

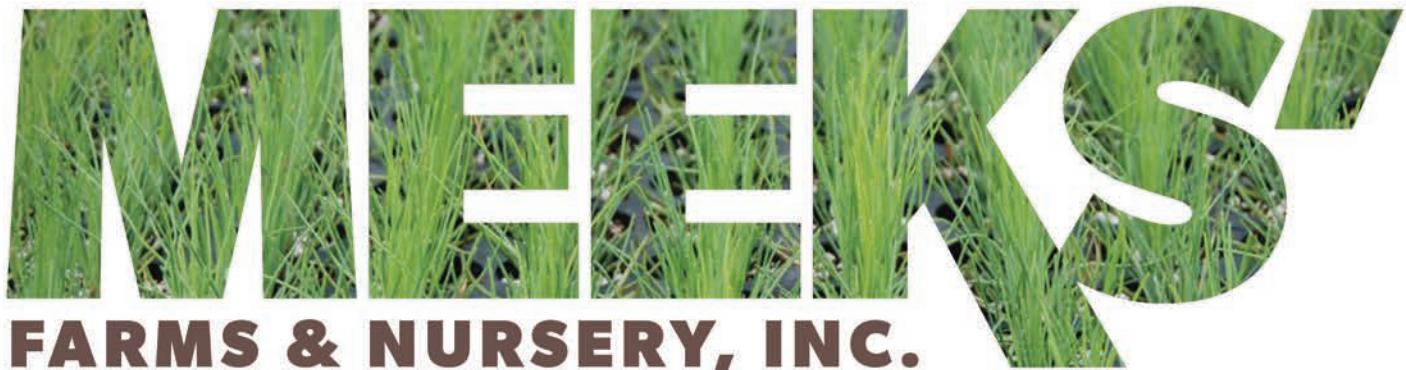


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PUBLISHER The Longleaf Alliance, **EDITOR** Sarah Crate, **ASSISTANT EDITOR** Margaret Platt
DESIGN Bellhouse Publishing, **ADVERTISING** Sarah Crate – editor@longleafalliance.org
COVER Prescribed fire at Carver's Creek State Park, North Carolina. Photo by Michael Walker.

The Longleaf Leader is an official publication of The Longleaf Alliance, 12130 Dixon Center Road, Andalusia, Alabama 36420 and is published quarterly. 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 The Longleaf Alliance, 12130 Dixon Center Road, Andalusia, Alabama 36420. Periodicals Postage Paid at Montgomery, Alabama.

The Longleaf Alliance

PRESIDENT'S MESSAGE



CAROL DENHOF

REKINDLING OUR CONNECTIONS

Making connections is essential for all the work we do with The Longleaf Alliance. Our ability to connect with landowners, partners, members, and individuals in our communities allows us to build relationships that affect positive changes to the longleaf pine ecosystem spread across the southeastern United States. Over the past two years, our normal means of connecting with people through our Longleaf Academies, festivals, meetings, and other in-person events was severely impacted. However, our exemplary staff adapted to ever-evolving conditions surrounding the pandemic by developing a wide array of virtual outreach content, pivoting to a Virtual Longleaf Conference, and becoming pros at online meeting formats.

The tools that we have employed since spring 2020 have allowed us to continue our work to guide longleaf work across the range, but as we learn to live with COVID-19 and restrictions are relaxed, we are eager for the activities ahead. As I write this in February, our teams have just finished an exciting weekend in Charleston, SC at the Southeastern Wildlife Expo, and organized several in-person

Learn & Burn workshops and Longleaf Academies for landowners across the region. And now, we are gearing up for fire festivals, training sessions, and member events. It is refreshing to meet with people face-to-face to do what we do best — ignite a passion for the longleaf pine ecosystem. By building relationships with folks like Holly Henderson, in our Landowner Spotlight, and Karen Manning, who tells her story in the Heartpine column, we expand this powerful community of people who make great things happen with longleaf.

With this issue, we reinforce this idea of connecting by launching the theme “Rekindling Our Connections” for the 14th Biennial Longleaf Conference to be held this October in Wilmington, North Carolina. This event will provide opportunities to bring together both old and new longleaf friends. All of us here at The Alliance are excited to gather with and learn from all of you once again.

Please stay tuned to our website, social media, and monthly newsletters as details are released. We hope to see you all in Wilmington!



*Learn & Burn participants in Georgia.
Photo by Susan French.*

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OCTOBER
25-28, 2022



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MANAGEMENT CHECKLIST | SPRING

Evaluate Young Longleaf Stands

- Assess winter seedling plantings for any early mortality from freeze damage or other factors.
- Uncover and/or lift any viable containerized longleaf seedlings that were planted too deep.

Plan for Your Next Longleaf Planting

- Order your seedlings early for 2022 fall and winter plantings (by April if possible). Nurseries usually sell out of preferred seed sources by early summer.
- A list of our partner nurseries can be found at www.longleafalliance.org.

Assess Longleaf Recruitment

- If promoting natural regeneration is your goal, conduct your longleaf pine cone and flower counts in May to assess the developing crop, as well as next year's potential crop.
- If a good crop is developing, prepare the seedbed with prescribed fire – see burning section below.

Apply Herbicide Treatments

- Assess stands for herbaceous competition to determine if there is a need for chemical release, especially on former agricultural sites. If using any Oust® product, test pH to ensure it is below 6.2 to avoid seedling mortality. For any release, avoid periods of stress or late-planted seedlings.
- Apply hexazinone as a site prep treatment or to control oaks on sandy sites after bud-break but before full leaf-out. Hexazinone is tough on oaks but easy on many desirable understory species.
- For site preparation following a cutover, ensure adequate time for resprouting to develop before applying a herbicide site prep treatment. If in doubt, wait a year to improve the effectiveness of treatment.

Prioritize Burning

- Evaluate what you burned in the winter to determine if you accomplished your desired fire effects.
- Burn young longleaf stands invaded by short needle pines or hardwoods that are too large to control with winter burns.
- Avoid disking firelines around wetlands and ponds; reptiles and amphibians are actively traveling to wetter areas for breeding, and plowlines can impede their movement.
- Promote viable wiregrass seed production, increase wildflower abundance, and control hardwoods with growing season prescribed fire.

Prepare the Seedbed

- Consider the best timing for a seedbed preparation burn on mature longleaf stands with good cone crops to promote natural regeneration.
- The goal is to increase the likelihood that seed falls on bare mineral soil but not so clean that predators can find and destroy most of the new seed. Spring or early summer burns may be best to be ready for natural seed fall in October/November.

Mow the Competition

- Burning is better but mowing can be a tactical tool to combat competition. Consider combining mowing with periodic patch burning to enhance habitat.
- Avoid complete mowing in spring to early summer to reduce the loss of ground-nesting birds. Most birds will re-nest if damage does occur and suitable habitat is nearby.

Plant Native Warm-Season Grasses

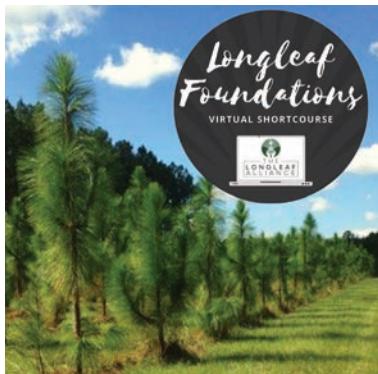
- Check for weedy competition 7-10 days prior to seeding. If needed, treat with herbicide.
- Time planting with seasonal rain events.
- For successful germination, seed must be planted less than 1/4 inch deep.

Reach out to The Longleaf Alliance with any longleaf management questions at longleafalliance.org/contact.

*Spring and summer burns prepare the seed bed for good longleaf pine seedling survival.
Photo by Sarah Crate.*



SPRING CALENDAR | 2022



Longleaf Foundations is a condensed virtual course, so you can learn at your own pace, on your own schedule. Registration remains open all year, but sign up soon to take advantage of the next “Ask the Alliance” live sessions.



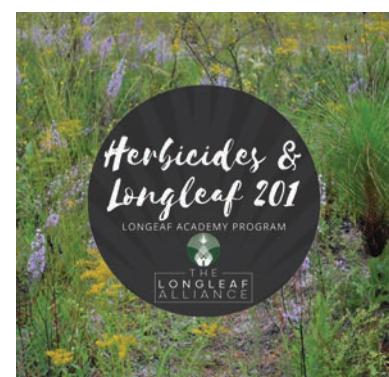
April 12-14 | Lufkin, Texas

Longleaf 101 will provide expert instruction from The Longleaf Alliance and feature guest speakers in “all things longleaf.” The course will consist of both classroom and field instruction to begin or enhance your longleaf education. All experience levels are welcome!



May 17 | Hurtsboro, Alabama

The **Groundcover Restoration Field Day** will feature techniques for maintaining and restoring healthy groundcover communities in pine systems for a variety of objectives.



June 15-16 | Elizabethtown, North Carolina

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Q&A

Q. Dear Longleaf Alliance,

I'm a longleaf landowner interested in finding out more about conservation easements. I saw the "Longleaf & Land Trusts" article in the Winter 2022 issue of *The Longleaf Leader* and was impressed with the work of the organizations highlighted, but none of them are in my area. How do I get started on my land?

Looking to the future in Louisiana

A. Dear Looking,

Nonprofit land trusts work to protect land through easements and land purchases, as do government agencies. They can be local, regional, statewide, or national in their scope, utilizing public funding and private donations. Finding the right partner is essential as a conservation easement creates a long-term relationship between your land and the easement holder.

In 2020, Charles Roe and Julie Moore, with Southern Conservation Partners, surveyed private land conservation organizations across the longleaf range, asking about their accomplishments and challenges supporting longleaf pine conservation on private lands. They authored a list of participating longleaf land trusts with descriptive summaries of their work using the survey responses. Learn more at longleafalliance.org/landtrusts.

ALABAMA

Alabama Forest Resource Center
Georgia-Alabama Land Trust

FLORIDA

Alachua Conservation Trust
Conservation Florida
Conservation Foundation of the Gulf Coast
North Florida Land Trust
Tall Timbers Research Station and Land Conservancy

GEORGIA

Southeast Regional Land Conservancy
Southern Conservation Trust
See also Georgia-Alabama Land Trust (Alabama) and Tall Timbers Research Station and Land Conservancy (Florida).

It is best to get to know several potential partners in your community. The process is akin to matchmaking in that the relationship must be a good fit for both the landowner and the organization. This will be influenced by your needs, the property's assets, local conservation priorities, and the organization's capacity and policies. Be aware that these agreements are often funded by highly competitive programs that must meet specific criteria.

Luckily there are many resources to assist with your research and help you find a good match for your projects and vision. We highly recommend the "Find a Land Trust Near You" feature and super helpful FAQ section on the Land Trust Alliance's website at landtrustalliance.org.

