLE OF CONTENTS



President's Message.....	2
Upcoming Events	4
Letters from the Inbox	5
Understory Plant Spotlight.....	6
Wildlife Spotlight	8
Longing for Longleaf: A Tale of Forest Restoration...	10
LANDOWNER CORNER	16
TECHNOLOGY CORNER	20

REGIONAL UPDATES	24
While You're in the Grass Stage	32
ARTS & LITERATURE	33
Longleaf Destinations	36
PEOPLE	40
SUPPORT THE ALLIANCE	44
Heartpine	48

PUBLISHER The Longleaf Alliance, **EDITOR** Carol Denhof, **ASSISTANT EDITOR** Margaret Platt, **DESIGN** Bellhouse Publishing
ADVERTISING Carol Denhof 678.595.6405 – carol@longleafalliance.org
COVER The Longleaf Stewardship Fund helps fund burn crews so longleaf landowners have access to trained and qualified experts. Photo by Randy Tate.

The Longleaf Leader (USPS#) is an official publication of The Longleaf Alliance, 12130 Dixon Center Road, Andalusia, Alabama 36420 and is published 4 times a year. The Longleaf Alliance reserves the exclusive right to accept or reject advertising or editorial material submitted for publication. Advertising rates quoted upon request. Postmaster: Send address changes to Longleaf Alliance, Address 12130 Dixon Center Road, Andalusia, Alabama 36420. Periodicals Postage Paid at Montgomery, Alabama.

In accordance with Federal law and U.S. Department of Agriculture policy, this institution is prohibited from discriminating on the basis of race, color, national origin, age, or disability. (Not all prohibited bases will apply to all programs.) To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 1400 Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

BY ROBERT ABERNETHY, THE LONGLEAF ALLIANCE



PRESIDENT'S MESSAGE

Looking Back

As I write this column, I am sitting on the porch of our farmhouse in eastern North Carolina built in 1923 by my grandfather.

Herbert built the house of longleaf that he and his brother cut from the land and hauled to the sawmill. He used longleaf because that is what was here in 1923. Building with longleaf solved two problems for Herbert. It provided a home where he could bring his new bride in 1924, and it cleared the land of trees so he could start farming. Loblolly replaced longleaf as the next forest, but the old turpentine catfaces are still evident on the lighter knot snags in the forest on the back side of the tobacco fields and on the fence posts on the farm.

Taking Stock

His house is solid and well built; we stay here when we come down to deer hunt in the fall or turkey hunt in the spring. The longleaf is here too, present as an old lone tree that my grandfather somehow missed but also as the young longleaf that my brother and I started planting in 1993 with cost-share from the North Carolina Forest Service (NCFS) and the Natural Resources Conservation Service (NRCS). The advice and financial cost share we received from the NRCS and the NCFS have allowed us to restore the longleaf to the land. We are burning every two to three years, and the recovering forest contains a diverse understory of wiregrass and broomsedge, blueberry and sheep wicky, and the occasional patch of crested dwarf iris. We see the occasional fox squirrel, and my aunt told me she heard two bobwhite this summer. Sad when compared to the coveys we hunted in the 1970s but a positive sign that the restoration and fire are producing the desired results.

Moving Forward

So how do we move forward managing this land that has supported my family for generations? The timber cut from these forests has provided a home and income for my grandparents and their children; the forest has helped pay for college for my brother and me and both our families. But, what now for the land? My brother and I intend to keep it in the family, and each fall the extended family will gather to hunt deer in the forests where we grew up. We will plow the fire breaks and burn the woods. We will rake straw, cut timber, and investigate new ways that the land can support us and our management.

Our land produces more than just timber and whitetail deer. It produces clean water for all of society whether we live on the land or 50 miles downstream.

We know how to grow and manage longleaf and cut and sell timber, but if private forests are going to persist past our generation, we need to figure out how all of society can help pay the landowner whose forest provides the clean air that all citizens breathe and the clean water that we all drink.

On October 23, we gather in Alexandria Louisiana to kick off the 12th Biennial Longleaf Conference. We will greet old friends, make new ones, and together we will discover how we are going to move forward through the remainder of the 21st Century to ensure that the longleaf forests of today persist, expand and continue to produce the products we all need. As the weather cools and the leaves turn, remember to get out in the longleaf and enjoy the Fall. I hope to see you in Alexandria!

Longleaf Alliance Board of Directors

Marc Walley –

Chairman

Barclay McFadden –

Past Chairman

Angus Lafaye

Lynda Guerry Beam

Rufus Duncan

Robbie Fisher

Amanda Haralson

Ken Nichols

Mickey Parker

Mac Rhodes

Salem Saloom

Latimore Smith

Reese Thompson

George Tyson

Phillip Woods

Staff

Robert Abernethy

President

robert@longleafalliance.org

Ad Platt

Vice President of Operations

ad@longleafalliance.org

Anne Rilling

Vice President of Business

anne@longleafalliance.org

Emily Bagby

*Wetland Ecosystem Support Team
Member*

emily@longleafalliance.org

Lynnsey Basala

Development Director

lynnsey@longleafalliance.org

Ryan Bollinger

Local Implementation Team Consul

ryan_b@longleafalliance.org

Karen Zilliox Brown

*Technical Assistance & Training
Specialist*

karen@longleafalliance.org

Vernon Compton

GCPEP Director

vernon@longleafalliance.org

Carol Denhof

Understory & Media Coordinator

carol@longleafalliance.org

Bobby Franklin

SoLoACE Partnership Coordinator

bobby@longleafalliance.org

Lucas Furman

GIS Support Specialist

lucas@longleafalliance.org

Emma Gladstone

Wetland Ecosystem Support

Team Member

emma@longleafalliance.org

Lisa Lord

South Carolina Field Project

Coordinator and Savannah River

Watershed Project Director

lisa@longleafalliance.org

Ryan Mitchell

Outreach & Technical Assistance

Coordinator

ryan@longleafalliance.org

Edward O'Daniel

Wetland Ecosystem Support

Team Member

edward@longleafalliance.org

Jessica Sandoval

Wetland Ecosystem Support Senior

Team Member

jessica@longleafalliance.org

Brian Schumann

Ecosystem Support Senior Team Member

brian@longleafalliance.org

Kaiden Spurlock

Ecosystem Support Team Supervisor

kaiden@longleafalliance.org

Randy Tate

Ft. Stewart/Altamaha Longleaf

Restoration Partnership Coordinator

randy@longleafalliance.org

Ben Tuttle

Ecosystem Support Team Member

ben@longleafalliance.org

Donna Vassallo

Ecosystem Support Senior Team Member

donna@longleafalliance.org

Casey White

Administrative Assistant

office@longleafalliance.org

Bob Wilken

Fire Specialist

bob@longleafalliance.org



The Future in Longleaf Propagation

Bareroot Quality Roots
Containerized Efficiency

**Super Long-Life 6" deep container
designed specifically for Longleaf**

Mechanizable to save big on labor bills
Numerous, vigorous air-pruned roots
Intact root system at shipping
Easy to pull cell design & no root circling



proptek.com (800) 487 1381

2018 | Calendar

October 23 - 26, 2018 12th Biennial Longleaf Conference

Holiday Inn Alexandria — Downtown
Alexandria, Louisiana

For more information about events please visit The Longleaf Alliance website (www.longleafalliance.org.)
Dates, locations, and course titles are not final until registration has opened.

December 4 - 6, 2018 Longleaf Academy: Longleaf 101

Georgetown, South Carolina

FALL 2018 MANAGEMENT CHECKLIST



- **Apply Fall Site Preparation Herbicides:** For maximum efficacy, foliar active herbicides such as glyphosate (Roundup®/Accord®) should be applied to pasture grasses before the first frost; while triclopyr (Garlon®) may be delayed until after the first frost for targeting waxy leaf competitors while minimizing impact to herbaceous groundcover.
- **Allow time for soil active herbicides to break down** before planting longleaf, especially those with the active ingredient imazapyr (Arsenal®/Chopper®).
- **Apply mechanical site preparation treatments:** Scalp agricultural sites; remember to stay strictly on the contour and pick the scalper up regularly. Leaving water bars in the furrow will greatly reduce erosion. Subsoil or rip sites with hardpans, allow 8 weeks or more following subsoiling for adequate rainfall to settle the site prior to planting, but remember, do not plant seedlings directly into the sub soiled/ripped furrow.
- **Clean up or establish fire lanes** for site prep or fuel reduction burns.
- **Harvest Native Herbaceous Seeds:** Certain species, such as the Indian Grasses, ripen and fall in a very short time window (as little as 1 or 2 weeks). Ripe wiregrass can lose all of its ripe seed if a cold front blows through. Be watchful and move quickly!
- **Order Native Seed** for Understory Restoration: Seed from local ecotypes and endemic species is limited and expensive. Although some landowners and land managers have the time and expertise to collect their own seed, most restoration will be done with seed purchased from the few seed companies that sell southeastern sourced seed.
- **Plant Longleaf:** It's never too early to plant longleaf if the following conditions are met: the site is prepared (see Fall Site Prep recommendations), there is adequate soil moisture, seedlings are available, and a planting crew is available.



RMS

Resource Management Service, LLC

Resource Management Service, LLC is proud to support
the work of The Longleaf Alliance and its partners.

Q&A

Q.

Dear Longleaf Alliance,

Help! Some sort of worm is eating my young longleaf pines! They are a little over an inch long and have a red head. They've completely defoliated about two-thirds of my planting. What can I do?

Worried in Wedowee

A.

Dear Worried,

The culprit eating your young longleaf pine is larvae of the redheaded pine sawfly. It's one of several species of pine sawflies in the genus *Neodiprion* common throughout the range of longleaf pine in the south. The larvae hatch from eggs laid by adults on young pines of any species that are less than 15 feet tall. The larvae feed on pine needles, and a large outbreak can cause defoliation of the entire tree over a significant portion of a young stand. At worse, they can cause mortality in weakened

trees and seedlings, but more typically cause some decrease in growth. Up to three generations of sawfly larvae can occur during one season in the south, but usually, one generation is the norm. The damage looks bad, but unless the young trees are weakened by something else, they will recover.

While it does look bad, spraying insecticides is not customarily needed for control as the larvae are hosts to a number of parasites and prey for many birds and small mammals. If just a few trees are affected, the "shake and stomp" method of control may suffice. Most locations may see an outbreak of pine sawfly once every 8-10 years or so. That said, it's usually not a recurring problem that requires control. Consult with your local County Extension Agent for control recommendations if you feel that you need to control the infestation.

Sincerely,

The Longleaf Alliance

Q.

Dear Longleaf Alliance,

I want to try growing a few of my own longleaf seedlings from seed. Can you advise me on where to buy healthy seeds, and how to do so? I've already seen your video on longleaf pine seedling planting tips, and that was helpful.

Thanks, James

A.

Dear James,

Thank you for your question, but we probably need to begin by saying that growing longleaf from seed is more difficult than growing other southern pine species, in part because of the thin seed coat, early germination, and rapid root development of this species. We've learned a lot about proper and improper containers, and two helpful documents to review first would include USFS General Technical Report SRS-60, Interim Guidelines for Growing Longleaf Seedlings in Containers, and USFS SRS-RWU-4158, Container-Grown Longleaf Pine Seedlings.

You will also want to learn about damping-off fungus, and how to avoid it, by using sterilized containers, clean new potting media, and avoiding overwatering. Damping-off is a common problem for nurseries and is caused by a variety of pathogenic fungi that kill newly germinated pine seedlings. Barnett and Varela (2004) published on effective sterilization of the seed itself by a 1-hour soak in 30% hydrogen peroxide, to begin planting with uncontaminated seed. Many people at this point just decide to buy a few containerized seedlings, unless they really have a green thumb and an interest in trying this!

You can purchase longleaf seed online or by mail, but the location where the seed was grown is important (from some sources that sell small packets of seed, you can't always tell its origin). You want it to be in the correct seed zone for your location. For small lots of seed, try Sheffield's Seed Company (<https://sheffields.com/seeds/Pinus/palustris>) or Schumacher (<https://www.treeshrubseeds.com>), as they track where theirs was collected. Another option, if you know someone already growing longleaf, they might just offer a few seeds, as well as valuable experience and insights.

And if you just want to try growing longleaf entirely from scratch, locate some good physical specimens near you where you can legally collect seed, and be ready to gather some cones as soon as they fall (usually starting in October or November). Many of the seeds will already have dropped out of the cone as soon as it ripened enough to open and fall, but there should still be a number of good seeds in there if you shake them. Or you can sometimes pick up live seed underneath the tree if the ground is bare and seed production is good. With longleaf, seeds do not overwinter, and they will try to sprout within 2-3 weeks of seed fall on any moist surface they land on. Sometimes that works out, but if they land on a wet road or wet leaf litter, they are doomed! You will notice these seeds are much larger than loblolly or other southern pine seeds. They also taste good so most everything in the forest will try to eat them, which also takes natural survival way down.

Hope this is the kind of help you needed! Please contact us again if we can help, and good luck!

By Carol Denhof, The Longleaf Alliance

PLANT SPOTLIGHT

SCHIZACHYRIUM SCOPARIUM (MICHX.) NASH VAR. *SCOPARIUM* LITTLE BLUESTEM



Map showing distribution of little bluestem. USDA PLANTS Database.



Closeup of flowering stem of little bluestem showing single raceme. Photo by Chris Evans, University of Illinois, Bugwood.org

Description

Little bluestem is one of the dominant perennial grass species that make up the groundcover layer in longleaf forests. Depending on the variety, it can be solitary or clump-forming in its growth habit. The stems typically grow up to 4 ½ feet tall. The smooth leaf blades measure up to 10 inches long by 0.2 inches wide. The flowering spikes of this grass are slender, single racemes that grow on long stalks that are evenly distributed up the stem of the plant. This is a fall blooming grass with seed ripening in November. There are a couple of other varieties of *S. scoparium* that can be found growing in longleaf forests. These include *S. scoparium* var. *divergens* (pinehill bluestem) that occurs in the western portion of the range and *S. scoparium* var. *stoloniferum* (creeping bluestem) that spreads by stolons and is found only in the core of the longleaf range.

Distribution & Habitat

The distribution of little bluestem is very wide. It occurs across all of North America in a wide variety of habitats. Here in the southeastern United States, it can be found growing in dry longleaf pinelands, oak-hickory woodlands, roadsides, old fields, and rights-of-way.

Wildlife Uses

Little bluestem seeds are sometimes eaten by songbirds and bobwhite quail. The bunches formed by this grass also create good nesting cover for quail.

Commercial Sources

Seed of little bluestem is available for purchase through a number of different commercial seed suppliers. Plants can occasionally be purchased from native plant nurseries and specialty growers.

References

Miller, J.H. and K.V. Miller. *Forest Plants of the Southeast and their Wildlife Uses*. The University of Georgia Press, Athens, GA. 454pp.