Be sure to also talk with family members as you consider your conservation options. This is a big decision, so we strongly advise you to consult with an attorney and financial advisors, too.

Sincerely,
The Longleaf Alliance

LOUISIANA

Land Trust for Louisiana

MISSISSIPPI

Land Trust for the Mississippi Coastal Plain
Mississippi Land Trust

NORTH CAROLINA

North Carolina Coastal Land Trust
Three Rivers Land Trust
Triangle Land Conservancy
See also Southern Conservation Trust (Georgia)

SOUTH CAROLINA

Lowcountry Land Trust
Pee Dee Land Trust

RANGE-WIDE

The Nature Conservancy

*Additional land trusts not listed here may hold conservation easements over tracts containing longleaf pine but did not respond to the Southern Conservation Partners survey.



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By Jacob Barrett, The Longleaf Alliance

PLANT SPOTLIGHT

Macranthera flammea (Bartr.) Pennell
Hummingbird Flower
Boomrape Family – Orobanchaceae



Description

Hummingbird flower, also known as flameflower, is a striking biennial herbaceous plant due to its remarkable height (up to 10 feet tall) and numerous, brilliant orange flowers. Its leaves are 3-4 inches long, deeply lobed, and toothed with tiny hairs on the leaf margin, arranged opposite on square-shaped, erect stems.

Flowering from July to September, 1-inch-long orange flowers occur on erect clusters up to 2 feet long at the tip of the stems. Plants are hemiparasitic, capable of photosynthesis but also relying on underground connections to host plants for additional resources. Plants turn black when dried.

Distribution & Habitat

Hummingbird flower is a wetland obligate located within the coastal plain of Georgia, Florida, Alabama, Mississippi, and Louisiana. It can be found in seepage slopes, wet streamside thickets, pitcher plant bogs, edges of cypress-gum ponds, and utility rights-of-way through these habitats. It is semi-parasitic on the roots of black gum, bayberry, blackberry, tulip poplar, and other wetland shrubs and trees.

Conservation Status

Across the Hummingbird flower's range, it is recognized as G3 (globally imperiled), and within each respective state, it is listed from S1 (state critically imperiled) to S3 (state vulnerable).

Wildlife Value

As its name implies, this species is quite popular and a very important nectar source for migrating Ruby-throated Hummingbirds before their trans-Gulf migration.

Protection and Management

Apply prescribed fire every 2-3 years after wetlands have dried, and fuels are available to burn. Avoid altering the hydrology of streams and wetlands. Eradicate feral hogs and limit off-road vehicle access.

References

- Chafin, L.G. 2007. *Field guide to the rare plants of Georgia*. State Botanical Garden of Georgia and University of Georgia Press, Athens.
- NatureServe. 2022. NatureServe Explorer [web application]. NatureServe, Arlington, Virginia. Available <https://explorer.natureserve.org>. (Accessed: February 22, 2022.)



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By Samantha Dillon,

The Longleaf Alliance

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A photograph of a longleaf pine forest. The scene shows numerous tall, thin pine trees with dense green needles. Interspersed among them are several dead, hollow tree trunks standing upright, characteristic of longleaf pine ecosystems. The sky is blue with some wispy clouds.

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A handwritten signature in black ink, appearing to read "Reese Jordan Thompson".

Reese Jordan Thompson
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The candlestick-like appearance of an actively growing longleaf bud. Photo by Ryan Bollinger.

By Karen Zilliox Brown,
The Longleaf Alliance

LONGLEAF CANDLING & FIRE

Early spring brings the start of the growing season across the South. For longleaf pine, this means “candling” is well underway.

What is a longleaf candle?

Beginning in February to mid-March, a white growing tip will become evident, emerging upwards from the “leader” bud atop the central stem of a longleaf pine. This is the site of height growth for the developing tree. The white tip, commonly referred to as a “candle,” may grow a couple of feet in just a few months.

Usually a welcome sight, this indicates the dramatic, active height growth is now ON for young longleaf. Terminal buds at the end of branches will show smaller candles, as they also elongate during this time. Soon green needles will emerge from the candle, rapidly growing to full length, while the candle base begins to turn scaly brown as the tissue turns to bark.

Longleaf will also have several growth flushes during the summer, but they are not as noticeable, with each one shorter than the one before.

Can I burn during candling?

Thick, luxurious longleaf needles can deflect a lot of heat – just one of the pine’s adaptations to frequent fire. Without the needles’ protection, candling buds are more vulnerable to damage from fire until the new needles surround the bud again.

This is especially true for grass stage longleaf and young saplings when the heights of the tree and passing flame are the same; direct flame impingement on the bud is all but certain. Damage to the leader bud is the greatest concern; a dead leader means the loss of most of this year’s growth, and maybe worse. Longleaf is fire resistant, but not fire proof. However, thermal pruning of the lower limbs can be advantageous to the growing tree, encouraging it to drop those limbs and promoting better form.

Prescribed burning can still be done effectively in candling stands, taking care to manage the fire’s flame heights and intensity. Opt for igniting with moderate to narrow strip-head fires, or use a grid ignition pattern. Observe the fire behavior that results from those techniques and adjust accordingly. Experience counts here.



A



B



C

A) Hollow-feeling buds, those that break under mild pressure, and brown discoloration on a bud are all bad signs. All may not be lost, though. Young longleaf can resprout after bud death, but we don't recommend relying on this high-cost adaptation. Photo by Karen Brown.

B) Buds should be bright white and firm under a gentle squeeze even when the needles have mostly been consumed. Photo by Kaiden Spurlock.

C) Needles have begun to grow around this leader bud, though not yet at their full length. Prescribed fire can be applied at this stage with extra attention paid to objectives, conditions, and techniques. Photo by The Longleaf Alliance.

While we can burn now, maybe the first question should be, "Is this the best time, or should I wait?" If you decide you can achieve similar (or better) effects with less risk of damage by waiting a few weeks, then plan to resume burning after a short pause for needle growth.

What about mature longleaf?

Candling is not always so apparent in older longleaf, partly due to the treetops and upper limbs being harder to view from the ground and partly because candle lengths are not as prominent during this stage.

The good news is that fire is much less of a threat to the leader and terminal buds of these taller trees, and less

attention needs to be paid to the candling season when planning a prescribed burn. Of course, it is still important to avoid scorching crowns and stressing trees, which can make them more vulnerable to other concerns.

Weigh all factors when deciding when to burn.

Candling and tree physiology is not the only factor to consider; fuel loading, presence of ladder fuels, and weather and climate factors should always be part of deciding how and when to burn longleaf at any stage.

These considerations can help longleaf managers get the best results from fire, our most cost-effective tool for longleaf ecosystems.



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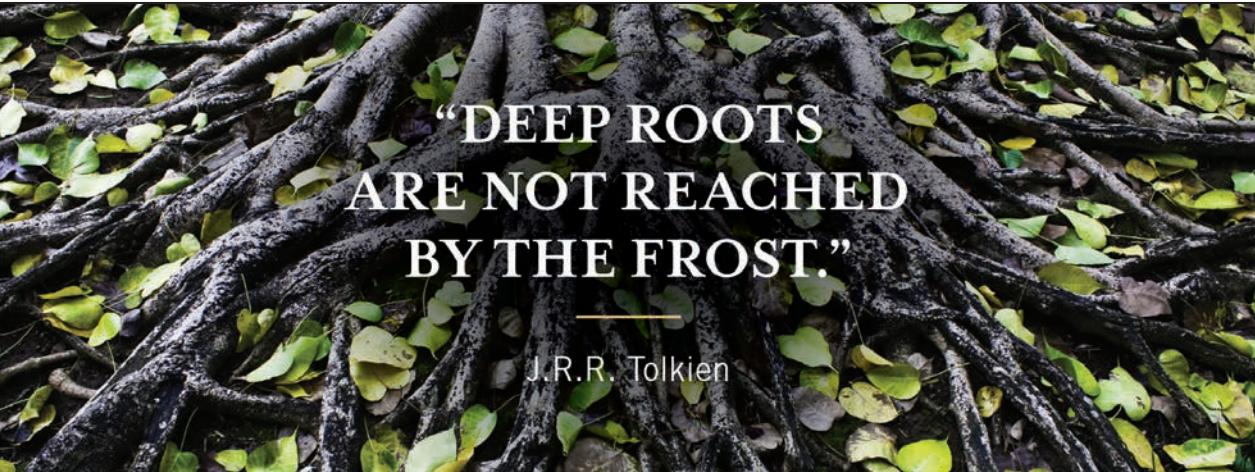
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LONGLEAF RESEARCH NEEDS

Survey Results

By Carol Denhof, The Longleaf Alliance

The Longleaf Alliance (TLA) plays a key role in providing technical assistance to landowners and partners restoring and managing longleaf lands around the southeastern U.S. It is incredibly important to ensure that the information we convey is scientifically sound and based on proven research in forestry, wildlife biology, and other natural resource areas. We strive to maintain a pulse on past research and new, innovative studies looking to answer the questions that arise as the field of longleaf restoration evolves.

In an effort to provide guidance on research needs related to longleaf, TLA launched a public survey in 2021 to gauge the importance of a range of topics. The survey link was sent out to a wide distribution list including TLA supporters and partners. It was also shared through TLA social media platforms. The response to the survey was positive, with a total of 71 individuals representing seven of the nine states where longleaf occurs submitting input (Figure 1). The percentage of respondents from each state is reflective of

our higher membership numbers in Alabama, Florida, Georgia, and South Carolina. The group of respondents also exhibited a variety of longleaf restoration roles and backgrounds. By far, the largest groups represented in the survey were landowners and land managers. These two groups combined made up 84% of all responses (Figure 2). Their input provides important insight into needs from an on-the-ground restoration perspective.

The research topics were grouped into the following categories: Ecosystem Services, Forest Products, Longleaf Ecosystem, Plant Materials, and Restoration & Management. The list of research topics was developed by TLA staff based on existing bodies of work, current studies, or known research needs. Respondents were asked to score each topic on a scale from "Not Important" to "Most Important." Weighted averages were calculated for each topic within categories and reflect the level of importance of each topic (Table 1).

Figure 1

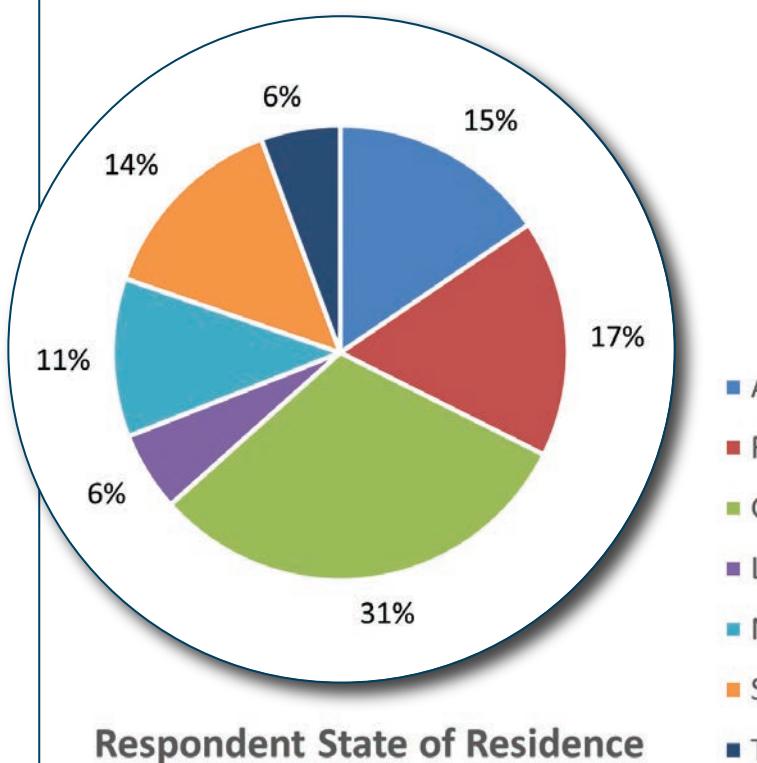


Figure 2

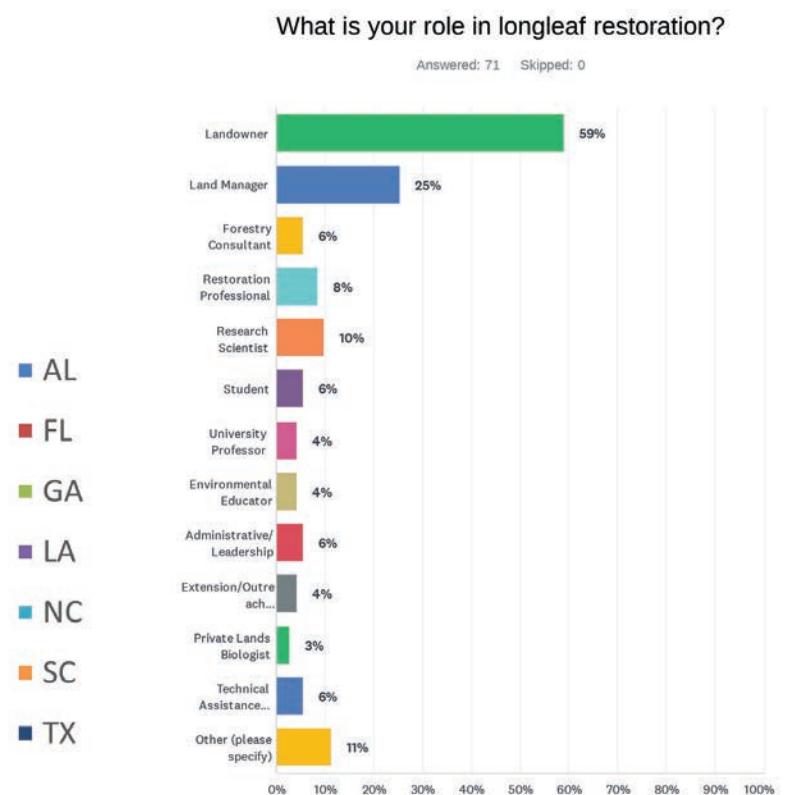


Table 1

Research Category	Research Topic	Weighted Average Scores within Category
Plant Materials	Longleaf Tree Improvement Groundcover Production Longleaf Seedling Production Groundcover Genetics	3.60 3.53 3.38 3.10
Longleaf Ecosystem	Groundcover Restoration, Maintenance, and Enhancement Rare Species Recovery - Wildlife Rare Species Recovery - Plants Embedded Wetland Restoration Value of Hardwoods in Longleaf	3.92 3.77 3.77 3.25 3.00
Restoration & Management	Prescribed Fire Longleaf Establishment Invasive Species Management Wildlife Management Competition Control - Chemical Methods Thinning Strategies Competition Control - Mechanical Methods Silvopasture/Grazing with Native Grasses	3.93 3.85 3.79 3.71 3.48 3.42 3.32 2.62
Forest Products	Growth & Yield Premium Markets Pinestraw	3.65 3.48 2.83
Ecosystem Services	Resiliency Water Resources (Aquatic ecosystems, embedded wetlands, overall watershed health, etc...) Forest Carbon - Trees Natural Disaster Response or Recovery Forest Carbon - Groundcover Supporting Drinking Water	3.70 3.54 3.49 3.43 3.38 3.33

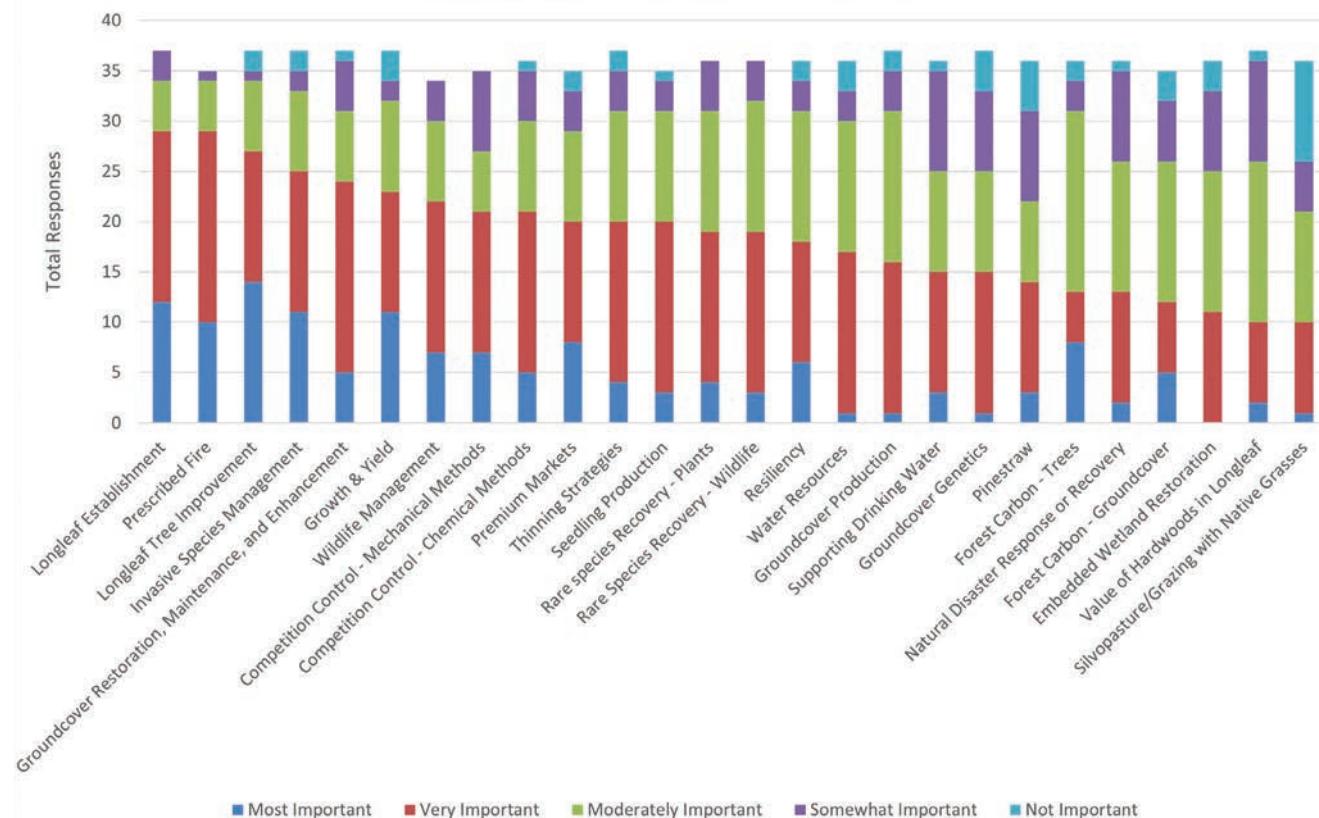
To evaluate the survey data further, responses from the largest subgroup of respondents, private landowners, were assessed separately to determine the most pressing research needs from their perspective (Figure 3). For the most part, the responses from private landowners were consistent with the overall weighted averages of the survey, with the highest rankings given for Longleaf Establishment, Prescribed Fire, Longleaf Tree Improvement, and Groundcover Restoration, Maintenance, and Enhancement. These responses indicate how critical a clear understanding of these topics is for successful longleaf pine ecosystem restoration. The lowest-ranked needs according to private landowners were Natural Disaster Response or Recovery, Forest Carbon – Groundcover, Embedded Wetland

Restoration, Value of Hardwoods in Longleaf, and Silvopasture/Grazing with Native Grasses. These lower scores do not mean that the topics are not important, but simply that they are not as crucial to this group as other areas of study.

This survey is a good first step in assessing research needs in the context of improving longleaf restoration and management processes. These initial results can inform recommendations to research partners and students on questions related to longleaf pine that are yet to be answered. The next step of this process will be to examine broad topics such as Prescribed Fire and Groundcover Restoration to gain a deeper understanding of some of the most pressing needs in these very complex topic areas.