Sorrie, B.A. 2011. *A Field Guide to Wildflowers of the Sandhills Region*. The University of North Carolina Press. Chapel Hill, NC. 378pp.

USDA, NRCS. 2018. The PLANTS Database (<http://plants.usda.gov>, 29 September 2011). National Plant Data Team, Greensboro, NC 27401-4901 USA.

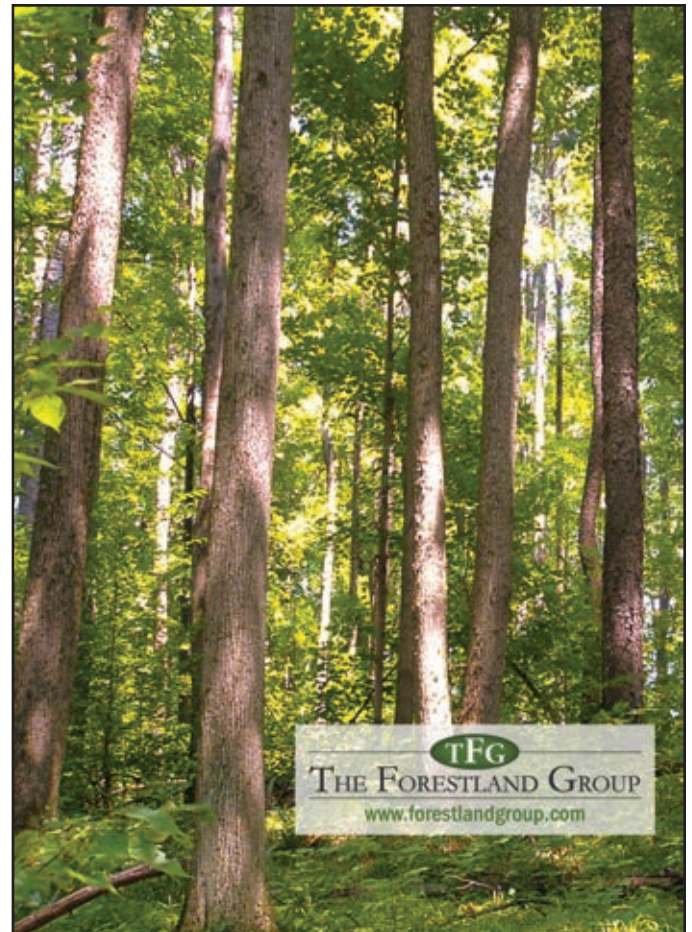


Beaked Panicgrass
(*Panicum anceps*)

A native grass whose short stature produces less biomass for controlled burns than switchgrass, resulting in a cooler burn.

ernstseed.com
sales@ernstseed.com
800-873-3321

Join us at...
11th Eastern Native Grass SYMPOSIUM
SEPTEMBER 17-19 2018
www.EasternNativeGrassSymposium.com
September 17-19, 2018



TFG
THE FORESTLAND GROUP
www.forestlandgroup.com



Blanton's
LONGLEAF CONTAINER NURSERY
MADISON • FLORIDA
850-973-2967 PH & FAX
blantonsnursery@earthlink.net

SINCE 2001, THE LARGEST PRIVATELY OWNED PRODUCER OF CONTAINERIZED PINE SEEDLINGS IN THE STATE OF FLORIDA.

GROWERS OF 6" PREMIER CONTAINERIZED PINE SEEDLINGS
*Improved & Natural Stand Longleaf
Advanced Generation Slash & Loblolly*

LOCATED IN NORTH FLORIDA ONLY MINUTES FROM VALDOSTA, GA & I-75

C. J. (JAY) BLANTON III 850-566-1884
JASON M. BLANTON 850-566-7175
C. J. BLANTON JR. 850-673-7429

WILDLIFE SPOTLIGHT

Red-headed Woodpecker

Several years ago, my parents called me from Virginia with a ‘yard bird’ question, which to my pleasure happens now and then. On this occasion, I could sense a great deal of excitement. As my father tried to describe the bird to me, I could hear my mother in the background correcting his description. “Tom, Tom, please give me the phone!” My mom has an eye for design and is a keen observer, and this was made very clear as she perfectly described one of my favorite species, the red-headed woodpecker (*Melanerpes erythrocephalus*). The bird’s entire head is crimson red, the belly is white, the back and a portion of the wings are glossy black, and the wings have a noticeable white band close to the lower edges of the wing, which is particularly noticeable when the bird is in flight. “This beautiful bird looks like it is wearing a tuxedo!” she exclaimed. They were delighted, and I was delighted for them.

The red-headed woodpecker is one of my favorite birds in the eastern United States for several reasons. As previously described, they are an aptly named and stunning bird. Males and females are similar in appearance; however young birds come out of the nest distinguishable from adults because their head, neck, and upper breast vary from grayish brown to crimson red. Most juveniles I have seen have brown feathers on the head, making them easy to identify as birds hatched in the current year.

These medium-sized woodpeckers are a bit over 9 inches in length and occur throughout the Midwest and Eastern United States. In most of the Southeast, they occur year-round. They

can be seen in a variety of wooded habitats including deciduous woodlands, longleaf pine woodlands, river bottoms, and forest edges to name a few. Additionally, they inhabit urban areas and suburban habitats as evidenced by the family nesting in a snag

over my driveway several years ago. The adults were highly active and vocal, emitting distinctive, wheezy calls at the nest site. They are cavity nesters and forage for nuts such as acorns but are also apt at sallying out from branches and flycatching. While once a common species, they have been in decline for several years. The Partners in Flight Conservation Plan lists changing forest conditions and urbanizations as the main threats to red-headed woodpeckers. The loss of open woodlands and snags for nesting due to lack of prescribed fire

and competition with introduced birds such as European starlings are all likely challenges. On a bright note, several bird conservation partnerships such as Joint Ventures (www.mbjv.org) consider this woodpecker species as a priority. These partnerships are implementing thinning and burning in habitats such as oak woodlands, oak-pine savannas, and longleaf woodlands and savannas, which provide the conditions needed by this remarkable bird, the red-headed woodpecker.

Reference:

Frei, B., K. G. Smith, J. H. Withgott, P. G. Rodewald, P. Pyle, and M. A. Patten (2017). Red-headed Woodpecker (*Melanerpes erythrocephalus*), version 2.1. In *The Birds of North America* (P. G. Rodewald, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. <https://doi.org/10.2173/bna.rehwoo.02.1>



Adult red-headed woodpecker.
Photo by Ed Schneider.



Advantage

Forestry Container Pines

Your Source for Containerized Pine Seedlings

Our product list of Advanced Generation pines includes

- Loblolly
 - Coastal
 - Piedmont
- Slash
- Shortleaf
- Longleaf
 - Coastal
 - Piedmont

Service and Quality is our number one objective

All of our seedlings are grown in Tifton, GA at LTF Greenhouses

- Located just 5 miles from I-75 and 1 mile from Hwy 82 for easy access
- Large labor force to accommodate short notice needs
- On site cold storage
- Local pick up or delivery to your location
- Custom grown orders upon your request

To place an order or inquire about pricing,
please call 334-341-2059 or visit us at containerpines.com

Advantage Forestry Container Pines
408 N. Commissioners Ave.
Demopolis , AL 36732



by Brian Cooke, U.S. Forest Service Contract Science Writer

Longleaf pine is a fire-dependent ecosystem, which can create complications in terms of land management. Photo by Randy Tate.

LONGING FOR LONGLEAF: A TALE OF FOREST RESTORATION

The Great Disappearing Forest

In the early 1800s, North America's longleaf pine forest was like the American bison's historical range: It covered such a huge area that its full extent is difficult to comprehend today. Back then, longleaf pine-dominated forests covered about 90 million acres of the southeastern United States — nearly the size of the state of Montana. At the time, it was the biologically richest region on the continent.

Today, that acreage is less than 5 million acres, which would easily fit into New Jersey.

There are relatively few places where one can go today to get a sense of what longleaf forested areas were like 250 years ago. One such location is the Joseph W. Jones Ecological Research Center in southwest Georgia. "When you're in the middle of a longleaf forest like the one at the Jones Center," Longleaf Alliance co-founder Rhett Johnson says, "it's not hard to imagine 90 million acres of longleaf spread across the South. The vistas are overwhelming. There's also the sea of wildflowers and grasses, the birds and these distinctive, columnar trees with their long, shiny needles and huge pinecones. But you can also imagine the early settlers taking it for granted because it was everywhere."

The dense, tightly grained wood from these forests was used to build some of America's great cities and railroads, as well as cottages, castles and mines in the British Isles. In addition, vast sections of the forest were cleared for crops, grazing and human development, while fire suppression and feral hogs degraded other longleaf areas.

A Couple of Johnny Appleseeds

By the 1990s, so few people remembered these immense forested areas that their loss was hardly felt. And many of the scientists who had dedicated their careers to studying longleaf were near the end of their lives.

Two professors at Auburn University — Rhett Johnson and Dean Gjerstad — decided it was time to take action. Johnson says, "We had a couple of meetings in 1994 and we found more interest in longleaf restoration than we'd expected. But no one wanted to take the lead. We had to do it ourselves and on our own time. We both had day jobs, but it was very rewarding, especially in working with private landowners. It was like we were Johnny Appleseeds: We'd scatter like a covey of quail and go to four different states. And it wasn't just about hunting or timber: Some landowners were just excited about restoring this historic, iconic landscape." As time went on, Johnson says,

“Darned if it didn’t take off. We realized that we weren’t capable of managing growth and interest and that we needed partners. And when the USDA Natural Resources Conservation Service (NRCS) started to support us, it was a breakthrough.”

Eight Million Acres in Fifteen Years

According to Kyle Jones, the U.S. Forest Service’s Regional Longleaf Pine Restoration Coordinator, in 2007 the Longleaf Alliance joined forces with more than 20 other organizations from Federal and State agencies as well as the private sector. That partnership became ALRI — America’s Longleaf Restoration Initiative.

ALRI’s conservation plan, which was drafted in 2009, calls for an increase in longleaf-dominant forests to 8 million acres by 2025. It’s an ambitious goal, for several reasons. One is that so much of former longleaf habitat has been and continues to be cleared for agriculture and development. Another is that longleaf ecosystems depend on frequent, low-intensity fire, which is a difficult management prospect for forests near developed areas. In addition, longleaf can be tricky to establish, and although the tree is highly valued for its strength and its resistance to rot, fire, wind and insects, it can be difficult to convince timber companies of longleaf’s economic value relative to faster-growing trees such as slash or loblolly pine.

One such company is Resource Management Service, an Alabama-based timberland investment management organization that manages more than \$4 billion in timberland and related assets. While the company is a for-profit business, it has a sustainability ethic that has lasted for more than 60 years. According to Jimmy Bullock, the company’s senior vice president for forest sustainability, “We’re working with The Conservation Fund and other partners to establish and maintain a working longleaf forest and functional longleaf ecosystem called the Coastal Headwaters Forest in the Florida Panhandle

and southern Alabama. It involves tens of thousands of acres and some pretty significant working forest conservation easements. I think it’s going to help change the notion of whether longleaf pine can be economically feasible for large private landowners.”

A Shared Vision, With Very Different Priorities

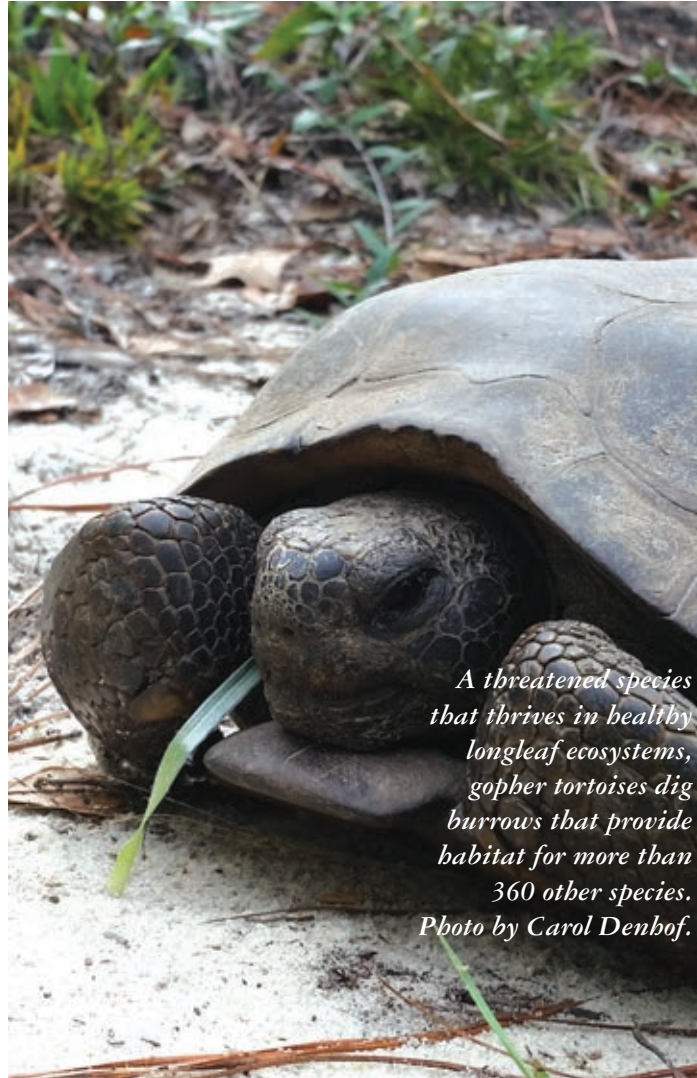
Many representatives of ALRI’s more than 30 partner organizations observe that it’s unusual to have partners with so many different agendas working toward the same goal. According to Jones, “It’s inspiring to go to a meeting and see a conservationist working closely with an executive from the timber industry.”

The Forest Service is an important partner in this effort, partly due to the fact that, of all ALRI partners, it manages the largest amount of historic longleaf property — more than 4 million acres, of which only about 850,000 are current longleaf forests. “There’s a huge opportunity for us to move the needle,”

Jones says, “and we’re doing that with the Million Acre Challenge, which is an effort that we announced last year to add a million acres of longleaf stands on National Forest land. By doing this, we’re hoping to cause a ripple effect with acreage commitments from other State and Federal agencies.”

Working with Public and Private Landowners

As another part of this effort, the Forest Service and the NRCS work closely with state governments as well as private landowners to restore and manage for healthy longleaf forests. According to Kay Reed, the director of cooperative forestry for the Forest Service’s Southern Region, “In the South, private landowners own most of the forest land. Some landowners already know about longleaf and they’re passionate about it, while others can benefit from learning more about the ecosystem and the assistance available under the Cooperative Forestry Assistance Act and through state forestry agencies.”