Figure 3

Private Landowner Results by Research Topic



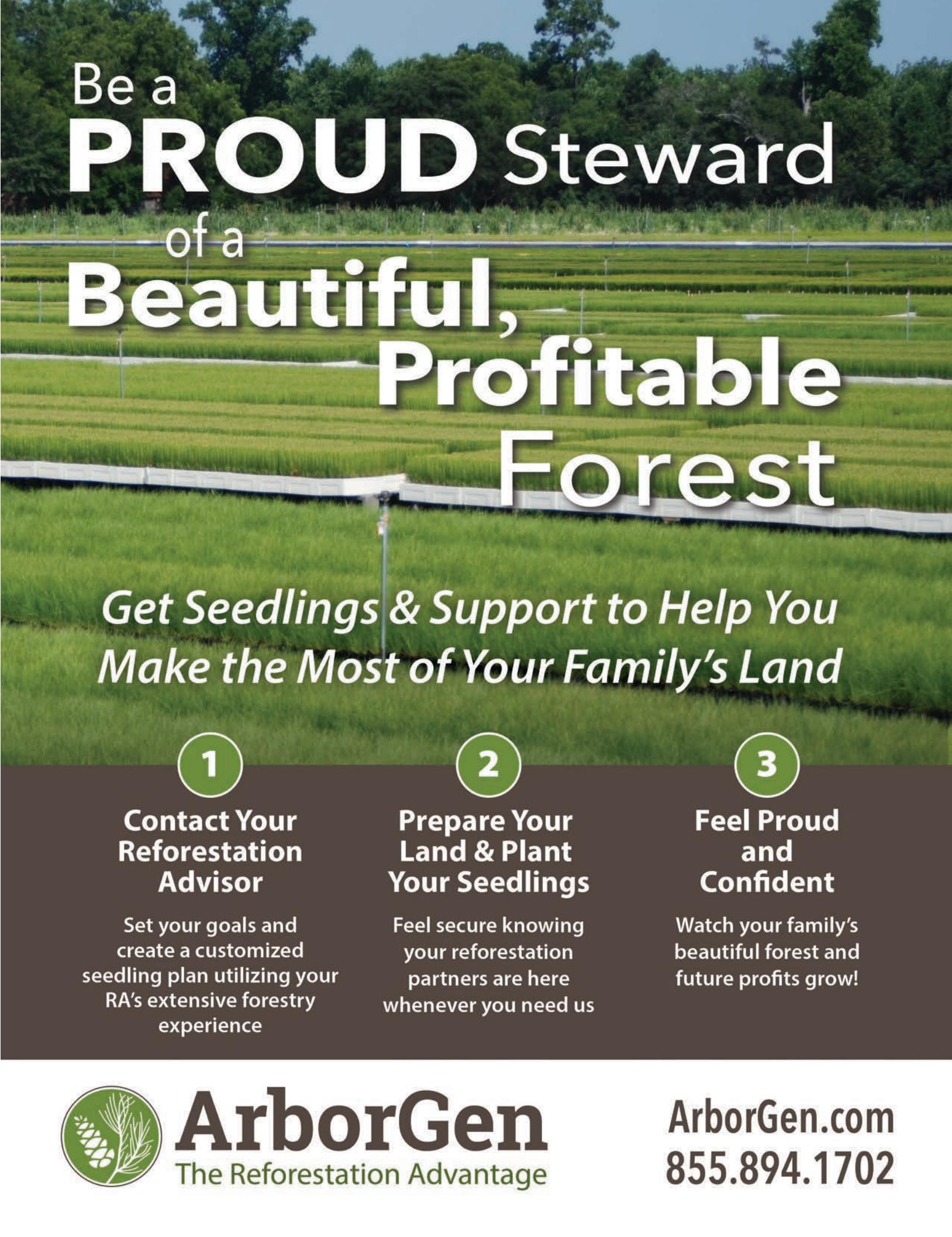
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"Using advanced genomic techniques on tissue samples from old-growth longleaf pine trees, I will characterize molecular genetic diversity and population differentiation across the species range to inform restoration and conservation efforts."

A special thank you to the Selection Committee for their efforts to come to this unanimous decision.

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When I look at a longleaf pine, I get a sense of an old soul. I get a sense of something that is special – something that is contributing to what's around it. It's very peaceful and it brings you closer to what is here and what is surrounding you. – Holly Henderson

Coming Home

HENDERSON FAMILY TRUST – LUFKIN, TEXAS

By Jenny Sanders, Texas Longleaf Team

Land stewardship is in Holly Henderson's blood. The front wall of the Henderson Family Trust conference room features a gallery of photos and conservation award plaques, including a large photo of Holly's great-grandfather, Simon Wood Henderson collecting resin from a mature longleaf stand on their land around the turn of the century.

Ms. Henderson is the fourth generation to manage the land and mineral holdings of the Henderson Family in East Texas on behalf of her two sisters and numerous other family members. Simon W. Henderson came to East Texas from Georgia with his wife Louise in 1883 and quickly established himself as a pioneer in the local timber industry. Henderson was instrumental in the establishment of several sawmills, the Angelina & Neches River Railroad, the Angelina County Lumber Company, and a variety of other ventures. His son, Simon Henderson Jr., grew up working in the Keltys sawmill alongside his father. He later took over the management of the Angelina County Lumber Company, once the oldest mill in Texas, and established his own ventures, including a Ford Motor Dealership and Lufkin Federal Savings and Loan. One of his greatest accomplishments was founding the Southland Paper Mill with the Kurth Family,

where southern yellow pine was first converted to newsprint. Henderson additionally managed the family timber interests and raised his four daughters and a son, Simon W. Henderson, III or "Bubba," who soon found his own passion in the land.

A lifelong hunter and angler, Bubba began managing the family land, specifically properties known as Ewing Mound and Pine Island. Following the announcement that Ewing Mound would receive the coveted Lone Star Land Steward Award for East Texas in 1997, Bubba spoke of his desire to teach his three daughters all he could about the land and wildlife. He said, "I'd show them all the different trees and try to teach them the different species and all about timber... We try to do as much conservation as we can. We're trying to get quail started back on the property, and we're trying to get turkeys started, and of course, we always try to keep the deer population as well as we can." And that he did. During his tenure managing the family landholdings, Henderson was instrumental in introducing prescribed fire back onto the landscape. His reforestation practices helped the longleaf and other native pine to flourish.





▲ The front wall of the Henderson Family Trust conference room features photos and plaques celebrating the family's extensive legacy of land stewardship.

◀ Bubba Henderson, sharing his love of the land and water with his three young daughters. Back to front: Honea, Virginia Loucile "Sister," and Holly.

It was this passion observed in her father, and his willingness to involve his daughters in the work of stewarding the land from an early age that brought Holly back home. She recalls, "Our family has a history of empowering women. Both my great-grandmother and my grandmother were instrumental in managing our interests, so it was a natural transition for me to take the reins from my dad." After receiving a fine arts degree at the University of Texas in Austin, Henderson had a successful career in photography, spending years working in New York City before returning to Austin. As a tribute to her late nephew, she started a granola business called 'House Granola' which helped support special needs charities in the Austin area.

In 2016, with the realization that Bubba's health was declining and her older sisters were not in a place to take over the family business, Holly made the decision to leave her career in Austin behind and move her family back to Lufkin. Her goal was to learn as much as possible from her father in his final years.

"I'm not going to lie. It was somewhat difficult coming home and working alongside my dad. He had done his own thing for a long time, and he was quite set in his ways. That being said, it was very rewarding to learn from him, especially the moments where my new way of looking at challenges and opportunities could improve operations and create efficiencies. In the end, I felt like we learned a lot from one another, and I cherish the time I was able to spend with him," Holly reminisced.

In the time since Bubba's passing in 2020, Holly has worked hand-in-hand with the Henderson Family's long-time business manager, Kristina McCoy, to continue her father's work. Their primary focus is on the Pine Island and Ewing Mound properties. Most importantly, Holly and

Kristina have been laser-focused on fulfilling Bubba's lifelong dream of restoring the Eastern Wild Turkey population in the area.

"It is certainly a challenge to find balance," Holly said. "On the one hand, I am accountable to shareholders who expect the properties to generate maximum timber income. At the same time, I have this strong desire to fulfill my dad's wishes to restore these beautiful longleaf areas with the classic diverse understory and vibrant wildlife populations that made him so happy."

Holly and Kristina credit multiple consulting foresters, agency representatives, wildlife biologists, and members of the Texas Longleaf Team for helping them devise a plan that balances timber income production and longleaf and wildlife habitat restoration. The resiliency of longleaf is a significant selling point as they promote the idea of increasing the share of longleaf in their forestry portfolio. "I see longleaf as an insurance policy," Holly said. "It's more drought resistant, wind and fire-tolerant, aids in water-infiltration and quality, and we can feel good about the carbon sequestration and storage benefits. We really see longleaf as a win-win."

Kristina also explains the evolution of their understanding of the value of fire through the years and how longleaf has played a key role in that understanding. "The tree tells you when to burn... It is just so interesting to see how it all fits together and how everything starts growing after a fire. In the beginning, our hunters were a bit hesitant because of how things looked after the burn, but then I could see their eyes brighten during the green-up. They couldn't deny how much better things looked – especially from a wildlife perspective."

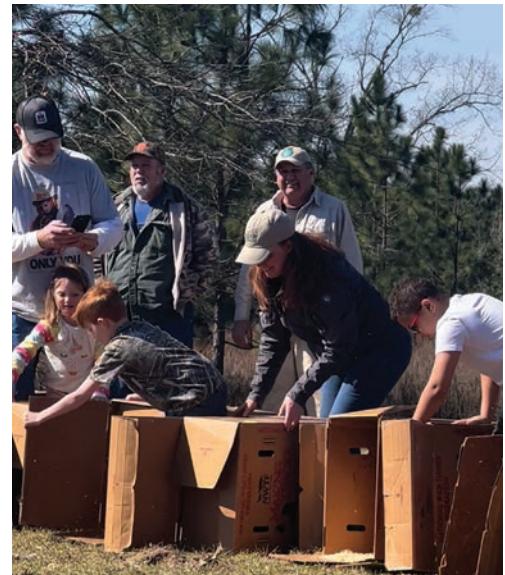
Between the two properties and other holdings, Holly and Kristina manage close to 600 acres of longleaf within a

matrix of almost 10,000 acres of bottomland hardwood, savanna, loblolly plantation, and mixed pine uplands. Longleaf restoration began in earnest in 2004, when Bubba received his first cost-share to replant. Since then, the family has worked with the Texas Longleaf Team and the Natural Resources Conservation Service to replant longleaf and manage existing longleaf wherever appropriate on the properties.

Their story is one that should inspire generational landowners everywhere. Each generation of the Henderson family has had slightly different goals for the land with an evolving understanding of its unique values. With each generation, their stewardship ethic has matured, and their understanding of how best to balance profit and conservation has evolved. The result is a diversified operation that supports income, wildlife conservation, recreation, and the environment. What more could you ask?



The Henderson family and Texas Parks & Wildlife biologists at turkey release. Left to Right: Chris Gregory, Sean Willis, Holly, Gracie and Bruno Henderson, Kingston and "Sister" Henderson, Randall Kroll, Tresian Bryant, Rusty Wood, and David Campbell.



Holly Henderson, her children Bruno and Gracie, and nephew Kingston, releasing Eastern Wild Turkeys onto a longleaf stand on Pine Island in January 2022

In 2016, the Henderson family teamed up with several adjacent landowners to form the Pine Island Wild Turkey Cooperative, seeking to actively manage their properties to improve habitat for Eastern Wild Turkeys with hopes of a future stocking. In the summer of 2020, Texas Parks and Wildlife Department conducted a habitat site evaluation, and the Co-op was approved as a Super Stocking site for 20 gobblers and 60 hens. In 2021 and early 2022, partial stockings of 22 and 28 turkeys were released, with plans to follow with another 20-40 birds in late spring 2022.