*A threatened species that thrives in healthy longleaf ecosystems, gopher tortoises dig burrows that provide habitat for more than 360 other species.
Photo by Carol Denbof.*

Jeffrey Vail, former acting deputy regional forester for state and private forestry, described efforts working with for-profit organizations and State Forests such as Tate's Hell State Forest in the Florida panhandle. Once a swampy mix of cypress sloughs, wet prairies, wetlands and pine forests, Tate's Hell was home to rare species such as Florida black bears, red-cockaded

"But we still have much more work to do, and we encourage forest landowners to visit their local USDA service center to learn about the assistance that we offer." Through the Farm Bill, a variety of conservation programs are available to landowners to cover much of the costs for carrying out these practices.



Healthy longleaf pine ecosystems are home to an incredibly diverse range of plants and animals, including many that have become difficult to find across the South. Photo by Randy Tate.



Red-cockaded woodpeckers, which prefer to make their homes in old-growth longleaf forests, are an endangered species. Photo by Brady Beck.



Ongoing research is helping to restore knowledge of how to reintroduce and maintain healthy longleaf forests. Photo by Randy Tate.

woodpeckers, Chapman's butterwort and small-flowered meadow beauties. From the 1950s through the 1990s, much of it was converted to slash pine plantations, which support a very different ecosystem. "If you go there today," Vail says, "you can see the efforts made to restore longleaf habitat and remove other species while restoring fire to the ecosystem."

Meanwhile, the NRCS works with forest landowners and other agricultural producers to plan and implement conservation practices that restore and protect longleaf forests while improving the sustainability and profitability of forestry operations. Practices include managing overgrowth of competing plants, using prescribed fire, establishing new longleaf forests and protecting existing forests. "With the help of private landowners and conservation partners, we've made significant progress in reversing the decline of longleaf pine forests since 2010," says USDA acting chief Leonard Jordan.

Employing a Powerful Conservation Tool

On the Federal level, there's another key partner with a very specific focus: the U.S. Fish and Wildlife Service. According to Aaron Valenta, chief of the Fish and Wildlife Service's Division of Restoration and Recovery, "Our primary interest in longleaf restoration is that it's an ecosystem that holds a whole suite of species, including many that depend on that ecosystem for survival." In fact, according to the Fish and Wildlife Service, longleaf forests are associated with 29 species on Federal threatened or endangered lists.

The Fish and Wildlife Service has a powerful tool in the restoration process. It's called a safe harbor agreement, and it's a voluntary agreement between the Fish and Wildlife Service and non-Federal property owners. According to Valenta, "The lumber industry in the Southeast was facing a potential crisis related to red-cockaded woodpeckers, which are closely reliant

on longleaf pine forests that are maintained as an open forest canopy and that burn every few years. Those companies were worried that the Endangered Species Act would prevent them from harvesting their land. We went to landowners and proposed an agreement: 'If you manage the land in a way that we both find acceptable and a red-cockaded woodpecker moves

outside of our installations and land protections are triggered under the Endangered Species Act, that would restrict our ability to use the land for training purposes." This is why, Orndorff explains, the Endangered Species Act requires Federal agencies to develop and implement conservation programs and to consult with the Fish and Wildlife Service on actions that



Across nine states from Virginia to Texas, longleaf was once the dominant forest of the southeastern U.S. coastal plain. Photo by Randy Tate.

onto your land, you'll have no liability under the Endangered Species Act.' Once they had the legal right to not worry, red-cockaded woodpeckers became a non-issue."

This approach is proving useful for other longleaf-dependent species such as the gopher tortoise and the Eastern indigo snake. Valenta explains, "Not all of these species are listed under the Endangered Species Act, but we're not waiting for that to happen. Our vision is to work with private landowners and State and Federal agencies by understanding their needs in the context of restoring endangered, threatened or at-risk species. For the gopher tortoise, landowners are stepping up to help manage the land to prevent the species from being listed."

Cooperation from the Department of Defense

One such landowner is none other than the Department of Defense. Like other Federal agencies, the Department of Defense is subject to Section 7 of the Endangered Species Act, which requires Federal agencies to work to conserve endangered and threatened species. According to Ryan Orndorff, director of the Department's Natural Resource program, "A number of Southern military installations have healthy populations of red-cockaded woodpeckers, gopher tortoises and other species that depend on these ecosystems. If that habitat continues to be lost

might affect listed species. The Department of Defense even has a name — and, of course, an acronym — for these efforts: They're called Integrated Natural Resource Management Plans, or INRMPs.

INRMPs are why, on military installations such as Eglin Air Force Base in the Florida Panhandle, you'll find thoughtful placement of military exercises as well as a willingness to manage the land with frequent fire — approaches that preserve longleaf ecosystems. "It's a process that takes a significant amount of time and resources," Orndorff says, "but if we can sustain conditions that prevent habitat losses and prevent the need for habitat restrictions, we can maintain flexibility of land use while supporting conservation efforts." The Department of Defense also works with other Federal, State and private partners to coordinate efforts across a broader landscape, through a program called Readiness and Environmental Protection Integration, or REPI.

Funding Restoration Efforts: The Longleaf Stewardship Fund

The Department of Defense is one of several Federal agencies and private companies that support the Longleaf Stewardship Fund, a partnership managed by the National Fish and Wildlife

Foundation. According to Jon Scott, the Foundation's Southern Forests Program Director, the Fund and related efforts have awarded more than \$32 million in Federal grants for longleaf restoration, which has leveraged an additional \$78 million in non-Federal grant matches and helped restore and enhance more than 1.5 million longleaf acres. Scott explains, "We support a variety of longleaf-related efforts, including funding burn crews, so landowners have access to trained and qualified experts."

The National Fish and Wildlife Foundation is also an important partner in bringing together a wide range of partners. Scott explains, "We were chartered by Congress but we're also an independent nonprofit agency. That means we can bring together a Federal agency that's complying with legal requirements and a company like International Paper that's interested in responsible, sustainable forest stewardship."

"The Most Successful Ecosystem Restoration Project on the Planet"

According to Ken Arney, the acting Regional Forester of the Forest Service's Southern Region, "It's quite a success story, and I mean that in a collective sense, since a lot of agencies and groups have been involved. It's evolved to be what The Nature Conservancy has described as the most successful ecosystem restoration project on the planet. I think we've made a lot of progress, even though we have a long way to go."

While this initiative will transform parts of the South, the effort also has implications for landscape-wide ecosystem restoration efforts elsewhere. Arney says, "Our hope is that we can reach our goal of 8 million acres by 2025 while also demonstrating that this kind of effort can be replicated in other landscapes around the country."

Andrew Schock, Georgia State Director of Conservation Acquisition for The Conservation Fund and the chair of ALRI's Longleaf Partnership Council, is also optimistic. According to Schock, "Personally, I hope to have a change in culture towards using longleaf pine where appropriate as timber and for ecosystem restoration, especially for endangered or threatened species." And although it may take decades to change targeted areas back into healthy longleaf pine ecosystems, Schock says, "It's happening."

For more information about ALRI, please visit www.americaslongleaf.org.

Brian Cooke is a science writer based out of Fort Collins, Colorado. He received a degree in journalism-science writing from Lehigh University. Brian's writing and editing work has included assignments for several U.S. Forest Service divisions, the National Park Service and various environmental services companies. Additional information on Brian can be found at www.linkedin.com/in/bcooke1.



Enviva is a leading supplier of industrial wood pellets, a form of renewable fuel that is:

- A renewable alternative to fossil fuels
- Sustainably-sourced
- Beneficial to U.S. forests
- Low in carbon and other pollutants
- Efficient and easy to transport
- Scalable and reliable



DRINK A PINT,
PLANT A PINE

FOR EVERY CASE OF LONG LEAF IPA SOLD,
APPALACHIAN MOUNTAIN BREWERY
WILL PLANT A LONGLEAF PINE

APPALACHIAN MOUNTAIN BREWERY
PROUDLY PARTNERS WITH THE LONGLEAF ALLIANCE
TO DIRECTLY HELP MAINTAIN, RESTORE AND
PRESERVE THE LONGLEAF PINE

Now available in 12oz cans!

APPALACHIANMOUNTAINBREWERY.COM

WE CAN SO YOU CAN FOUNDATION | PROCEEDS FROM EVERY PURCHASE SUPPORT THE REVITALIZATION OF OUR COMMUNITIES, MOUNTAINS AND RIVERS.



Templin Forestry, Inc.

2022 N. MacArthur Drive
Alexandria, LA 71301
(318) 445-5566 | Fax: (318) 445-4422
www.templinforestry.com

•

**COMPREHENSIVE FOREST
MANAGEMENT SERVICES**
Louisiana State Certified General Appraiser

Steven K. Templin, ACF

THE NATIONAL WILD TURKEY FEDERATION

“Working hand in hand with our agency partners, we collectively restored the wild turkey across much of North America. Now we must work together to Save the Habitat. Save the Hunt.”

— Becky Humphries,
NWTF Chief Executive Officer

**OUR GOAL
SAVE THE HABITAT:**
We will conserve or enhance 4 million acres of critical wildlife habitat.
We are working to restore and manage longleaf pine ecosystems throughout their historic range.

SAVE THE HUNT:
We will recruit 1.5 million hunters and establish 500,000 acres of new hunting access.

NWTF
Conserve. Hunt. Share.

**SAVE THE HABITAT.
SAVE THE HUNT.**
NWTF

NWTF.org
f t i y

*Cattle grazing in the pineywoods.
Photo by NCBA/Baxter Communications.*

TARGETED GRAZING AND SOIL HEALTH — KEYS TO LONG-TERM LONGLEAF SAVANNA MANAGEMENT

In the western parishes of Louisiana and the eastern counties of Texas, a broad coalition of landowners, business leaders, and concerned citizens — all dedicated conservationists — have joined together to promote the concept of prescribed grazing. Longleaf pine forests and coastal prairies are among the most imperiled ecosystems in the nation, and both systems evolved with and were shaped by large grazing mammals.

Their absence also shapes these systems and may lead to their loss over time.

Our family lives on and manages ranches and properties in Beauregard, Allen, and Jeff Davis Parishes. We acquired our first 75 acres in 1982, at a time when we couldn't afford improved pasture. Relearning the old secrets of rotational grazing of woodlands cattle began from there, and over the years we acquired six more tracts. As longleaf enthusiasts, over half of our now 1,400 acres is protected in perpetuity as natural longleaf habitat.

We have partnered with the Natural Resources Conservation Service for many years, and our restoration activities have been aided by participation in the Wildlife Habitat Incentive Program (WHIP), Environmental Quality Incentive Program (EQIP), the Longleaf Pine Initiative (LPI), and the Conservation Stewardship Program (CSP). All of our property is registered as a Natural Area by the Louisiana Dept. of Wildlife and Fisheries; we also participate in their Safe Harbor program for the red-cockaded woodpecker. The National Wild Turkey Federation has also assisted with restoration activities on the property.

There is a great deal of variability in the age of our longleaf tracts. We have planted longleaf stands that are 4, 10, and 16 years old, and natural stands from 40 to 75 years old that are both even-aged and uneven-aged. The one thing they all have in common is that they are included in a management plan that will attain old-growth characteristics in about 300 years! We really like the Stoddard-Neel approach where the forest is perpetuated indefinitely with selective thinning and natural regeneration. We are on a wetland-based landform where longleaf grows heavily stocked on ridges and mounds, while grasses and forbs grow on flat wet meadows. It's a beautiful patchy vegetative structure and composition that grows cattle, timber, and wildlife well.

In the last few years, we have learned a great deal about soil health in grazing lands and must give credit especially to Ray Archuleta and Dwayne Rice, both formerly with NRCS. Our Louisiana NRCS team, John Pitre, Chris Coreil, Mike Lindsey, Brandon Waltman, Corby Moore and Barrett Lyons, all led by our State Conservationist Mr. Kevin Norton, have also provided overwhelming support in our efforts to better understand the role of soil health in grazed longleaf systems. Soil health can have considerable benefits to productivity in farmland and grazing lands (both tame grasslands and wild grassland habitats), as well as environmental benefits to both water quality and quantity, air quality, and carbon sequestration. Because our longleaf pine savannas and flatwoods here in Southwest Louisiana are often described as 'a prairie with trees on it,' and because this



*Landowner David Daigle.
Photo by NCBA/Baxter Communications.*

habitat was historically grazed by large ungulates, I believe that it makes sense to say that soil health was historically maintained at some natural level by the interaction of grazing animals on the landscape, and that this level of soil health (as maintained by grazing ungulates) may have been a natural force, in combination with fire, in maintaining the 'prairie with trees on it.' Range Conservations often speak of these interactions as 'prairie processes.' Native brush species are controlled naturally because cattle browse brush species lightly during the winter months (1% of their annual diet), cattle do some physical damage to bushes, and grazing stimulates the health and vigor of the herbaceous layer as well as soil health when grazing is conducted in a manner that mimics the historic native grazers. Properly grazed grasses and forbs are more efficient at uptaking nutrients and water, and thus outcompete brush species resulting in maintenance of the grassland

component of the savanna. We can now burn our savannas every third year (our natural fire regime) where we use biomimicry with cattle, but we find that annual burns are needed to control brush species on ungrazed savannas. On our longleaf bluestem range of southwest Louisiana, stocking rates of one cow per 15 acres utilizes about 25% of the annual air-dried forage production, which is considered light grazing. Moderate grazing on our longleaf bluestem range is about a cow (animal unit) per 10 acres. Stocking rates are likely different in other longleaf community types, and a good biomimicry grazing plan starts with the help of a competent Range Conservationist and a forage inventory. While USFS and others have provided good grazing research and information in the past, I believe we need to continue that work to naturally maintain healthy longleaf 'prairies with trees on them' in the future.

If grazing is to be used as a tool in longleaf pine habitat management, we should strive to determine what the historic levels of grazing were and how they varied throughout the longleaf range. The Society of Range Management coined the phrase 'Targeted Grazing.' It's a concept that I think lends itself well to maintaining the grasslands under longleaf pines. Targeted Grazing uses animals as a management tool to accomplish an envisioned, desired, defined plant community (vegetative structure and composition) with the primary goal of the targeted grazing operation being habitat maintenance or

restoration. Animal production and products are a secondary or byproduct of the operation.

On the nearby Clear Creek mitigation bank, which has not been grazed since 1992, we are observing an increasing hardwood stem count, and are losing grass coverage to sweetgum, yaupon, Southern wax myrtle, maple, and other native woody species. On our grazed lands, these woody species are greatly reduced. As a kid, I recall the free-range cattle landscape as being open, airy longleaf and pine savannas. And it was full of bobwhite quail! Kisatchie National Forest was also much like that 50 years ago! There is a great deal more we can learn about soil health in longleaf systems: how the grazer affects soil health, interactions with fire, and how targeted grazing with fire controls the encroachment of native brush species to the level where mulching and herbicides are no longer needed. Also, soil health interactions on pollinators

and consumptive and non-consumptive wildlife, interactions with invasive species, and much more.