Texas Parks & Wildlife Department selected the Pine Island Co-op as the site of this critical restocking effort due to the successful and extensive restoration of the longleaf ecosystem by several of the members. The management of these connected longleaf stands includes prescribed fire and mechanical and chemical control of understory vegetation which promotes the grasses and forbs needed for turkey nesting and brood habitat.

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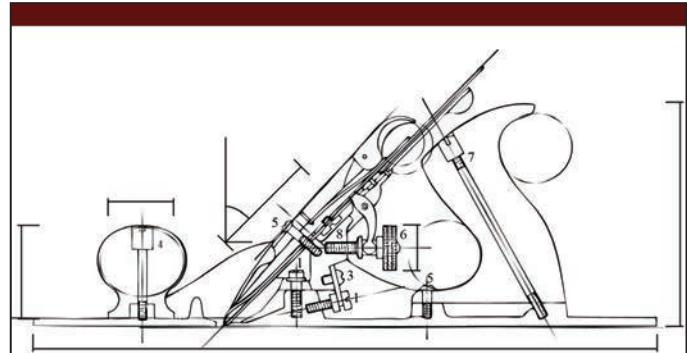
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Podcast Recommendations from TLA Staff

DEER SEASON 365 PODCAST - deerassociation.com/podcast
Prescribed Fire Basics: Learning to Burn Safely and Effectively with Wildlife Biologist Shan Cammack

FRIENDS OF FIRE - southernfireexchange.org/sfe-podcast

IN DEFENSE OF PLANTS - indefenseofplants.com/podcast
Episode 346 - *A Longleaf Adventure Revisited*, Episode 264 - *The Longleaf Alliance Speaks for the Trees*, & Episode 171 - *Restoring Plants & Saving a Salamander*

HOW THE RIVER FLOWS - keepingforests.org/podcast
Water and Forests

MEATEATER - themeateater.com
Episode 269: *The Mooch, featuring turkey hunting stories with former Longleaf Alliance President Robert Abernethy*

OLOGIES WITH ALIE WARD - aliward.com/ologies
Indigenous Fire Ecology (GOOD FIRE) and Wildlife Ecology

SNAKE TALK WITH DR. JENKINS - oriannesociety.org/initiatives/snake-talk

TALKING FORESTS - talkingforests.com

THE WILD WITH CHRIS MORGAN - thewildpod.org

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Interview with Longleaf Partnership Council Chair

Colette DeGarady, The Nature Conservancy

By America's Longleaf Restoration Initiative Communications Team



Easement monitoring. Bluff Plantation, Berkeley County, South Carolina.

Earlier this year, The America's Longleaf Restoration Initiative (ALRI) welcomed Colette DeGarady as the 2022 Chair of the Longleaf Partnership Council. Colette is the Longleaf Pine Whole System Director for The Nature Conservancy (TNC), overseeing a regional conservation program that provides leadership and support for longleaf pine restoration work occurring across the 9-state historic range. The ALRI Communications Team recently caught up with Colette to discuss her background and thoughts on longleaf pine.

What drew you to working longleaf?

When I graduated from undergrad at Clemson, my first job was working on TNC's Sandy Island preserve in SC, where I helped monitor and band Red-cockaded Woodpeckers. I fell in love with the island and didn't mind going to sleep each night sticky with sap from climbing trees and checking cavities. Sandy Island had that feel of being mysterious and isolated, but with open sweeping mature longleaf trees as far as you could see. It's still one of my favorite places 25 years later.



From a personal perspective, what has been your most rewarding experience so far?

During my career, I've worked with several college students and interns who volunteered with me to learn what my job was all about and gain experience in the environmental career field. I remember being that inexperienced kid who had no idea what job to pursue or how to interview. I appreciated being able to share my story and career insights with them. Now it's fun to see many of them on Facebook or elsewhere. Two of these interns have full-time careers at TNC; one opened an organic farm, another opened a local climbing gym, and another works for a local environmental consulting firm.

What is the greatest challenge facing longleaf forests in the Southeast?

The immense fragmentation of our current longleaf forests is pretty sad when we think about what once covered the Southeast. Now there are so many different land-use interests competing for forests as a whole. We need housing to live in, cities to work, farms for food, and space for wind and solar

energy sources, but we need to make sure there is enough forest land to help balance clean air and water and provide shelter and food for wildlife. The South has so many different types of landowners, both public and private. It takes immense coordination and communication to work together across boundaries to ensure forests are sustainably managed. As those land tracts get smaller and more divided, it only becomes more complex.

What is the greatest opportunity?

Once people (landowners and other agency land managers) walk in a well-managed longleaf forest and learn about its qualities, the value of longleaf is not hard to appreciate. Planting and managing longleaf feels like the right thing to do. That's why there is a whole organization dedicated to

longleaf forests (The Longleaf Alliance) and a multi-tiered range-wide partnership that has maintained momentum for more than ten years. If someone attends a Longleaf Partnership Council meeting (virtually or in person) for the first time, they will feel the comradery of everyone believing in this work we're doing together.

What is the value of coalition work?

Having an existing successful partnership structure in place at different scales allows agency staff to tackle this incredibly complex challenge of restoring and maintaining longleaf. No one agency or landowner can do it alone. From implementing restoration on the ground to channeling funding to providing education and outreach, there are so many facets to building sustainable, lasting, longleaf forests.



Burning Sandy Island. Photo by Furman Long.



DeGarady on Sandy Island, first job after college, 1998

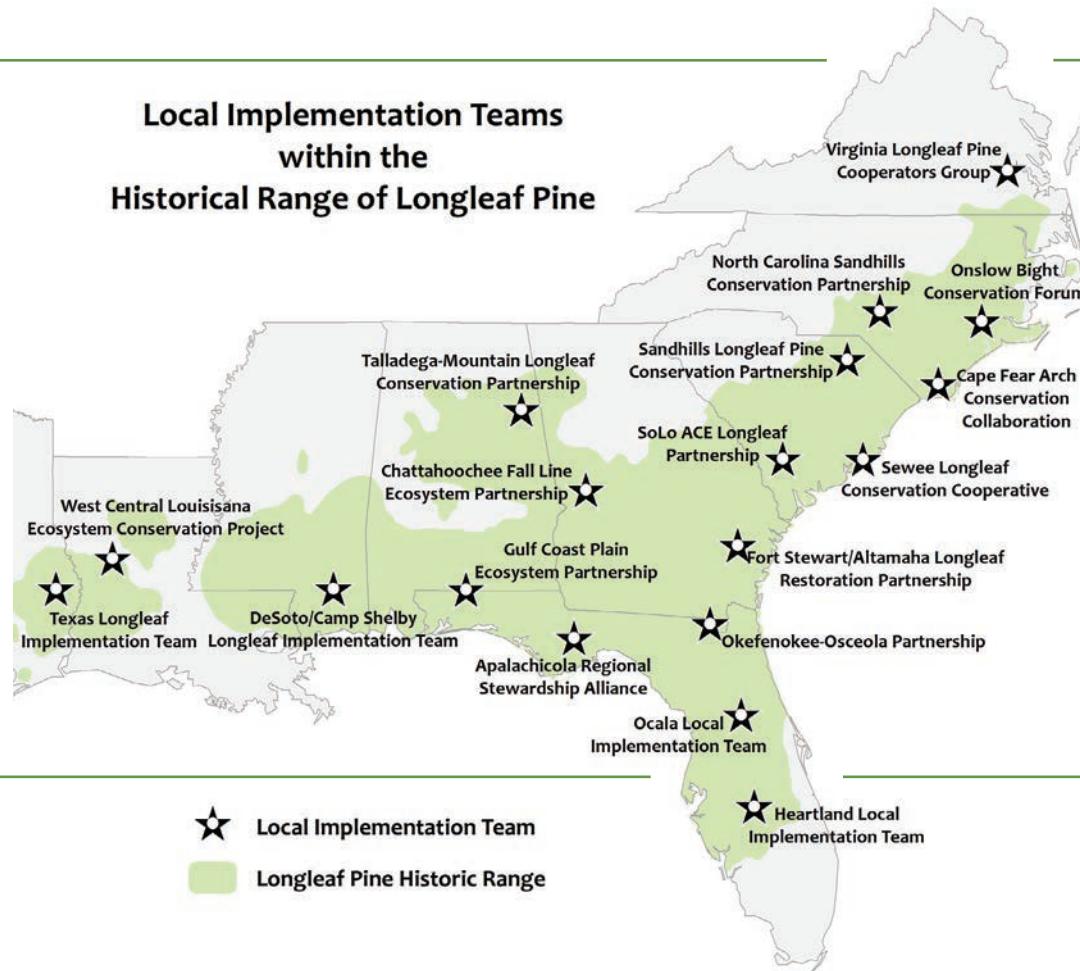
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LONGLEAF FOR ALL

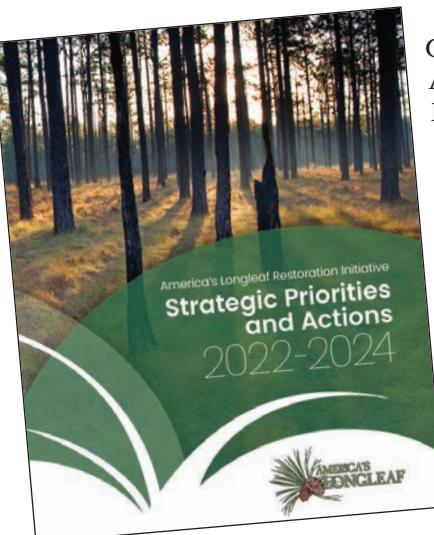
Learning opportunity for landowners — Through generous support from the Richard and Rita Porterfield Education Foundation, landowners who are members of underrepresented racial, ethnic, or gender groups or who are facing financial hardship are invited to participate in an upcoming Longleaf Academy at no cost to them. Contact Karen Zilliox Brown (karen@longleafalliance.org) to learn more.

Local Implementation Teams within the Historical Range of Longleaf Pine



By Colette DeGarady, The Nature Conservancy, Longleaf Partnership Council Chair

Longleaf Partnership Council Establishes Priorities for Next Three Years



the goal of 8 million acres of longleaf pine restored by 2025, as well as ensure success for ALRI beyond 2025.

The Longleaf Partnership Council (LPC) released the America's Longleaf Restoration Initiative (ALRI) Strategic Priorities and Actions 2022-2024, the fourth and final iteration of the step-down planning document that details a more focused look at short-term activities needed to advance the goals and objectives of the Range-wide Conservation Plan for Longleaf Pine. This document lays out priority actions designed to maintain and build upon the substantial momentum towards

These priority actions include but aren't limited to:

- Understanding and prioritizing the longleaf landscape through advanced mapping;
- Expanding and advancing longleaf restoration on public lands;
- Expanding and advancing longleaf restoration on private lands;
- Strengthening the partnership with more focus on equity through our Longleaf for All Working Group; and
- Further supporting research and communication of the co-benefits of longleaf forests.