My daughter loves and will continue to enjoy the many benefits of the longleaf system. We are moving toward the formation of an integrated resource management company that

on out there? Let's do more research...and share the truth!

I can't think of a habitat that can provide so many benefits for mankind and society: It's all there — Beauty, Truth, and Goodness. Our human species flourished early on savannas which provided them with food, shelter, and an environment

where they thrived and multiplied. Today our savannas shelter us from the extreme heat and cold, from storms and hurricanes, while providing forest products and fuel, red meat for nourishment, wildflowers and bird life to enjoy, whitetails, wild turkeys, and quail (maybe again soon) to hunt, and all the environmental benefits to air, soil, and water. We work and play on the same ground. I knew an ole free-range French cowman here many years ago, and he often passionately proclaimed, "This is a good place to grow cattle, timber, and kids." That was kinda our motto for years. Then in 1996, I met my ole friend Latimore Smith, who enlightened us on biodiversity and our longleaf ecological treasures. So, we amended our motto at that time to include "and lots and lots of special plants and animals." It truly is a land with too many blessings to count. What a beautiful part

of creation—what a gift!



Young longleaf forest on the Daigle property. Photo by Cecilia Richmond.

would manage longleaf tracts (mine and others) for their multitude of values. This would be a 'natural land management company' that would focus on the management of tracts of 'outstanding natural resources.' All values would be taken into consideration for management and maintenance of this high-value habitat. Biological integrity would be a primary focus on tracts of ecological significance. The company will be owned and managed by a group of professionals with expertise in forestry, grazing, recreational (consumptive and non-consumptive wildlife), outstanding natural resources, and other land uses like oil and gas and right of way management. I think that added-value products like specialty longleaf wood products and natural beef products can greatly enhance the value of the company.

We see a lot of wild turkeys near cattle. This could be a bug thing. Also wading birds use flatwoods ponds more frequently in areas that are grazed at moderate levels. This may be due to their ability to fish more effectively on grazed wet pastures. Whitetails use the herbaceous layer more frequently in moderately grazed pastures. This may be due to increased nutrient cycling, small-scale diversity, or the fact that forbs are more physically available to grazing whitetails (as per USFS research). My old friend and retired USGS researcher, Larry Allain, recently told me that native species of bees nest in the ground near cow trails and near bare ground areas where cattle loaf or near cattle water troughs. Who knows what all is going

Gifting the Longleaf Pine

*Retirement, Speaker
Gifts, Merit Awards.
For Any Lover
of the Longleaf Pine.*



**Add Your
Business Logo,
or Forest Service
Shield**

Melanie Walter, Artist
pgb@pinegardenbaskets.com
www.pinegardenbaskets.com
910-799-8363



Modern Approach to an *Ancient Art*

HANDMADE, HEIRLOOM QUALITY FURNITURE



FORGED FROM TIME-HONORED TRADITIONS

Partnering with The Longleaf Alliance to ensure a sustainable future for the longleaf pine ecosystem.

864.862.3127
WWW.FORESTTOTABLE.COM



Be a **PROUD** Steward of a **Beautiful Longleaf Pine Forest**



1

Seedlings & Support to Restore the Iconic Longleaf Pine Forests

2

Contact Your Reforestation Advisor

3

Prepare Your Land & Plant Your Seedlings

4

Feel Proud and Confident



ArborGen
The Reforestation Advantage

ArborGen.com
855.894.1702

A BLUEPRINT FOR SOUTHEASTERN PARTNERSHIPS

By Lucas Furman & Ryan Bollinger, *The Longleaf Alliance*
and Hilary Morris, *US Fish and Wildlife Service*

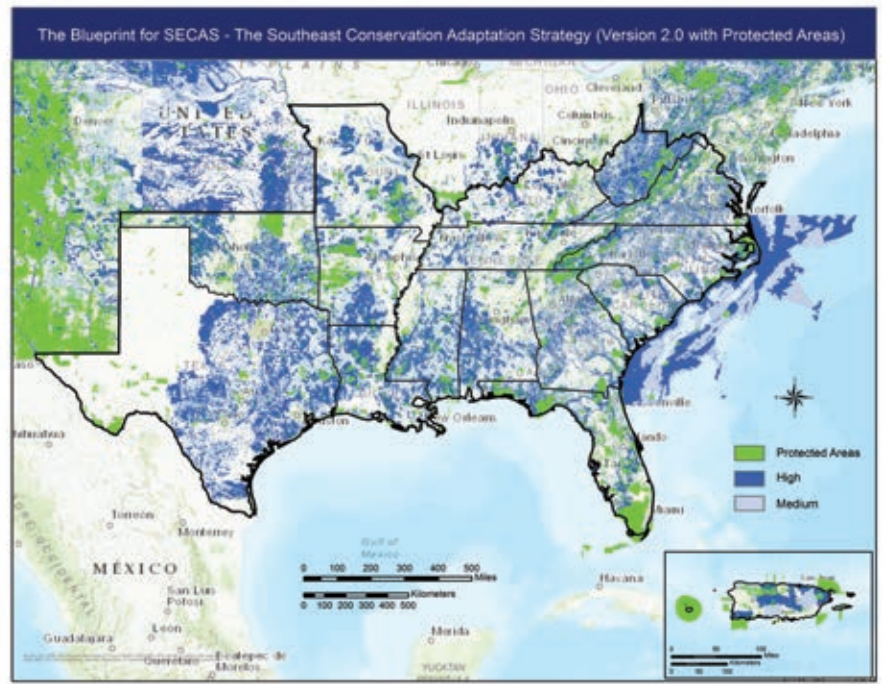
The Blueprint for SECAS

To improve range-wide communication and planning, the America's Longleaf Restoration Initiative has encouraged all 17 Longleaf Implementation Teams (LITs) to identify and share their restoration priorities. The Longleaf Alliance has been working closely with LITs and the larger conservation community to collect relevant spatial data, facilitate discussions, and assist in mapping efforts. While many types of spatial data support mapping longleaf priorities, regional plans such as the Southeast Conservation Blueprint contribute an invaluable landscape-scale perspective.

The Southeast Conservation Blueprint

It's not easy to identify restoration priorities in an ecosystem that spans nine states. Partners from across the range must compare different datasets, integrate expert opinion, develop shared goals, and agree on priorities. To support this effort, The Longleaf Alliance began looking for regional resources to help identify an initial set of spatial priorities. LITs needed something based on solid data, something already reviewed by hundreds of people and organizations, and something that covered the whole longleaf range. Fortunately, the Southeast Conservation Blueprint was developed for just such a purpose – mapping shared conservation and restoration priorities across the southeastern United States and Caribbean.

As a bonus, using the Blueprint also came with access to dedicated and helpful staff who were instrumental in advancing



LIT mapping efforts and interpreting data. Support staff are available to assist anyone hoping to use the Blueprint to bring in conservation funding or inform decision-making. Please reach out to Hilary Morris for assistance in applying the Blueprint to your work (hilary_morris@fws.gov, 919-707-0252).

Informing Longleaf Management and Restoration

The Blueprint played a pivotal role in identifying potential high-quality open pine habitat outside of partner lands, and in supporting range-wide data compatibility. Regional datasets help overcome the real barriers to coordination and data availability posed by state and county lines. To date, The Longleaf Alliance has worked closely with three LITs to develop priority maps that use the Blueprint as a key element: the Chattahoochee Fall Line Conservation Partnership (GA and AL), SoLoACE Longleaf Partnership (SC), and the DeSoto/Camp-Shelby Local Implementation Team (MS and AL). For each LIT, The Longleaf Alliance organized and



Left: Chattahoochee Fall Line Partners Review Maps During Spring 2017 Workshop. Photo by LuAnn Craighton.

Top: DeSoto Camp Shelby LIT Partners Review Maps. Photo by Ryan Bollinger

facilitated mapping workshops to review data, share ideas, and draw on poster-sized maps. While the Blueprint was one of many complementary datasets available, it was heavily referenced within each workshop.

Integrating “big data” like the Blueprint has helped provide partners with quality information across different parts of the longleaf landscape to effectively discuss and map strategic restoration targets. Visualizing priorities truly makes a difference in achieving tangible conservation goals and supporting range-wide planning efforts for longleaf – not only for guiding the work of LITs, but also for increasing public awareness. A picture is worth a thousand words, after all, and maps communicate an exceptional amount of information at a glance. The Blueprint and other landscape-scale plans will continue to inform targeted longleaf restoration and management discussions in the coming years as LITs work toward restoring critical longleaf pine habitats across the Southeastern United States.

Linking Landscape-Scale Data to “Boots on the Ground”

The Blueprint support staff are a fantastic resource involved in the development of many regional datasets. As a result, the Blueprint aligns well with projects like The Nature Conservancy’s Resilient and Connected Landscapes, the U.S. Fish and Wildlife Service’s Open Pine Decision Support Tool, the National GAP Analysis Program, and others. While several regional datasets were integrated into LIT prioritization efforts, landscape-scale priority mapping can only be successful if partners with on-the-ground experience work together to share knowledge and vet the data. We are excited to see where recent mapping efforts take the LITs as they integrate new information into conservation planning and targeted restoration projects. We hope to see these efforts paired and strengthened with “boots on the ground” longleaf surveys. In fact, Florida Natural Areas Inventory is working to create a range-wide Longleaf Ecosystem Database and support longleaf condition class ground-truthing surveys within select LITs in 2019. We’ll share that update in a future Technology Spotlight!



IFCO
SEEDLINGS

LET'S GROW TOGETHER

WWW.IFCOSEEDLINGS.COM

800-633-4506



MILLIKEN FORESTRY

Managing Assets Since 1949

213 N. Grampian Hills Road
Columbia, SC 29223
803.788-0590
millikenforestry.com

Creating working forests
that produce both natural benefits
and landowner satisfaction



TIMBER SALES ■ APPRAISALS ■ FOREST CERTIFICATION ■ HABITAT RESTORATION ■ EXPERT MAPPING ■ FINANCIAL ANALYSIS



*Possibility begins with **empowering you.***

No one knows forest management quite like you. But that will never keep us from nurturing the relationships you've grown to value with us as Crop Production Services. And now with even broader resources and capabilities, your Nutrien Solutions location is even more equipped to help you become a more capable forest land manager, or owner than ever.
nutrienagsolutions.com

Nutrien
Solutions

Visit your local Nutrien Solutions location today.

870.367.8561

Gordon.Forster@nutrien.com

By Andrew Schock, *The Conservation Fund*

THOUGHTS FROM THE CHAIR OF THE LONGLEAF PARTNERSHIP COUNCIL

Does the future reflect the past – I hope not. In the past, we lost 87 million acres of longleaf pine habitat. The future is showing us a brighter image; in the future, we will have restored at least 8 million acres of that lost habitat. What does this future reflect? Hard work, collaboration and a shift in culture.

When I first got to know longleaf pine 40 years ago this summer, (as an undergrad working in the North Carolina Sandhills) no one had a plan to restore the already devastated ecosystem; no one had a plan to increase burning on the landscape. In fact, no one was speaking to the need to do so. Fortunately, the future does not reflect the past, and with many people and many organizations (The Longleaf Alliance as a leader) the future of the longleaf pine ecosystem is brighter than it has been in the past 200 years.

Today, with the collaboration built through the America's Longleaf Restoration Initiative (ALRI) the engagement of four federal agencies (US Forest Service, US Fish and Wildlife Service, Natural Resources Conservation Service and the Department of Defense), many non-profit organizations and many "for profit" organizations are playing significant roles in

moving towards a goal of 8 million acres of longleaf pine by 2025. In fact, in the past ten years, we have gone from saying "we have 3 million acres of longleaf and the number of acres is declining" to "we have 4.7 million acres, and the number of acres is increasing."

Before the ALRI, restoring the longleaf system fell mainly to the non-profit world, chiefly The Longleaf Alliance, a few academic institutions, and many smaller private landowners who wanted to do "the right thing." Thanks to the collaboration created by the ALRI building on these early efforts, there is a shifting of culture around longleaf restoration, so people are not saying "no" they are saying "how can we make this work." This is evidenced by Resource Management Service's Coastal Headwaters Forest (a 200,000-acre longleaf restoration initiative) and the US Forest Service's Million Acre Challenge. We have every reason to believe we will reach the goal of 8 million acres by 2025 and sustain that growth because of the shifting culture.

No, the future does not reflect the past for longleaf – thank goodness and YOUR hard work!



Me? Obsessed with trees?
Yes. Yes, I am.

Vaughn Chandler champions the trees, landscapes and property investments of the customers in his care. And he's one of the many reasons we've become the premier scientific tree and shrub care company in the world.

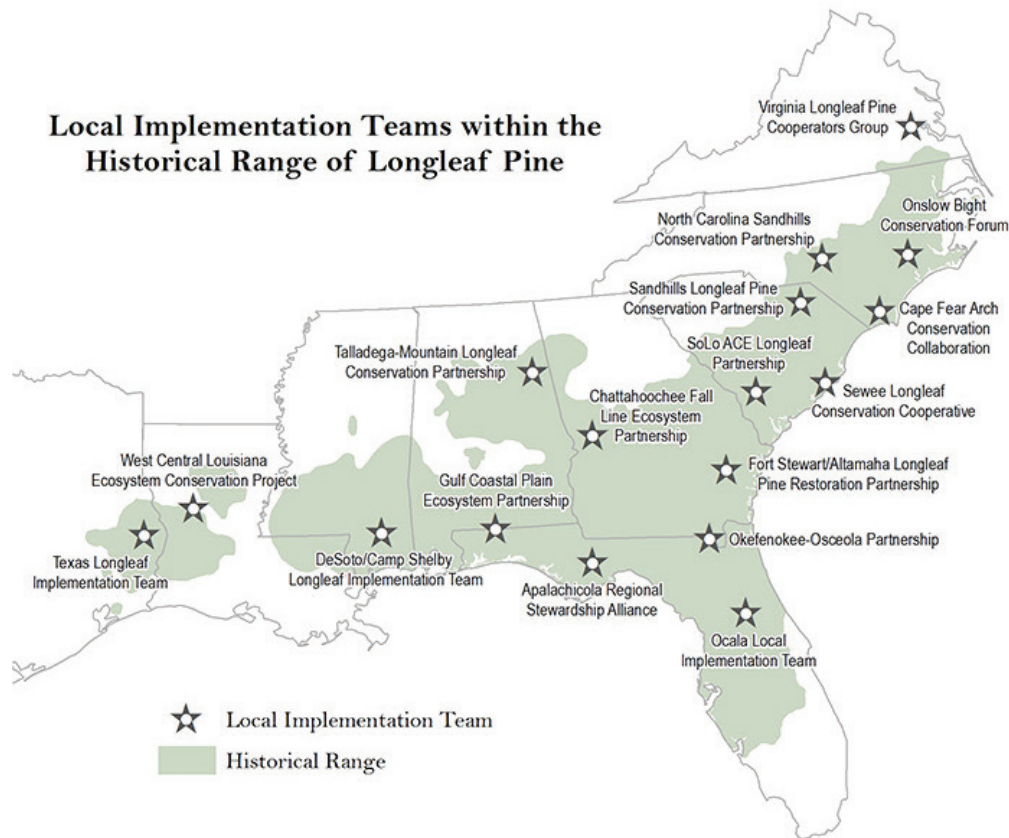
Contact us today at 877-BARTLETT | bartlett.com

VAUGHN CHANDLER, Arborist and Bartlett Champion

BARTLETT
TREE EXPERTS
SCIENTIFIC TREE CARE SINCE 1907

EVERY TREE NEEDS A CHAMPION.