To help accomplish these priorities, the Longleaf Partnership Council has reorganized LPC Working Groups to advance outcomes. These Working Groups include Policy, Communications, Groundcover, Mapping, Prescribed Fire and Smoke Management (via SERPPAS — The Southeast Regional Partnership for Planning and Sustainability), Tree Planting, and Longleaf for All. More information can be found on the ALRI website about the role of the Working Groups and how you can get involved.

Many thanks to the Strategic Priorities and Actions Working Group for spearheading the revisions and to everyone who assisted in the development, review, and comment process for the Strategic Priorities and Action document, including Kevin McIntyre, Chris Erwin, Ryan Bollinger, Carol Denhof, Colette DeGarady, Jason Dockery, Stephanie Hertz, Chuck Hunter, Kyle Jones, Andrew Schock, Matthew Vandersande, and Tiffany Woods.

Prescribed Burn Associations Come to Louisiana

By Dan Weber, *The Nature Conservancy*



*Prescribed burn, Rapides Parish, Louisiana.
Photo by National Wild Turkey Federation.*

formation of a second PBA in the state, the Southwest Louisiana PBA. A ‘Learn to Burn’ training session for participants was planned for February with a goal to conduct a first prescribed burn in March. The formation of these PBAs has long been a goal for agencies and natural resource managers in the Louisiana longleaf range and are a much welcome addition to regional fire capacity.

The WLEP is a coalition of stakeholders, including the U.S. Forest Service and U.S. Department of Defense, Natural Resource Conservation Service, state and federal wildlife agencies, conservation NGOs and others, overseeing longleaf and other ecosystem restoration efforts within the Fort Polk/Kisatchie National Forest Significant Geographic Area.

Academic Partnerships in Montane Longleaf

By Thomas Reddick, Director of Forest Management, *The Nature Conservancy, Alabama*



Berry College student Marshall Lynch burning on the new Jones property in the Dugdown Corridor, and TNC Fire Crew Lead Matt Holzapfel planting a montane longleaf on Berry College campus. Photos by Katie Owens.

The Talladega Mountain Longleaf Conservation Partnership (TMLCP) has begun its fire season right where it left off last year. Two crews are trained and currently assisting burns in Alabama, and another is underway in Georgia. The Georgia team has representatives from two academic partners among its crew. Both Berry College and the University of West Georgia developed a curriculum that has blazed a path for students to intern on a fire crew while gaining course credit. This year’s interns are Marshall Lynch from Berry College and Parker Johnson from University of West Georgia. They are working under crew lead Matt Holzapfel, a returning member from last year’s crew.

Berry College has also been working hard to update forest management plans and restore longleaf forests across its campus. The Nature Conservancy (TNC) has entered an agreement with Berry to plant 500 acres of longleaf pine seedlings per year to aid in longleaf restoration. We are excited about this growing partnership and look forward to expanding and managing the montane longleaf ecosystem with Berry for years to come.

Texas Grocery Giant Jumps on the Longleaf Train

By Jenny Sanders, Texas Longleaf Implementation Team Coordinator



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Grocery giant H-E-B recently announced they would award a \$25,000 grant to the Texas Longleaf Team in support of the Texas Longleaf Conservation Assistance Program. One hundred percent of the grant funds will be deployed as cost-share assistance to private landowners for longleaf restoration.

Specifically, funds will be used to plant 121,000 longleaf seedlings on 200 acres and support management practices on 2,000 acres of existing longleaf stands.

The Texas Longleaf Team is excited to partner with H-E-B to promote the restoration of the longleaf ecosystem in support of rural communities in East Texas. Their support will promote carbon sequestration, water infiltration, biodiversity, recreation, and rural economies. Their investment is an investment in a sustainable East Texas, and we are so proud to work with them!

This contribution by H-E-B marks the first in what the Texas Team hopes will be a groundswell of support from the corporate community in East Texas. With an increasing focus on environmental, social, and governance (ESG) metrics in corporate social responsibility and accountability standards, we see a huge opportunity for highly impactful support of our ecosystem restoration mission. Thank you, H-E-B, for your support!

Longleaf Restoration Spotlights – South Carolina State Parks

By Rachel Snuggs, Forester, South Carolina Department of Parks, Recreation and Tourism



Left: Prescribed burn by Sabine and Waters at ASP, November 2021. Photo by Ryan Wenzel. Right: Monitoring photo point following USFS burn at HPSHS, March, 2021. Photo by Rachel Snuggs.

South Carolina Department of Parks, Recreation and Tourism (SCPRT) has been expanding and enhancing longleaf and Red-cockaded Woodpecker (RCW) habitat across many sandhills and coastal parks using different management strategies, including mechanical mulching, prescribed fire, timber harvests, and herbicide treatments. Of our many managed parks and historic sites, SCPRT would like to highlight management efforts and successes in longleaf at the following two properties:

Aiken State Park (ASP) - Management efforts at ASP began in 2011. This year, prescribed burn efforts and timber harvest planning will continue at ASP to create and enhance longleaf pine forest on the Park.

In 2020, RCWs colonized naturally at ASP, forming one cluster, and later that year, two pairs of birds were translocated onto the Park, forming the second and

third clusters present today. The successful translocation of these four birds was facilitated through partnerships within the SoLoACE Longleaf Partnership (The Longleaf Alliance and U.S. Forest Service). In 2021, all three RCW clusters attempted nesting, and two clusters successfully fledged five chicks between them.

Hampton Plantation State Historic Site (HPSHS) - SCPRT has been managing longleaf stands at HPSHS since 2007. Through partnerships within the Sewee Longleaf Conservation Cooperative (The Nature Conservancy and U.S. Forest Service), prescribed fire and herbicide treatments have been implemented, along with timber harvests and mastication. These treatments have facilitated the restoration of longleaf on the 274-acre site. HPSHS has one RCW cluster that successfully fledged three chicks in 2021.

Sandhills Longleaf Pine Conservation Partnership Welcomes New Member

By Charles Babb, SLPCP Coordinator



New SLPCP member Tony Graham assists with a prescribed fire on private lands in Chesterfield County. Photo by Charles Babb.

The South Carolina Sandhills Longleaf Pine Conservation Partnership (SLPCP) welcomes a new staff member, Tony Graham, who joined us to assist the Partnership's outreach and prescribed fire efforts. A resident of Marlboro County, he is a product of the Horry-Georgetown Technical College Forestry Department and has spent the last two years in timber procurement. The position is funded through a National Fish and Wildlife Foundation (NFWF) grant.

The Partnership is thrilled to have Tony onboard. He will utilize our field inventory collected by previous summer interns to revisit longleaf stands and help landowners understand current management needs, such as prescribed burning and pre-commercial thinning to remove competitive hardwoods and loblolly regeneration. Many landowners aren't aware of the need for ongoing forest management in longleaf stands. Graham's schooling and commercial forestry experience give him the knowledge to evaluate stands and explain management and cost-share options available through USDA and SLPCP grants. He will also be assisting private landowners apply prescribed fire.

"I'm excited for the opportunity to use my education and experience to help landowners conserve and improve the longleaf ecosystem," said Graham. "There is a lot to learn, and I think this team is the right place to get that training. I have had my feet in the fire, and I look forward to working with all the partners to promote a healthy forest that benefits so many local families, along with plant and animal species."

Burning More Private Land with Partnerships in the Ocala LIT Region

By Ivor Kincaid, Alachua Conservation Trust



North Florida PBA members John Herbert and Rick Robbins review a burn plan. Photo by Lianne D'Arcy.

The Ocala Longleaf Implementation Team Ecosystem Restoration and Fire team has had a busy 2022 thus far. The fire team has helped put fire on the ground with eight partnering agencies as well as 14 private landowners, completing 22 burns totaling 5,653 acres in North Central Florida in the first six weeks of 2022. Favorable fire weather aided a fast start to the season, with the team often sending resources to two or three burns on the same day. With predicted dry weather on the horizon, every burn opportunity will be crucial for maximizing team impact this year.

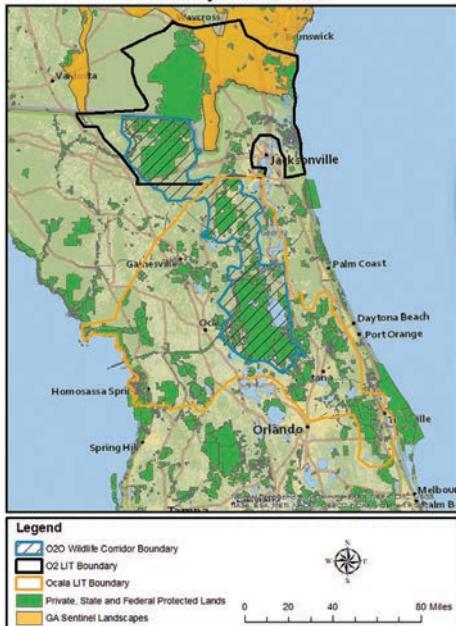
The fire team is led by Alachua Conservation Trust's private lands stewardship specialist Barry Coulliette. Barry assists the North Florida Prescribed Burn Association (PBA) by coordinating fire and training opportunities with members. The PBA helps link private landowners to needed support, equipment, and training to increase burning on private lands. So far, 22 different landowners have burned their properties with the PBA; this year's goal is 65 landowner burns if the weather cooperates.

Collaboration with a wide range of partners with varying burn objectives has required a good deal of communication and coordination. A strong shared vision for the benefits of prescribed burning by state and federal agencies has created a foundation for success in the OLIT region.

The Ocala to Osceola (O2O) Wildlife Corridor

By Kimberly Tillman, North Florida Land Trust

O2O Wildlife Corridor and Longleaf Implementation Teams Boundary Connections



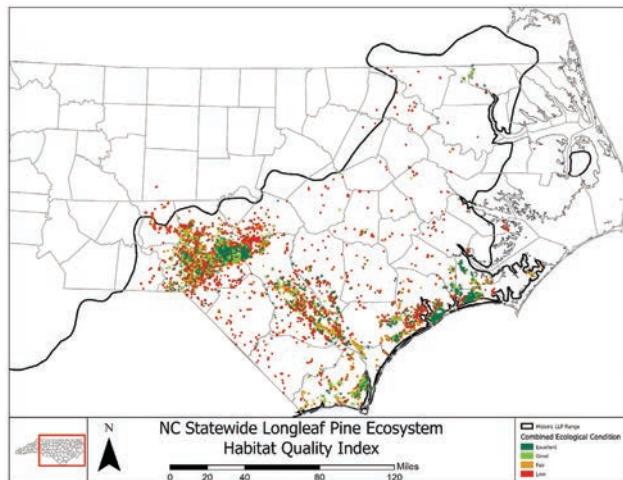
The Ocala to Osceola Wildlife Corridor, also known as the O2O, is a 100-mile-long wildlife corridor in North Central Florida that is not yet fully protected. The idea of making a connected swath of conservation lands has been around since the 1980s, with discussions starting with scientists like Dr. Reed Noss. Since then, data collection and observations have shown that connected landscapes not only give room to roam for wildlife but also improve habitat quality, water recharge, and cleaner air production on linked conservation lands. The O2O corridor benefits farmers, communities, and military bases within the landscape.

So how do we connect this long landscape on the ground? We do it together. In 2017, North Florida Land Trust started the O2O Wildlife Corridor Partnership, which has grown to over 25 federal, state, and non-government organizations. We reached our initial 10,000-acre goal by 2020 and are now working towards the next more ambitious goal of 140,000 acres by 2040.

Our O2O Partnership meets at least twice a year and has four active working groups. The Sentinel Lands working group continues to add participants throughout the state. The Outreach and Education, Florida Forever, and National Forest Acquisitions working groups are hard at work as well. We recently began working closely with the Local Implementation Teams (LITs) within and adjacent to the O2O. This great collaboration will increase each partnership's effectiveness at assisting landowners and partners in their areas. To participate in this mission of connectivity or to follow the progress, you can find more information on the Ocala to Osceola Wildlife Corridor website at o2owildlifecorridor.org.

Over Half of Documented Longleaf Ranked Good or Excellent in North Carolina Mapping Efforts

By Jeff Marcus and Dan Hannon, The Nature Conservancy



Statewide distribution and estimated habitat quality of the longleaf pine ecosystem in NC.

North Carolina completed field surveys for the Longleaf Ecosystem Occurrences (LEO) geodatabase project in the Sandhills, Onslow Bight, and Cape Fear Arch landscapes. Led by Dan Hannon and supported by The Longleaf Alliance, we documented longleaf at 1,795 new stands with rapid field assessments. In collaboration with Florida Natural Areas Inventory staff, we also compiled data from condition class surveys conducted by The Nature Conservancy (TNC), timber inventories on other conservation lands, North Carolina Forest Service technical assistance records, and other sources to come up with a total of 10,218 stands totaling 354,005 acres of longleaf. We used the metrics from LEO and TNC surveys to create a Habitat Quality Index (HQI) based on the America's Longleaf Restoration Initiative "maintenance class" standard. For stands without sufficient habitat metrics (i.e., most stands not visited on the ground), we utilized another HQI developed by TNC that assesses habitat quality based on interpretation of National Agriculture Imagery Program (NAIP) aerial photography data. We grouped the results into longleaf habitat quality categories: Excellent, Good, Fair, and Low. This effort revealed that

there are 117,376 acres of Excellent (33%), 63,623 acres of Good (18%), 72,409 acres of Fair (20%), and 100,597 acres of Low-quality (28%) longleaf habitat currently in the state. These measures will help North Carolina prioritize management actions, inform connecting corridors, and track progress towards ALRI maintenance class goals.

GCPEP Applauds the Newly Designated Northwest Florida Sentinel Landscape

By Vernon Compton, The Longleaf Alliance, with excerpts from the DoD Readiness and Environmental Protection Integration Announcement



Escribano Point. Photo by Nicole Barys.

The Sentinel Landscape Partnership, comprised of the U.S. Department of Agriculture (USDA), Department of Defense (DoD) and Department of Interior, recently designated three new Sentinel Landscapes. The selected landscapes play a crucial role in strengthening the nation's military readiness while addressing natural resources concerns like climate change. One of those selected was the Northwest Florida Sentinel Landscape. Defenders of Wildlife played a key role in developing the Northwest Florida Partnership that achieved this significant designation.

"Defenders is proud to serve as the nonprofit coordinator for the Northwest Florida Sentinel Landscape. Designating this area as a Sentinel Landscape is critical to promoting sustainable management practices on the land that will help protect wildlife habitat. This is a major victory for biodiversity and our armed forces," said Jamie Rappaport Clark, President and CEO of Defenders of Wildlife. "We are proud

to be part of such a unique partnership and hope it will continue to serve as a model for collaborative landscape management for years to come."

The Northwest Florida Sentinel Landscape contains rural and agricultural lands, iconic longleaf pine forests, threatened and endangered species habitats, and nine key DoD facilities integral to U.S. Air Force operations as well as Navy, Marine Corps and Coast Guard aviator training. Partners will focus on addressing the resilience and sustainability of natural systems by conserving and restoring habitat and water resources. Identifying, implementing, and accelerating projects that mitigate coastal risks will increase the climate resilience of military installations and the landscapes that overlap mission footprints.

"These new sentinel landscapes are a testament to the power of collaboration and partnership," said USDA's Natural Resources Conservation Service Chief Terry Cosby. "By using USDA's conservation programs to protect viable farmland, rangeland, forestland, and grasslands from development around these military installations we ensure that our military has flexible locations for training while at the same time protecting critical water resources and wildlife habitat on working lands and supporting climate resiliency." Juan Hernandez, Florida State Conservationist for the USDA Natural Resources Conservation Services, added, "I am absolutely looking forward for the coordination of resources and ideas for implementation of conservation practices in private lands in Northwest Florida."

The Gulf Coastal Plain Ecosystem Partnership also looks forward to new collaborations through the Northwest Florida Sentinel Landscape, knowing these opportunities will accelerate the recovery of the longleaf ecosystem.

Longleaf in the Ground

By Brian Pelc, Apalachicola Regional Stewardship Alliance LIT Coordinator



Carefully unloading 120,000 longleaf seedlings from a refrigerated trailer. Seedlings were delivered to TNC and Northwest Florida Water Management District projects after dropping off 86,000 seedlings at Wakulla State Forest earlier in the day. Photo by Brian Pelc.

The dedicated land managers of the Apalachicola Regional Stewardship Alliance (ARSA) looked high and low to obtain the millions of seedlings needed to keep pace on habitat restoration in the eastern Florida Panhandle and Southwest Georgia. The ARSA Local Implementation Team (LIT) provided over 200,000 seedlings this planting season and contracted planting labor for over 500 acres of public and private lands on the road to becoming longleaf forests. Meanwhile, groundcover restoration continues on nearly 400 acres at Torreya State Park, all funded through ARSA LIT's 2020 "Apalachicola Longleaf Initiative" agreement with the National Fish and Wildlife Foundation (NFWF) Longleaf Landscape Stewardship Fund.

This planting season marks the eighth consecutive year that ARSA members have reforested longleaf in the region using NFWF resources, and the team continues to be very grateful for the support. Partners like the Northwest Florida Water Management District, Department of Defense-Tyndall Air Force Base, Florida Forest Service, Florida State Parks, and The Nature Conservancy planted millions of additional seedlings this season as the region recovers from the 2018 Category 5 Hurricane Michael.

The Florida Ecological Report Card

By Nicole Burns, Florida Fish and Wildlife Conservation Commission



A mosaic of different landcovers, serving as an example of the interconnectedness of Florida's diverse ecosystems and the need for a landscape-level approach to conservation. Photo by David Moynahan.

The Florida Fish and Wildlife Research Institute's Landscape Conservation Team created the Florida Ecological Report Cards: Terrestrial and Freshwater, and Marine and Estuarine. Through collaborative efforts with conservation partners and a series of workshops and webinars, the Report Cards are designed to provide a broad, habitat-based framework to evaluate current condition and trends of a set of Conservation Assets, or ecosystems. Two report cards have been developed, one for freshwater and terrestrial Conservation Assets and one for marine and estuarine Conservation Assets. Multiple Indicators were chosen to represent quantifiable attributes of each Conservation Asset and include an appropriate numerical endpoint to consider as a target. The Indicators will be used to monitor the overall condition and trend of the Conservation Assets. The terrestrial and freshwater report cards include targets (i.e., desired future conditions) for each Indicator for the year 2030.

An example of this is the High Pine and Scrub Conservation Asset, which

includes a Sandhill Extent Indicator. This Indicator's target is established through America's Longleaf Restoration Initiative's strategic projections to increase Florida's longleaf pine by 15,000 acres per year, therefore, with a total of 150,000 acres of restored longleaf by 2030.

The Report Cards can be used to assess the status and trends of the Conservation Assets by tracking changes across ecosystem Indicators and progress towards Indicator targets. The Report Cards provide useful information for conservation practitioners in creating regional conservation goals as well as researchers and managers to gain a better understanding of how their collective conservation actions are impacting fish, wildlife, and their habitats statewide.

Seed Sourcing for the Future — Wiregrass Establishment on Fort Stewart's Wright Army Airfield

Complied by the Fort Stewart/Altamaha Longleaf Restoration Partnership



Prescribed fire benefitting understory grasses. Photo by Reese Thompson.

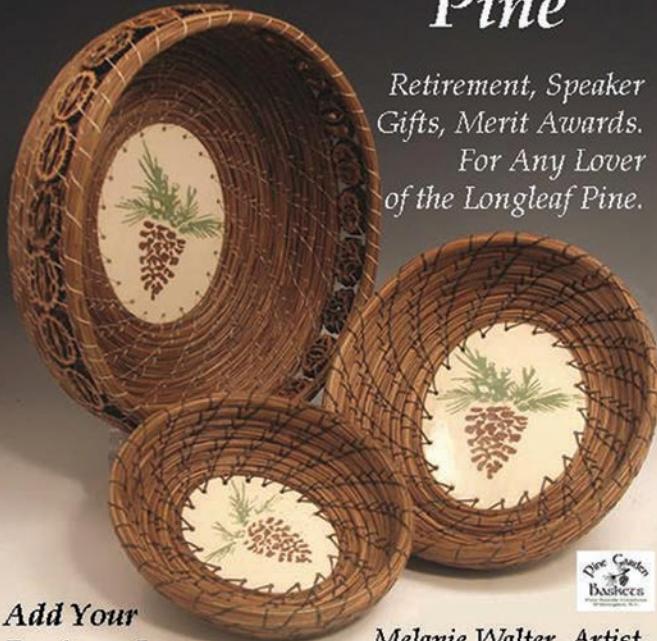
Woody vegetation management on airfields in the southeastern U.S. is an expensive endeavor, especially when the airfield is surrounded by southern yellow pines. Maintaining an obstruction-free safety zone at Fort Stewart's Wright Army Airfield (WAAF) is no exception. To reduce WAAF vegetation maintenance costs, the Fort Stewart Fish and Wildlife Branch agreed to remove pine and hardwood regeneration at WAAF on approximately 80 acres using heavy-duty mulching mowers that are normally employed to remove hardwood midstory in Red-cockaded Woodpecker habitat. In return, WAAF allowed the Fish and Wildlife Branch to establish a wiregrass "farm" in the cleared area. The project began in January 2020 with the removal of obstructive vegetation. Herbicide was applied to cleared areas in October of that year, followed by application of prescribed fire in December 2021. Bare soil was exposed using a bulldozer outfitted with a yoke in January 2022. Wiregrass seed collected from other sites on Fort Stewart in the fall of 2021 was sown using a conventional hay blower at a rate of 15 pounds/acre (1,200 pounds total). The Fish and Wildlife Branch will monitor the success of the planting and introduce

prescribed fire as soon as practicable. This project will result in a win/win for the Installation; WAAF will save funds it formerly expended on woody vegetation control, and the Fish and Wildlife Branch will benefit from improved logistics during the wiregrass harvesting season.