Local Implementation Teams within the Historical Range of Longleaf Pine



Reflections on the Chattahoochee Fall Line Rx Fire Season

By LuAnn Craighton, The Nature Conservancy and RT Lumpkin, Georgia Forestry Commission



Diverse partners successfully executed Rx fire across the Fall Line this past burn season. Photo by LuAnn Craighton.

The efforts of diverse partners and programs resulted in a successful prescribed fire season across the Chattahoochee Fall Line Significant Geographic Area (SGA) in Alabama and Georgia.

Two “Learn & Burn” live-fire mentoring programs were conducted in the Alabama portion of our SGA. Led by the Alabama Prescribed Fire Council and supported by multiple partners, these events (one dormant season; one growing season) attracted over 100 participants who gained experience working alongside experienced Rx fire practitioners on burns. In addition, The Nature Conservancy’s Chattahoochee Fall Line seasonal fire team assisted with Rx fire activities on Tuskegee National Forest in Alabama.

The Georgia Department of Natural Resources Fall Line seasonal fire team applied their skills to over 7,000 acres within the SGA. Several of their tracts have now seen 2-3 year fire return intervals and are displaying significant ecological results.

A new Prescribed Fire Cooperative (Co-op), led by the Georgia Forestry Commission (GFC) and supported by multiple partners, focused on private landowner training as well as sustaining and increasing Rx fire on private lands. Efforts of the Co-op produced over 1,000 acres of new burning in addition to the accomplishments of the GFC county units.

The Nature Conservancy’s Chattahoochee Fall Line (CFL) team and the Interagency Burn Team worked together on public and private tracts within the Army Compatible Use Buffer (ACUB) area near Fort Benning burning over 4,830 acres. This year’s CFL team included Student Conservation Association interns and military veterans.

It is exciting to work in a region where partnerships are strong and result in good stewardship for organizations both individually and collectively! Funding from the National Fish and Wildlife Foundation helped support these efforts allowing partners to leverage resources and accomplish significant conservation outcomes on the ground.

Invasive Species Control Efforts Ramp Up in the GCPEP Landscape

By Vernon Compton, *The Longleaf Alliance*



Six Rivers

Map of the Six Rivers Cisma focus area.

Twenty-two partners with the Six Rivers Cooperative Invasive Species Management Area (CISMA) attended a summer meeting of the organization to review control efforts in the landscape and to discuss the Strategic Plan. The CISMA was established in October 2009 to facilitate a network of land managers in addressing the growing threat of invasive non-native species in south Alabama and northwest Florida. This effort was built on the success of the Gulf Coastal Plain Ecosystem Partnership (GCPEP). Partners selected formation of a CISMA as a priority for addressing invasive species' threats because it provided the ability to work on issues outside the existing partnership boundaries. The year 2017 was a very successful treatment year with 3,734 acres treated across the landscape. The Florida Forest Service is to be congratulated since 2,757 acres of the total treated acres occurred on Blackwater River State Forest. In addition, Samantha Yuan with the Florida Fish and Wildlife Conservation Commission

and Co-Chair of the Florida Invasive Species Partnership (FISP), attended the meeting and gave a presentation on the role of FISP and support provided to CISMA's. The remainder of the meeting focused on review and evaluation of the Strategic Plan, highlighting what had been done right and where opportunities existed for improvement. The partners left with renewed energy for the CISMA and invasive species control efforts moving forward. Highest priority invasive plant control efforts in the GCPEP landscape have centered on cogongrass, Chinese tallow tree, Chinese privet, and Japanese climbing fern.

Georgia Sentinel Landscape Awarded Grant

By Randy Tate, *The Longleaf Alliance*



The Georgia Sentinel Landscape's (GASL) proposal *Establishing the Georgia Sentinel Landscape* has been approved for funding at the \$150,000 level by the US Endowment for Forestry and Communities. The Executive Committee of the GASL was notified on August 8, 2018, of the award. The award will be used to hire a GASL Coordinator to help leverage funds from various sources to achieve the goals of the GASL.

While the Fort Stewart/Altamaha LIT is a significant part of the GASL, the designated landscape is much larger. The entire GASL is 4.5 million acres, while 1.3M are being considered "critical" acres. There are nine Department of Defense (DoD) installations and five DoD Readiness and Environmental Protection Integration (REPI) Programs (such as Army Compatible Use Buffer Programs) associated with the installation.

The four focal areas for the GASL include continuing to enlarge REPI buffers to DoD installations, the Georgia Gopher Tortoise Initiative, maintaining clean water along the

Savannah River Watershed through improved land management and easements and focusing on expanding protection, and lessening development impacts along the Georgia coastline.

Currently, more than 20 partner organizations make up the GASL and, we hope it will continue to grow. This new award from the US Endowment is a big step in growing the landscape and achieving our goals.

An ARSA Friend Remembered: Jack Stites (1953-2018)

By Brian Pelc, *The Nature Conservancy*



Jack Stites holding an indigo snake in advance of a release event in July 2017. Apalachicola Bluffs and Ravines Preserve, Liberty County, Florida. Photo by B. Pelc.

It's hard to know where to start in listing the huge hole left by the recent death of Jack Stites. And even the most thorough inventory of his impacts, relationships, ideas... wouldn't adequately capture his personality. Jack was equal parts modest, capable, smart, kind, doting, patient, driven. Those that have known him will miss his music and amazing stories. Partners in the Apalachicola Regional Stewardship Alliance will miss his leadership on the fire line where he was often the face of The Nature Conservancy's fire team. Hundreds of thousands of acres, from his days with TNC and before, were burned better because of him. He brought vision and expertise to groundcover restoration, and nearly a thousand new acres are brimming with sandhill creatures because of him. He was a teacher and brought dozens of professionals and friends into the world of prescribed fire, sandhill restoration, and land conservation at his Apalachicola Bluffs and Ravines Preserve home. And this was personal work... Jack and his wife Annie were approaching the finish line on their 150-acre sandhill dream home; longleaf and wiregrass were already planted.

It is so bitter to move on without his sage advice and warm company. It is so sweet to know that his legacy will continue in our acres of habitat. Jack would want us to focus on the latter sentiment, and we in ARSA encourage everyone that knew Jack to keep his memory alive in your high standards, creative solutions, dedication despite obstacles. May he rest in peace but visit us often.

TNC NC Contracting with NC Wildlife Resources Commission for Expanded Fire Crews

By Mike Norris, *The Nature Conservancy*



Summer fire research intern Grace McLeod assisting on a burn with NC Wildlife Resources Commission. Photo by TNC NC.



Another successful growing season fire implemented on the NC WRC Sandhills Gameland by WRC and TNC staff. Photo by TNC NC.

Since 2014, The Nature Conservancy of North Carolina (TNC) has been sending fire resources to assist our state partners on their prescribed fires on a regular basis with funding from the National Fish and Wildlife Foundation grants. Recently our relationship with the North Carolina Wildlife Resources Commission (WRC) has changed, with TNC staffing three squads under contract to assist with burn unit prep and implementation in the Sandhills and Coastal Plain regions.

The Nature Conservancy hires trained wildland firefighters and coordinates their logistics on a day-to-day basis with our partners at the Wildlife Resources Commission. TNC is able to hold these resources back on burns that need more staffing or weekends when the Commission isn't conducting burns.

This has been beneficial to both TNC and WRC by hiring more skilled wildland fire personnel than WRC

typically has access to, expanding the number of crew members available to TNC, and increasing the numbers of burns a typical fire crew member is participating on per season from 30 to 70 on the average. Having these "good hands," as WRC Forester Chris Jordan would say, available to both partners has allowed for the implementation of more complex controlled burns as well as performance of initial attack on wildfires found on Commission lands.

Planting and Fire on Private Lands: Ocala Longleaf Pine Local Implementation Team (OLIT)

By Cheryl Millett, The Nature Conservancy and Ivor Kincaide, Alachua Conservation Trust



National Weather Service Meteorologist Angie Enyedi discussing fire weather challenges. Photo by Ben Williams.

With funding from the Longleaf Stewardship Fund and in partnership with the Florida Forest Service, the Longleaf Private Landowner Incentive program now has agreements with 26 landowners to conduct 846 acres of longleaf planting, habitat enhancement, and understory establishment projects. To get the word out this summer, we worked with WKMG/Click Orlando on a news story about what's special about longleaf pine habitat.

To help further efforts on private lands, Barry Coulliette, our Prescribed Burn Association Coordinator, is focused on assisting private forest landowners in the region through technical assistance to the Prescribed Burn Association (PBA), and one-on-one assistance at the landowners' properties to help build their own burn programs. During the first half of 2018, Barry has worked with more than 25 landowners, and some are already working toward becoming Florida Certified Prescribed Burn Managers.

The OLIT also teamed up with the newly-formed North Florida PBA to conduct a fire weather workshop for landowners on July 21st.

Landowners learned from regional National Weather Service (NWS) staff about fire weather, watch-out situations, and Florida-specific weather patterns essential to experienced fire managers. The class also learned the details of how the fire weather forecast is generated by NWS staff on a daily basis.

SLPCP Completes Second Season of Inventory Mapping: 130,000 Acres Mapped

By Charles Babb, SLPCP and Susan Griggs, USDA-NRCS



Dylan Whaley collecting forest inventory data. Photo by Susan Griggs.

The South Carolina Sandhills Longleaf Pine Conservation Partnership (SLPCP) recently finished its second summer of forest inventory data collection with Horry Georgetown Technical College forestry student Dylan Whaley. The inventory has proven critical to understanding where the Partnership's opportunities are to convert forests to longleaf stands and to protect and improve existing (privately owned) longleaf forests.

To date, students have collected data on approximately 5,000 tracts encompassing 130,000 acres. Data is collected only for soil types suitable for longleaf, excluding wetlands, urban areas, and active cropland.

Results to date show that longleaf is the dominant tree species on 35,000 acres, with mature longleaf covering about 2,500 acres. Along with mapping the forest stands by broad age class, Whaley collects information on existing management

evidence such as burning, thinning, and pine straw raking. He also notes the understory vegetation.

This data provides valuable information in a variety of manners, including outreach opportunities. A July outreach effort targeted 175 landowners who own unplanted clear-cuts. A letter and brochure were mailed which included information on the SLPCP, and opportunities for financial and technical assistance. As a direct result of the mailing, applications for 500 acres of longleaf planting have been accepted from high priority candidates.

Outreach to landowners with mature age longleaf stands has resulted in six applications for red-cockaded woodpecker Safe Harbor Agreements and the protection of at least 300 acres of stately longleaf. Restoration of these sites is underway through Partnership projects.

Additional outreach is planned to identify landowners of nearly 30,000 acres of mature loblolly stands. Many of these stands are expired Conservation Reserve Program trees that were planted in the 1980s and will be harvested in the next five years. They provide a unique opportunity to increase newly planted longleaf acres once harvested.

With information gathered through this inventory, realistic expectations are to at least double the acres of privately owned longleaf within the SLPCP focal area by 2025.

South Lowcountry – ACE Basin (SoLoACE) Longleaf Partnership Update

By Bobby Franklin, The Longleaf Alliance



F201 class observing a demonstration prescribed burn at Hitchcock Woods in Aiken, SC. Photo by Bobby Franklin.

The ‘Dog Days of Summer’ are in full swing in the SoLoACE LIT as I write this. Summer has been feast or famine rainfall wise with two three-week periods of little or no rain followed by 8-12 inches in a week’s time on three occasions! July 17-19 saw a successful Longleaf and Fire 201 Academy at the Savannah River Ecology Laboratory’s Conference Center in Aiken County. The highlight was a field tour featuring a demonstration prescribed burn at Hitchcock Woods, a 2,000-acre urban forest in the town of Aiken. A big shout-out to Bennett Tucker and his fire team for showing us the challenges of prescribed burning in the wildland-urban interface! The Partnership was also pleased to help South Carolina Audubon place a conservation easement on Silver Bluff Audubon Center on the Savannah River where they are actively involved in restoring longleaf on the dry sandy ridges along the river.

As always, thanks to all our partners: The Longleaf Alliance, Clemson University, Ducks Unlimited, Hitchcock Woods, International Paper, Lowcountry Land Trust, National Fish and Wildlife Foundation, National Wild Turkey Federation, USDA/NRCS, The Nature Conservancy, Nemours Wildlife Foundation, Savannah River Ecology Laboratory, SC Audubon Society, SC Department of Natural Resources, SC Forestry Commission, U.S. Fish & Wildlife Service, and U.S. Forest Service/Savannah River Forest Station.

Texas Longleaf Implementation Team

By Kent Evans, Team Coordinator



Ricky Massey with the US Army Corp of Engineers prepares to light the grassy fuels to control yaupon and myrtle. Photo by Sam McCalip.

Our team wants to increase burning in east Texas. We market cost-share programs for burning through NRCS, USFWS, and our fiduciary, Texas A&M Forest Service. We also provide training to increase the number of qualified burners. We teamed up with Texas A&M Forest Service lead instructor, Andy McCrady, and Texas Parks and Wildlife Department, Chris Schenck, to offer the Texas Certified Insured Prescribed Burn Manager course June 25-28. Most of the 13 participants that completed the 4-day course were from Texas burn companies; others attended to maintain certification in Texas. The required training burn was held at the E.O. Siecke State Forest, hosted by Area Forester, Joel Hambright and District Forester, Ben Plunkett. The growing season burn was completed under a mature overstory of 60 to 80-year-old longleaf with an average BA of 50. The stand was being invaded by woody competition: yaupon, wax myrtle, and sweet gum. Mid-summer burning was a new experience for many of the 26 burn participants.

The outcome was excellent with minimal crown scorch and 80-90% control of target species. Plunkett was pleased to see the effectiveness of summer burning where he had cured light fuels of perennial grasses to carry the fire. Ben said they traditionally do dormant season burning, but “this expands our burn windows” allowing more of the calendar for burn projects. They saw little mortality of young longleaf in the stand. Visitors are welcome to stop by this historical state forest east of Kirbyville where you will see the state’s first fire lookout tower (1926). The first pine seedling nursery and silvicultural research program was located here. The stand inside the front gate is one of the best examples of the native herbaceous community in east Texas, the outcome of decades of faithful prescribed burning.

Kisatchie National Forest Vernon Quail Focal Area

By Matt Pardue, US Forest Service



Quail outfitted with a transmitter to track movements to determine habitat usage and nocturnal roosting locations. Photo by Matt Pardue.

The Vernon Unit of the Kisatchie National Forest (KNF) is one of the last strongholds for quail in Louisiana. The 84,000-acre unit also contains one of the largest red-cockaded woodpecker (RCW) populations in the state. KNF together with other members of the West-Central Louisiana Ecosystem Partnership are working to improve quail habitat on 5,992 acres by creating a patchy mosaic with frequent fire, smaller burn blocks, alternating fire regimes, thinnings, wildlife openings, and supplemental plantings. The partnership is working toward getting the Quail Focal Area certified through the National Bobwhite Conservation Initiative. Certification will require a more intense monitoring protocol which was initiated in fall of 2017. Spring whistle counts are done two weeks in the month of June and fall covey counts performed two weeks in October. To date, 42 wildlife openings have been created and planted in spring to provide a mosaic effect in the landscape and an extra source of food for quail, turkeys, and their young. Small burns alternating from dormant to growing season provide a patchy mosaic effect and leave escape cover for quail. Upcoming activities include trapping and telemetry work to gain a

better understanding of bird movements as well as what type of habitat is being used for escape cover, loafing cover, and night roosting cover. An initial two birds have been tagged with satellite receivers and will be used as "Judas birds" to catch more when they are coveyed up in the fall.



Burner Bob met Georgia Governor Nathan Deal and First Lady Sandra Deal while visiting the Georgia State Capitol in September with creator Reese Thompson and his family. He was presented with an official Proclamation commending him for the great work he is doing to promote the use of prescribed fire.



For more information contact:

Flynn Miller

Flynn.miller@prt.com / 706-714-4108

Proud to supply:

- Native, Improved & Montane Longleaf
- Shortleaf
- Loblolly
- Slash

www.prt.com



Roundstone Native Seed LLC is proud to be a part of The Longleaf Alliance. It is our passion, our drive, and our mission to make a positive difference in the natural landscape by working alongside longleaf conservationists and enthusiasts. We are grateful that the seeds we gather and produce grow into appropriate longleaf ecosystem understory.

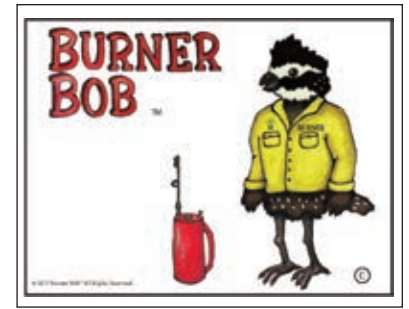


Call or Email Today

9764 Raider Hollow Road • Upton, Kentucky

sales@roundstoneseed.com • (270)-531-3034 • www.roundstoneseed.com

While you're in the Grass stage...



Burner Bob and his gopher tortoise friend provide safe shelter from the fire for other animals

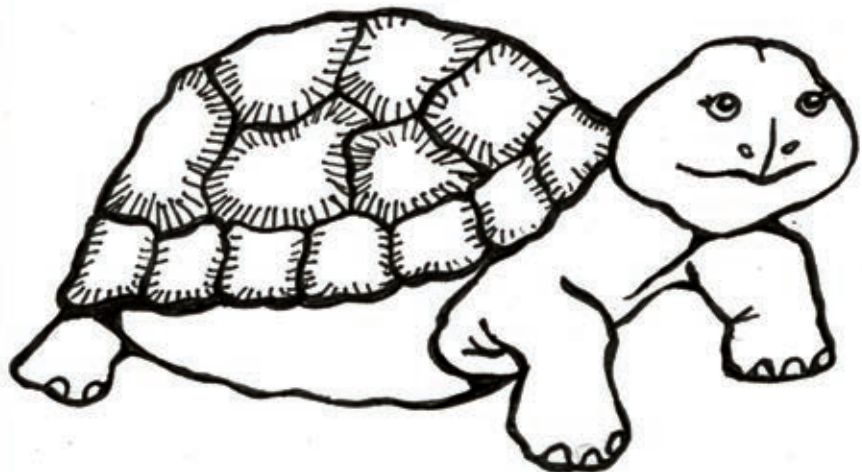
Burner Bob has many friends in the Ideal Forest. One of the friendliest animals is a gopher tortoise named Polly. She has a rounded, brownish shell, her skin is dark grey, and her front legs are like shovels, while her back legs are small and stumpy, but strong – like an elephant.

Gopher tortoises are the only land tortoises found east of the Mississippi River. They are herbivores; they love to eat grasses, berries, and prickly pear cactus. Polly likes living in the Ideal Forest because of Bob and his burning buddies. The fire clears scrub and opens up the forest allowing the sun to shine through on the low growing plants. Polly does not mind living in the upland sandy forest; she gets most of her water from the plants she eats, and the sandy soil allows her to dig her burrow and lay her eggs.

Polly created her home by using her front legs to dig a burrow. One day Bob went for a visit, and he found many other animals hanging out in her burrow. These other animals such as snakes, frogs, mice, and birds often take shelter in Polly's home. This is why gopher tortoises are referred to as a *Keystone Species* because others depend on them to survive.

GOPHER TORTOISE

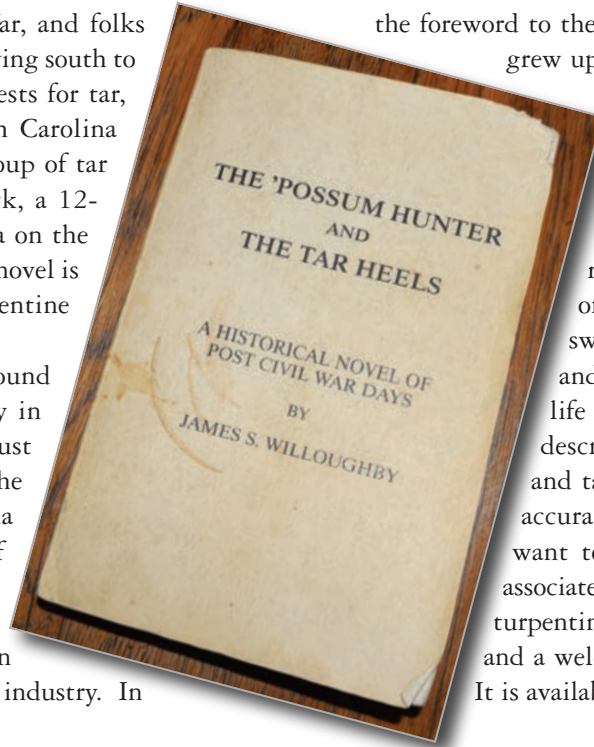
The gopher tortoise is known as a "Keystone Species" because the burrow it digs is used by some 300 other animals. They are only happy when they are living in a healthy forest habitat.



LONGLEAF LITERATURE SPOTLIGHT

It was shortly after the Civil War, and folks from North Carolina had started moving south to begin tapping the vast longleaf forests for tar, pitch, and turpentine as the North Carolina forests were “tapped out.” One group of tar heels from Chatham picked up Jack, a 12-year-old runaway, in South Carolina on the road east of Augusta, Georgia. This novel is their story of establishing a turpentine business in southeastern Georgia.

This novel tells of the years around 1870 when the turpentine industry in southeastern Georgia was just beginning. James Willoughby, the author, was born in Crosby, Alabama in 1905 and grew up in a family of turpentine operators and tree farmers. His parents had migrated from North Carolina to southeastern Alabama to work in the naval stores industry. In



the foreword to the book, Mr. Willoughby states that he grew up reading the novels of Zane Grey and always felt that his experiences of growing up in the South around a turpentine camp could be just as exciting. So, he wrote the novel.

While the book does not have the mountain lions and western landscapes of a Zane Grey novel, it does have swamps, piney woods, and cottonmouths and accurately describes the hardships of life in the South after the Civil War. The descriptions of running a turpentine still and tapping the trees are well written and accurate. For those that love longleaf and want to learn all we can about everything associated with the tree, the ecosystem, and the turpentine industry — this book is a good read and a welcome addition to any longleaf library. It is available on Amazon.

Outdoor Insurance SIMPLIFIED.

Protect your timber investment today!

The team at Outdoor Underwriters has more than 30 years of experience in the outdoor insurance industry and have designed programs to meet the needs of timberland owners nationwide. Protect your timber investment with coverage from Outdoor Underwriters.

To learn more call 866.961.4101 or visit outdoorund.com

Available Coverages:

Hunt Lease Liability Insurance

Timberland Liability

Tractors, ATV's & Implements

and much more....



By Aubrey Bolen, *The Indian Creek Studio*

LONGLEAF ART SPOTLIGHT

KISATCHIE SERIES

The painting pictured is one of a series of paintings inspired by the Wild Azalea Trail (WAT) which is located in Kisatchie National Forest. This trail is divided into six segments and has different vegetation communities throughout the 24-mile trail. These paintings depict a biome from each segment.

I chose the WAT as the focus of these paintings for its unique beauty. I wanted to share the diversity of this National Recreational Trail, located in Central Louisiana, through these pallet knife landscape paintings. My hope is they will bring awareness to this invaluable resource that we are so fortunate to have in Louisiana.

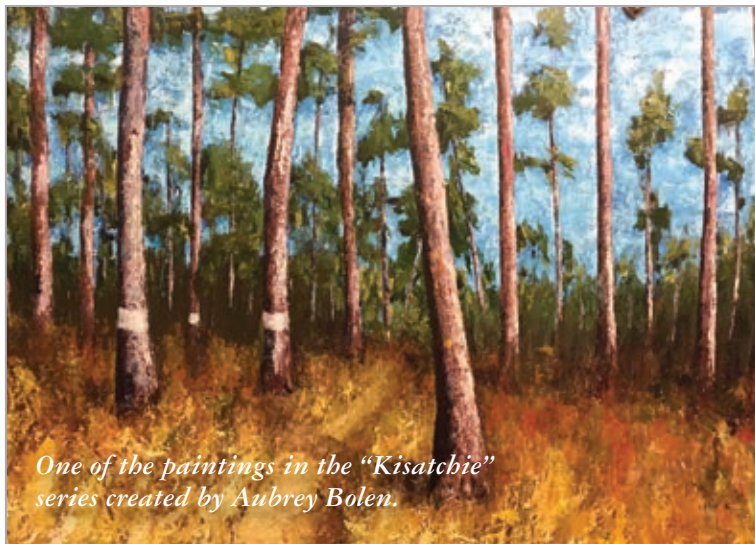
The first phase involved the challenge of gathering images. It was a fun yet daunting task. I hiked the WAT for months. Every trip I would take pictures, hundreds of pictures, trying to capture all the different vegetation communities that are present. I wanted to capture and share other distinct features of the trail which also contribute to the WAT being designated an outstanding scenic value — from the clear water creeks and old trees of the Castor Plunge Scenic Area to the pure pine stands where the red-cockaded woodpecker lives and the rolling hills of mixed hardwood forests. Every hike I would see something new, and every season new charm.

After collecting data, phase two focused my attention on selecting images. My criteria for selecting images to showcase included: multiple images of the same area, taken from different perspectives or angles; images representing one of the six biomes found along the trail; images which accurately captured the lighting and color of the biome/area; recognizable or familiar scenes of the WAT which may evoke emotional connections with some viewers.

Phase three took place in the studio. Layers upon layers of acrylic paint were applied to a plywood surface using the pallet knife, until components of each painting reflected the biome to my satisfaction — from the winding trails to the shadows cast by trees, to the way the light fell to the forest bottom and leaves rested on trees. The trees are the focal point of the pieces as they were to me while hiking and studying the trail. Hike,

study, paint, hike, study, the repetition of this process is hidden in the layers of these paintings.

The 604,000-acre Kisatchie National Forest has been ours since the 1930s. We are tasked with taking care of this beautiful forest for future generations to enjoy and to ensure a continued sanctuary for the wildlife that calls it home.



One of the paintings in the "Kisatchie" series created by Aubrey Bolen.



When I am on trail I am looking at the way sunlight comes through the trees, the colors of the landscape that surrounds me, all the while pushing myself physically to explore more of this wilderness. As I walk, my breathing falls into a meditative state that brings peace to my soul as the beauty of the surrounding environment brings happiness to my heart. My senses awaken to a heightened state, and I feel alive. The wilderness is where I can go to find myself and lose myself all on the same path.

J. Aubrey Bolen III

Follow the Adventures
www.theindiancreekstudio.com

The Indian Creek Studio



DAUNTLESS AIR

WE FLY TO WIN

formerly Aero Spray



Dauntless Air is an aerial firefighting company that exists to protect people, land and property.

We fly to win the war against wildfires.

320-297-9088 / dauntlessair.com

FORESTATE

GROWERS LLC



Jacob Moore, Forester & Owner

1535 Harvey Vickers Road ♦ PO Box 2198 ♦ Douglas, GA 31534-2198

912-592-0542 ♦ jacob@forestatellc.com ♦ www.forestategrowers.com

By Carol Denbof, The Longleaf Alliance

Longleaf Destinations

The Longleaf Conference Field Tour: Public & Private Longleaf in Central Louisiana

The Longleaf Alliance is excited to be bringing the 12th Biennial Longleaf Conference to Alexandria, Louisiana. This largest gathering of longleaf professionals and landowners will be coming to town October 23-26. This year's conference will once again allow for the exchange of the latest research and applications for longleaf restoration and management, honoring much-deserved individuals and groups that have made significant contributions to the longleaf field, and networking with others in the longleaf community. A regular part of the conference is always getting out in the field to see the great work that is being done in the area to restore longleaf habitats. This year is no exception. During the conference field tour, attendees will have the opportunity to visit both public and private owned properties and learn how longleaf restoration and management are implemented in Central Louisiana.

Just outside of greater Alexandria lies Louisiana's only National Forest. The Kisatchie National Forest is home to some

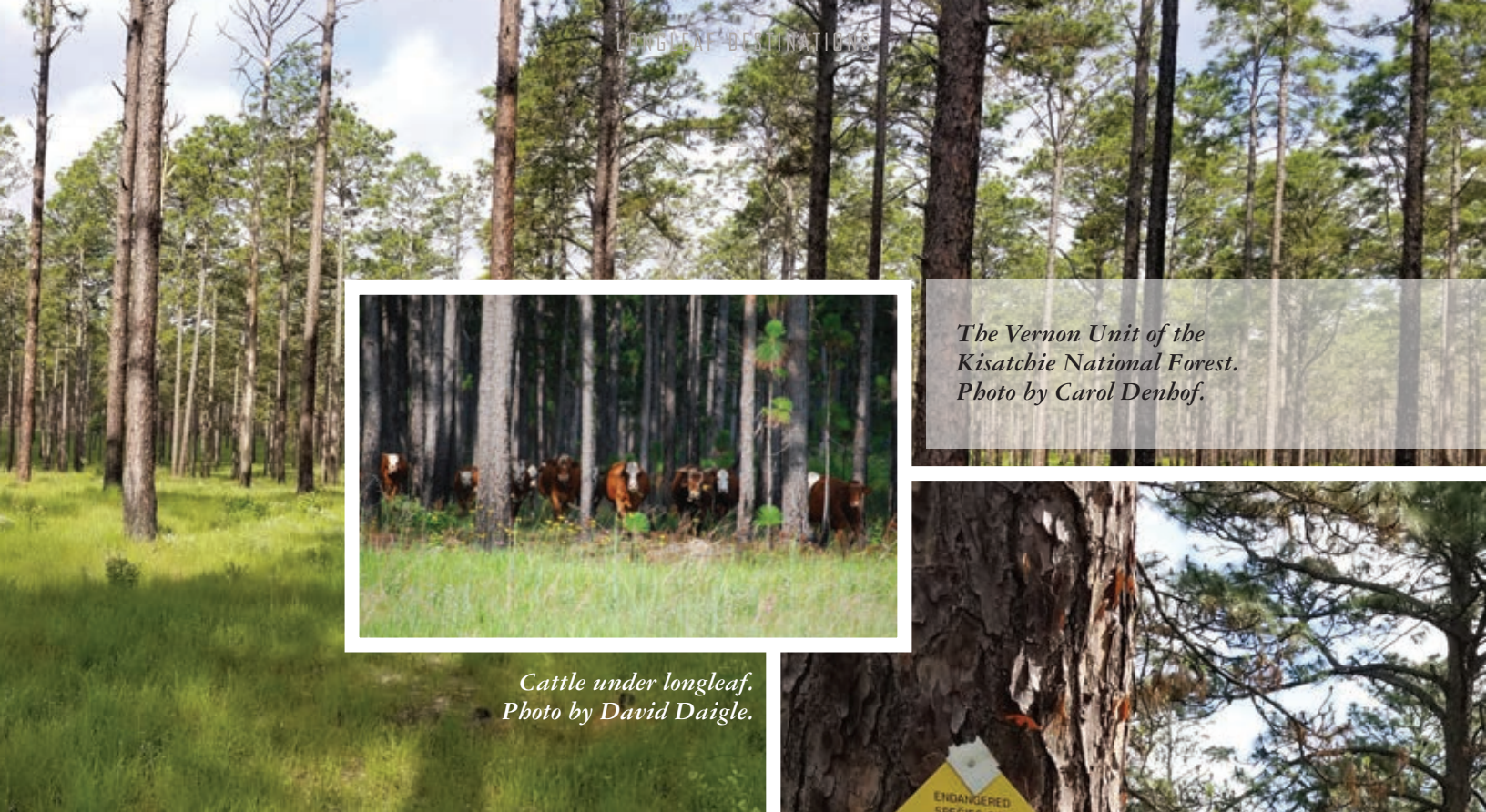
of the best remaining longleaf in the western range of the species. The tour will spend time at the Vernon Unit, known

for its sweeping views of the rolling hills landscape. After years of stewardship, the Vernon is quietly becoming a longleaf showpiece equaling anything else found across the range. Frequent use of fire has shaped the forest here, earning the area its nickname of the "Burnin' Vernon." Frequent fire has promoted a rich understory of native warm season grasses, dominated by bluestem varieties, forbs, and fall-flowering species. Fire-dependent longleaf specialists such as red-cockaded woodpecker, bobwhite quail, and the Louisiana pine snake



The beautiful flora found in the Kisatchie National Forest contribute to the overall diversity of this longleaf forest ecosystem.

find a home on the Vernon unit, and with any luck will be visible (or audible) during the tour. This great diversity of species coexists where active and compatible timber management is also being practiced. The tour of the Vernon Unit will highlight a Quail Focal Area, embedded wetlands, RCW areas, and their adaptable fire management program, along with the partnerships that have made these common objectives possible.



*The Vernon Unit of the
Kisatchie National Forest.
Photo by Carol Denhof.*

*Cattle under longleaf.
Photo by David Daigle.*

The tour will also showcase an award-winning private landowner property in Beauregard Parish. Daigle Farms, the 2017 Lower Mississippi Valley Joint Venture Private Landowner Conservation Champion, and a Louisiana Department of Wildlife and Fisheries Natural Heritage Site, was once a clear-cut. Having come full circle through decades of sound stewardship, the property now represents a functioning longleaf pine savanna alongside the utilization of resources in a manner that is compatible with habitat restoration goals. Through the use of controlled herbivory and prescribed fire, just as historical records confirm it was maintained pre-settlement, the property supports abundant wildlife habitat, wood products, and native understory forage for quality Braford and Brahman Cattle. Nesting and foraging habitat for the endangered red-cockaded woodpecker is maintained alongside the endangered American chaffseed plant. Open pinewood savanna provides habitat for bobwhite quail, wild turkey, and other grassland nesting birds. These subjects, and more, make this property one that can't be missed in central Louisiana.

This field tour will be a highlight of the Conference and something you definitely don't want to miss. If you don't already have your reservations in place, it's not too late. Visit the conference website go.ncsu.edu/longleafconference for more information about the conference, hotel options, and to register online.



*RCW management is a
priority on the Kisatchie
National Forest. Photo
by Carol Denhof.*



GreenAssets®

A Leading Forest Carbon Offset Developer

"Landowners Working with Landowners"

www.green-assets.com



ArborGen
The Reforestation Advantage

is proud to be a Corporate Conservation
Partner with the Longleaf Alliance



Our sponsorship allows the Alliance to host
academies, workshops and conferences across the
range. We're pleased to provide both improved and
unimproved containerized Longleaf for restoration.

ArborGen.com

855.894.1702

Longleaf Pine Needle Baskets and Red Clay Pie Plates



HessPottery.COM

NeedlesandClay on Etsy
(bit.ly/LongLeaf)



EAT, SHOP & PLAY
THE CENTRAL
LOUISIANA WAY!

AlexandriaPinevilleLA.com - 1-800-551-9546

WELCOME NEW BOARD MEMBERS

The Longleaf Alliance will be welcoming four new Board of Directors members at the fall board meeting which will be taking place in Alexandria, Louisiana during the 12th Biennial Longleaf Conference. We are excited to have them join our team and look forward to seeing how their individual perspectives and experiences will help shape The Longleaf Alliance moving forward.

Latimore Smith



Latimore is truly a child of the piney woods, descended from folk that lived amongst the virgin longleaf pines and then farmed the land after it was cleared of pine. Growing up as a young boy on a dairy farm in the historic longleaf piney woods of southeast Louisiana, he clearly remembers being drawn to those majestic straight arrow trees with their boughs bearing pom-poms of long pine needles. Those early formative years deeply influenced his life's path and led directly to his great fortune of working over most of his professional career with other passionate people to help protect and restore a bit of the incredible habitat called longleaf pine. In 1974, he received his B.S. in Biology from Southeastern Louisiana University, and in 1983, he received an M.S. in Wildlife Science from Louisiana State University.

His professional career began as Conservation Ecologist with the Louisiana Department of Wildlife and Fisheries Natural Heritage Program (LNHP) for 15 years, where he had one of the best jobs a young piney woods field biologist can have, seeking out, among other things, the best remaining examples of longleaf pine habitats in the state. It was there that he led the effort to place the first longleaf pine wet flatwood savanna, one that he had identified through his field work, into formal conservation in the state (Lake Ramsay Savanna WMA). With LNHP, he was instrumental in the effort to establish the first longleaf pine flatwood wetland mitigation bank in the U.S., owned and operated by The Nature Conservancy. It was there also that Latimore's extensive work with Kisatchie National Forest, Louisiana's only national forest, had a significant and lasting

impact on ecosystem management of KNF, particularly in the longleaf pine system.

In 2000, Latimore joined The Nature Conservancy in Louisiana where he coordinated planning and implementation of restoration actions on thousands of acres of TNC properties state-wide, but mainly on rare longleaf pine flatwood wetlands. He developed and implemented restoration plans for approximately 10,000 acres of pine wetland mitigation banks operated by TNC and others, which ensured that those banks achieved highest levels of restoration performance. Through this work, Latimore earned a reputation as a leading longleaf pine restoration practitioner. He worked to refine many essential restoration practices, including ecological timbering, hydrological remediation, brush and invasive species control, herbaceous ground cover rehabilitation, and timing, frequency, and seasonality of applied prescribed burns. Fire in longleaf is a particular passion of his, and while at TNC, he led the multi-agency effort to establish the Louisiana Prescribed Fire Council to promote the continued and expanded wise use of fire, especially in longleaf pine habitats. In March of 2018, Latimore moved on from TNC and started a conservation consulting firm he named Southern Wild that will have a primary focus of longleaf pine conservation and restoration. In May of 2018, he was awarded the Environmental Law Institute's annual award for wetlands conservation and restoration in the U.S., primarily for his work in longleaf pine wetlands.

Throughout his career, Latimore has worked extensively with industry, state and federal agencies, academia and numerous private organizations and landowners across Louisiana, and indeed the South. Over the years, Latimore has become a recognized authority on the ecology, management, and restoration of longleaf pine habitats, particularly in the central Gulf South. His expertise is regularly called upon by many.

He has long been an avid supporter of and a participant in the work of The Longleaf Alliance, and in fact made a plenary presentation at the inaugural Longleaf Alliance conference in Mobile in 1996, and another at the 3rd Biennial conference in Alexandria, Louisiana. Latimore is truly honored to serve on the board of The Longleaf Alliance. He currently resides near Covington (within 30 miles of where he was born), with his wife Nelwyn McInnis.

W. McLeod 'Mac' Rhodes



Mac is the 4th generation of his family engaged in the forestry business. He is the Managing Member of Essex Farms, LLC, Flowing Well, LLC, and several other enterprises. On properties in Hampton County, South Carolina, he is overseeing the conversion of about 2,000 acres of loblolly to longleaf pine.

Mac is past chairman of the Forestry Association of South Carolina, current chair of the Center for Heirs' Property

Preservation, a board member of the Forest History Society, Forest Land Owner Association, and a commissioner on the South Carolina Forestry Commission. He graduated from Duke University in 1973 and obtained Law and Master of Forestry degrees from University of South Carolina and Clemson University. Mac is a Registered Forester and member of the Society of American Foresters. Residing in Charleston, South Carolina, he and his wife Dee have three grown children and three grandchildren.

Mickey Parker



Mickey became interested in the woods and wildlife at an early age. He grew up in Ferry Pass, which is a once small community north of Pensacola, Florida. The small farm that his grandparents owned had a good stand of old-growth longleaf and numerous gopher tortoise. It was also great habitat for bobwhite quail. He attended Pensacola Junior College and graduated from the University of West Florida in 1970 with a degree in biology with

emphasis on ecology. He graduated from the University of Louisville School of Dentistry in 1974 and then served two years in the U.S. Navy at the Recruit Dispensary-Naval Training Center Orlando Florida. He has practiced family dentistry in Pensacola since 1976. Three years ago, he sold his practice and now works part-time.

Mickey was fortunate to acquire part of an old turpentine plantation in 1979. It had been "cut over" and reforested with

slash and was being cut again by the previous owner. Mickey made a personal commitment to restore the longleaf ecosystem. He and his wife Stephanie do most of the work themselves, working diligently to eradicate invasive species and protect and enhance habitat for all species native to the longleaf ecosystem. As a board member, Mickey will strive to pass along what he has learned about the woods in general and specifically longleaf. Hopefully, this will recruit new members and perpetuate the mission of The Longleaf Alliance.

Robbie Fisher



Robbie grew up in the Mississippi Delta and now lives in Water Valley, Mississippi. She is a lawyer, conservationist and filmmaker and has a passion for working to improve and collaborate in making a difference to art, society and the environment.

In 1998 Robbie joined The Nature Conservancy in Mississippi as Director of Conservation and then served as the State Director from 1999 until 2008. While at TNC,

Robbie came to learn about and appreciate longleaf pine ecosystems and forged good relationships with many partners working to protect longleaf and other native habitats, and ecosystems in Mississippi and beyond.

Since leaving TNC, Robbie has pursued her passion of filmmaking, with several of her films focusing on conservation themes and education.

Robbie served as executive producer, writer and co-editor of the 2009 documentary, *The Gulf Islands: Mississippi's Wilderness Shore*, an account of Mississippi's barrier islands, touching upon their history, preservation, and role in coastal ecosystems.

Robbie also contributed to the Emmy award-winning Mississippi Public Broadcasting documentary, *The Singing River: Rhythms of Nature*, which tells the story of the Pascagoula River, from its headwaters to the Gulf of Mexico. She also served as Field Producer for the three-part television series *The Science of the Spill* for Mississippi Public Broadcasting, educating viewers about the effects of the BP Deepwater Horizon oil spill in 2010.

Robbie holds a B.A. in French and Political Science from The University of the South (Sewanee) and a J.D. from Suffolk Law School. Her favorite amphibian is the Mississippi gopher frog, one of the many species for which she worked to protect, restore and enhance habitat while at The Nature Conservancy.

Benjamin Tuttle Joins Ecosystem Support Team



In mid-August, we welcomed Benjamin Tuttle to The Longleaf Alliance and the Gulf Coastal Plain Ecosystem Partnership (GCPEP) Ecosystem Support Team (EST) as a Team Member. Benjamin graduated from St. Cloud State University in Minnesota with a Bachelor's Degree majoring in Biology. He most recently worked on Ocala National

Forest as a Forest Intern, where he gained valuable experience in the areas of invasive species control, timber harvest operations, and rare species recovery emphasizing the red-cockaded

woodpecker. That experience will be particularly helpful as the EST increases its efforts to control invasive species and recover rare species in the GCPEP landscape. With the addition of Benjamin, the EST is again up to full crew status.

The LLA and other GCPEP partners are all glad to have Benjamin on board.

Bob Franklin Honored with Lifetime Achievement for Excellence in Prescribed Fire Award

By Johnny Stowe, South Carolina Department of Natural Resources

The Lifetime Achievement for Excellence in Prescribed Fire award recognizes an individual who is an ambassador for the advancement of prescribed fire in South Carolina through his/her dedication and contribution in this field. These accomplishments may have been made in management, education, research, administration, or in a combination of activities.

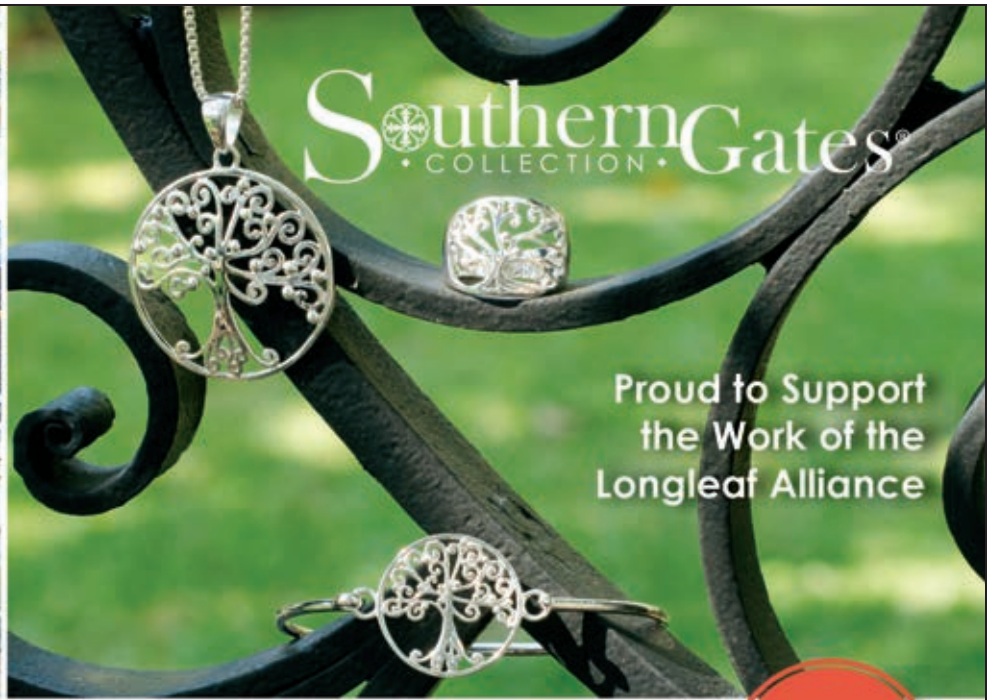
Bob Franklin has made unique and remarkable contributions to promote prescribed fire during his lifetime. Few people in North America, and no one in South Carolina, have contributed as much to restoring the Southern culture of woods-burning, and to getting fire on-the-ground, especially on private lands. Bob's life-long passion for rural Southern culture and active land management has been the foundation for his scholarship and advocacy, combining with his understanding and love for, and connection with, private landowners to make a difference that may never be equaled. Over Bob's 28-year long career as a Clemson University Cooperative Extension Agent (preceded by five years with Auburn University Extension) specializing in forestry and wildlife management, and in the last four years as the SoLoACE Longleaf Pine Conservation Partnership Coordinator, Bob has

steadily and productively connected with private landowners through countless site visits; field trips; workshops; conferences and symposia; presentations; newsletters and other writings he produced, spearheaded, led or played a major role in, and the grants he wrote and administered. Moreover, he has inspired, educated and trained generations of professionals who are making their own contributions. These foresters, wildlife managers and other natural resource professionals, and the landowners who Bob has touched will carry his work into the future. He has had a great impact on South Carolina's public lands, and on private and public lands outside of South Carolina. And Bob has also been productive in the policy arena, helping to shape public opinion, policy, and laws in support of prescribed fire. Remarkably, all this he did, with great prescience, for many years before prescribed fire had many advocates -- when burning the woods wasn't cool.

Bob's accomplishments are writ large on the land, indelibly etched by the multicultural connection he has played such a great role in restoring and maintaining, and it is not likely anyone in the future will ever do as much for the firelands of South Carolina.

Two Bobs, Burners Both, with private landowner John Brubaker at Sewee FireFest in March 2018. Photo by Lisa Lord.





SouthernGates®
• COLLECTION •

Proud to Support
the Work of the
Longleaf Alliance

Inspired by historic wrought iron gates throughout the South, this fine collection of sterling silver jewelry celebrates special times both past and present.

Find a store near you at
www.southerngatesjewelry.com/pine



Corporate Gift
Opportunities
Available

© 2017 All rights reserved. Southern Gates® collection is a registered trademark of The Cargo Hold, Inc. Designed and distributed in Charleston, SC.

Forestry's impact in Louisiana

- 58,530 jobs in forestry & related industries
- 14 million acres — 50% of land area — of forest land
- 73 million seedlings planted each year
- \$12 billion of economic impact



SUSTAINABLE
FORESTRY
INITIATIVE

*70 years of minding
the forest for our future*

by Lynnsey Basala, *The Longleaf Alliance*

Your Donations Support 'Boots on the Ground' Longleaf Restoration

The holidays are upon us, and many of you are mulling over year-end contribution opportunities. May we respectfully recommend a thoughtful donation to The Alliance?

The Longleaf Alliance's primary objectives include outreach, education, habitat management, protection, and restoration. We are the only conservation nonprofit organization solely dedicated to restoring the longleaf ecosystems of the South. We need your help! By choosing The Longleaf Alliance (LLA) as your charity of choice you are undoubtedly making a high-impact donation. Maintaining longleaf pine stands is crucial in supporting biologically diverse habitats throughout the southeast, and LLA is a leader in this effort. Thanks to the unwavering commitment of our members and partners, LLA allocated an astounding 85% of income to programs and services last year, a figure that steadily increases.

You should have received the annual appeal, a fall campaign letter, which shares exciting and collective successes achieved in areas of education, habitat protection and restoration in 2018

while providing a wonderful opportunity to make a high-impact donation as a new or renewing member. We hope that we can count on you to help us achieve and surpass our \$50,000 campaign goal by making a year-end contribution. The fall campaign extends from October 1-December 31 and donations of \$50 or more include a one-year membership in The Longleaf Alliance. All contributors receive a longleaf-themed thank you gift, the quarterly Longleaf Leader, and recognition in the winter edition.

To double or possibly triple your contribution this year, be sure to mark your calendar for the annual Giving Tuesday campaign on November 27. #GivingTuesday is a global day of giving fueled by the power of social giving and collaboration. Please look into your company's matching gift program before donating as LLA is an eligible 501(c)(3) nonprofit. Post #GivingTuesday #LongleafAlliance to social media in support of the longleaf ecosystem. Donations can be made at www.longleafalliance.org or direct (334) 427-1029.

OUR CORPORATE CONSERVATION PARTNERS ARE UNPARALLELED

John Seymour, co-founder, co-owner, and president of Roundstone Native Seed (roundstoneseed.com) participated in the very first Groundcover Restoration Academy in Aiken South Carolina on April 17-19. He provided a great lecture to a group of 30 participants on native seed selection, seed production, and groundcover restoration. John and his staff also participated in the field trip to Hitchcock Woods in Aiken. He brought a seed stripper, Truax™ I No-Till Seed Drill, and other equipment all the way from Kentucky as part of a field demonstration on seed restoration which allowed participants to learn about the equipment and ask questions in the field for a more hands-on experience.



Roundstone Native Seed's monetary and in-kind support spans over a decade. Photos by Lisa Lord.



12th Biennial Longleaf Conference

LONGLEAF REFLECTIONS
LONGLEAF REFLECTIONS

Looking Back Taking Stock Making Progress

Alexandria, Louisiana October 23-26, 2018

Visit the Conference Website for Details
go.ncsu.edu/longleafconference



FORESTS

ARE THE ANSWER



INVESTING IN CONSERVATION

The Sustainable Forestry Initiative® (SFI) stands for future forests. We recognize that improving forest habitat requires an investment in research and the collaboration of many partners.

Since 2010, SFI has awarded more than \$3.9 million in conservation and community partnership grants to organizations and projects that promote wildlife habitat, water quality, and biodiversity conservation.

Look and ask for the SFI label on any wood, paper and packaging product you purchase. By supporting SFI, you're supporting biodiversity and conservation through responsible forestry.

Learn more at sfiprogram.org.



THE CONSERVATION FUND

We make conservation work for America.

conservationfund.org

Since 1985, we have protected nearly 8 million acres of America's land while developing innovative solutions to combat tough environmental challenges.

We pioneered our Working Forest Fund program to quickly acquire threatened forests with high conservation value. We own, restore and sustainably manage these lands as working forests until they are permanently protected under conservation easements.

Get to know us!





United States
Department of
Agriculture

The Natural Resources Conservation Service works with private landowners and cooperating partners to protect and restore America's longleaf pine forests.

Natural
Resources
Conservation
Service

www.nrcs.usda.gov



USDA is an equal opportunity provider, employer and lender.

Whitfield Farms & Nursery

SINCE 1996

2561 Lambs Bridge Rd
Twin City, GA 30471

bwhitfield@pineland.net

(912) 515-4103

The Deepest Container on the Market!

Introducing our new 6.5" deep, lower density container for longleaf seedling production. Each cell holds 8.2 cu.in. (134 ml) of soil to help develop a larger root system for a superior stand of trees. The longer plug and greater soil capacity should result in a seedling with a higher survival rate than those with shorter plugs.



GROWER OF CONTAINERIZED LONGLEAF PINE SEEDLINGS

WhitfieldPineSeedlings.com

A photograph of a middle-aged man with a beard and mustache, smiling and touching a large tree trunk with his right hand. He is wearing a dark jacket over a red shirt. The background is a forest with trees and some autumn-colored leaves.

Heartpine

By Clay Ware

Looking Back, Looking Forward. Perspectives on Longleaf Restoration.

I grew up on the edge of the longleaf range in Meridian, Mississippi, where my exposure was limited to occasional longleaf trees mixed with shortleaf and loblolly on sandy, upland sites. Not until pursuing my M.S. degree from North Carolina State University did I get exposure to the actual longleaf ecosystem. After all, the NC State Toast begins with the line “Here’s to the land of the longleaf pine.” I was fortunate to receive several forestry job offers after receiving my degree, but a quick exploratory trip down to South Carolina to the Carolina Sandhills National Wildlife Refuge made the choice easy. While many folks would see “just pine trees,” I saw wiregrass and scrub oaks and flat-topped longleaf of varying heights, frequently bisected by blackwater streams and densely vegetated drains. I saw charred stems indicating an active prescribed fire program and white bands on trees identifying them as red-cockaded woodpecker (RCW) cavity trees. Most importantly, I saw an opportunity to conduct ecologically-based forestry rather than focusing primarily on economics. After five years in the best job I’ve ever had, career advancement beckoned, and I moved on to manage the Army and Air Force forestry and wildlife programs, which provided opportunities

to work with, and learn from, foresters on huge expanses of longleaf pine, like Eglin Air Force Base and Forts Benning, Bragg, and Stewart. When the opportunity came in 2012 to rejoin the US Fish and Wildlife Service (FWS) as Longleaf Pine Recovery Coordinator, I jumped at the chance to focus full-time on returning this iconic forest to the landscape. I retired from this position earlier this year, and it is with the perspective gained through this position that I address the reflective theme of this issue of *The Longleaf Leader*.

We all know the numbers: Ninety-one million historic acres of longleaf, down to three million by the 1990s. The present estimate is around 4.7 million acres, with a better understanding of that acreage coming in the next U.S. Forest Service (USFS) Forest Inventory and Analysis report. A gain of 1.7 million acres is quite impressive, even more so given that, in recent years, losses are reportedly as high as two-thirds of gains. Many of us are also well aware of the number, eight million, which is the acreage targeted by the America’s Longleaf Restoration Initiative (ALRI) to be on the landscape by 2025. This number was always ambitious, but the dedication and passion of longleaf practitioners has always led to seeking, and achieving, impressive results.

What the future holds is uncertain, and many challenges lie ahead before we reach the eight million-acre goal. Budget cuts have reduced funding for longleaf restoration and support staff among some federal agencies and will likely cut into many States' ability to support restoration efforts. A recently proposed change to the Endangered Species Act to provide greater leniency with respect to threatened species may make longleaf restoration more attractive to industry and private landowners but may also result in reduced federal and state funding for longleaf restoration. Through perspective gained in my six years of participation and support of the LPC and the longleaf Federal Coordinating Committee (FCC), I have identified several broad, directional issues that should be addressed as we move into this uncertain future.

1) More education and emphasis on pragmatic longleaf ecosystem restoration: Attention to understory restoration must be not only promoted, but also more completely understood, effectively reported, and feasibly applied. While we all desire the entire suite of groundcover species, efforts to completely restore such conditions rapidly are simply too expensive for most landowners. Initially prioritizing vegetation most critical to the ecological function of longleaf forests, such as grasses to provide fuel for prescribed fire and legumes to capture atmospheric nitrogen and provide food for wildlife, would help bring down costs and maximize benefits. Patience is also critical. On many cutover sites, significant natural groundcover regeneration from the seed bank may not be fully realized until prescribed burning is applied and/or after the canopy is opened up via thinning. Until the dynamics of understory recovery are fully realized, costly understory restoration activities should be carefully considered.

2) Greater emphasis on site selection: We should avoid focusing our efforts and limited resources on small, isolated sites, as well as sites in locations that preclude the ability to apply prescribed fire. Difficulty getting prescribed fire contractors to work on such sites, as well as finding timber buyers to enable thinning, make these sites difficult to manage. Preference should be given to restoring longleaf on cutover or heavily thinned sites. Not only are old field and agricultural sites devoid of native groundcover seeds in the seed bank, residual fertilization and hardpans in the soil often result in trees that are top heavy and prone to tipping or of poor growth form due to excessive limbs, growth spirals, or cankers.

3) Improved "Inreach" among partners: We have done a great job on outreach efforts to various longleaf practitioners, but often critical personnel within our own organizations or agencies are uninformed about ALRI or how they can contribute. The vast majority of FWS employees are very supportive of, or actively engaged in, longleaf restoration, but there are still misperceptions, misinformation, and bias against forestry-related activities among key regulatory staff. Department of Defense is a huge supporter of ALRI, but broader engagement of the Services (particularly Army and Air

Force) in the LPC and the FCC would benefit the effort. Other LPC members, from State Forestry and Wildlife agencies to private industry and nursery representatives, could step up inreach efforts within the organizations or affiliations they represent. Kudos are due to the USFS in establishing their Longleaf Million-Acre Challenge, an extremely impressive inreach effort to restore a million acres on National Forests in the Southern Region.

It's easy is patience also applies to outreach efforts, where persistence is currently paying the highest dividends in areas where it has been applied the longest. During the past 17 years, I have witnessed the passion and drive that longleaf devotees bring to the table. I'm confident that we'll continue to make great strides in returning this majestic and diverse forest to the landscape as we move into the future.



**Container Loblolly and Longleaf
Pine Seedlings**

**BODENHAMER
FARMS & NURSERY**

.....

910/422-8118
FAX: 910/422-9793

www.bodenhamerfarms.com

Louie: 910/608-9823, Louie@BodenhamerFarms.com
Aaron: 910/733-2760, Aaron@BodenhamerFarms.com

.....

Rowland, North Carolina ■ Established in 2000
NCDA License # 5643
Seed Lots From NC, SC & GA
Second Generation Improved Loblolly