Once established, this project will benefit from the Partnership's continued commitment to prescribed fire in southern Georgia. Most recently, the Georgia Department of Natural Resources led the Wildland Fire Safety Training Annual Refresher (RT-130) for 196 people and three Firefighter Type 2 (FFT2) Academies, training 39 students and five seasonal fire crews.

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By Sarah Crate, The Longleaf Alliance



SEARCHING FOR FUN

Why use games in your outreach programs? Hands-on, interactive activities are not only fun, but they cover key concepts, inspire deeper exploration, and encourage movement. A favorite is the scavenger hunt, easily adapted to different locations, topics, and ages.

"Scavenger hunt" formats are as variable as their locations and subjects.

For teens and adults, elaborate scavenger hunts layer concepts and skills to increase complexity, sometimes with tiered point systems for friendly competition. Bingo cards or coloring sheets provide simplified activities, working very well for young children and fast-paced outreach events like festivals or expos.

Virtual offerings increase the reach of the activity, particularly with social media promotions. Online scavenger checklists, either printed-at-home or accessed from a device, and "hunts" hosted on the social network i-Naturalist allow users across a wide area to participate.

Set the participants up for success!

Tailor the scavenger hunt to the target audience or make it easily adaptable across different ability levels. For example, use a pine tree for children, but challenge older players to find a longleaf pine tree to hone their plant identification skills.

Don't include unlikely-to-find items; this is particularly true for wildlife sightings. Use tracks, scat, or special features like a gopher tortoise burrow or Red-cockaded Woodpecker cavity tree.

"Collection" strategy matters

Physical collection is a great way to engage all the senses, especially for the youngest participants, but is not allowed in many public spaces. Additionally, some items are best left in place. Make the expectations clear from the beginning.

Fill-in-the-blank scavenger hunts are fun, especially with a final word puzzle to solve. However, printed checklists with words AND images translate best for emerging readers.

"Take-a-photo" scavenger hunts will spark great show-&-tell opportunities to close the activity.

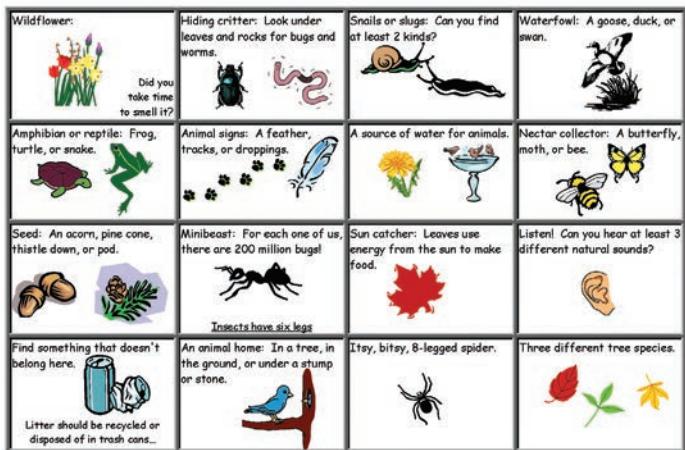
Indoor Nature Hunt?

We all think getting outdoors is more fun and has many learning benefits, but sometimes the weather or logistics are not conducive to going outside. A photo slideshow, an illustrative book like Ann Runyon's *Longneedle*, or even a handful of *The Longleaf Leader* issues can provide ample searching opportunities for indoor scavenger hunts.

Bingo – Michigan Project Learning Tree's "Schoolyard Safari" is an excellent example of an easily adaptable nature hunt for different locations and habitats. Note the use of graphics and text for the scavenger hunt items and the instructions to leave things in place. PDF available online at www.plt.org/educator-tips/nature-walk-activities

Schoolyard Safari - Activity 46

When you see or hear something in the boxes, you can "x" that box. Try to find four in a row. Remember, leave all natural stuff behind and only remove litter that doesn't belong!



Find it in the Forest - North Carolina Coastal Land Trust's exploration guide combines scavenger hunt activities with a forest health assessment. For example, finding longleaf pines in multiple life stages earns the forest more points. PDF available at [coastaltrust.org > connect > environmental education](http://coastaltrust.org/connect/environmental-education).

1. The Majestic Longleaf Pine

- Longleaf Pine (needles up to 18 inches in tufts) – 10 pts
- Pond Pine (found in wetter soils, needles often sprout directly from the trunk making it look brushy) – 5 pts
- Loblolly pine (5 to 9 inch long needles in bundles of three) – 1 pt



2. Pine Cones – Size matters

- Longleaf pine cone (cones are very large up to 12 inches long) – 5 pts
- Pond Pine cone (cones small and round) – 2 pts
- Loblolly pine cone (up to 7 inches long, prickly scales, don't squeeze this cone!) – 1 pt



3. Stage, not Age – Longleaf pine trees grow in distinct phases which helps them grow and survive frequent fire. The stage also provides some insight into the age of the trees.

- Grass stage (likely a 1 to 3 year old longleaf putting its energy first into growing an extensive root system, it looks like clumpy grass) – 1 pt
- Rocket Stage (The tree has popped up out of the grass stage and is rapidly putting on height, 6 inches to 12 feet tall) – 1 pt
- Flattop Stage (tree starts to flatten out at the top, no longer growing upwards, tree is likely 80 years or older) – 1 pt
- Find all three in the forest – 5 pts

SENSORY NATURE HUNT

CAN YOU HEAR ?

- An animal sound
- Something that crunches
- Something that makes music
- Something quiet

CAN YOU SMELL ?

- A longleaf pine tree
- Plant (flower or leaves)
- Something stinky
- Something you like

CAN YOU TASTE ?

- Something a human eats
- Something wildlife eats

SEE AND SKETCH

Something patterned

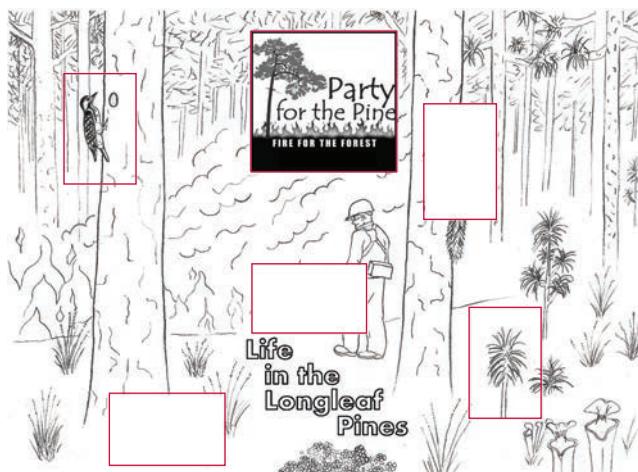
Your favorite color

Something in the sky

TOUCH AND COLLECT

- Something smooth
- Something rough

- Something prickly
- Something soft



Party for the Pine - Weymouth Woods Sandhills Nature Preserve's festival in Southern Pines, NC, uses a longleaf illustration with missing features to encourage visitors to mingle with festival exhibitors. Players locate booths with the correct stamps to complete the picture. Take-home coloring sheets and earned prizes add to the fun and friendly competitive spirit. Artwork by Nancy Williamson.

All the Senses – Learning is multi-sensory. Activities utilizing different ways to process information are ideal for diverse learning styles and abilities. Borrow inspiration from this checklist or visit captainplanetfoundation.org for sensory scavenger hunts devoted to each of the five senses.



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'Earth and Empathy' artist Nicole Boenigk lives in Wilmington, North Carolina with her 8-year-old son. She has been working with clay since 2017 and quickly realized that this hobby was a passion she wanted to pursue as a career. Her favorite thing about this medium is that there is no room for

boredom. She creates a wide range of wheel thrown and handbuilt pottery, from functional art to wearable art and home decor.

Find more of Nicole's work at www.earthandempathy.com or on Instagram at @earthandempathyceramics.

LONGLEAF LITERATURE

Saving the Wild South: The Fight for Native Plants on the Brink of Extinction

By Georgann Eubanks, The University of North Carolina Press; 2021

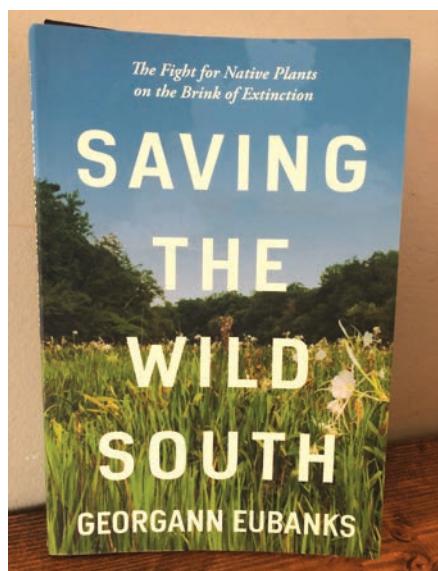
Reviewed by Sarah Crate, The Longleaf Alliance

Many know of the biodiversity associated with longleaf pine ecosystems, but this rich diversity extends across the Southern landscape, including a myriad of habitats and plant communities. In fact, the North American Coastal Plain as a whole, along the Gulf of Mexico and up the East Coast, was declared a biodiversity hotspot with over 1,800 (and counting) endemic plant species. Numerous of these species have a fascinating relationship with disturbance, especially fire.

In *Saving the Wild South*, Georgann Eubanks travels through the region, devoting each chapter to a rare and endemic plant. From the Miccosukee gooseberry to the Florida torreya, the twelve plants spotlighted are in trouble, struggling to survive amidst habitat loss, climate-changing effects, and development. These chosen examples represent thousands of more vulnerable species.

With my eye on the longleaf-related content, I was eager to jump into specific chapters and skipped straight to the carnivorous pitcher plants. One chapter in, I realized I was no longer reading just for the longleaf species, nor was I reading just for the natural history. I was reading the inspiring stories of the people of plant conservation. Eubanks describes the featured plant's biology, ecology, and threats while weaving in her interactions with the folks dedicated to their conservation – her guides along the way. The people of the book are not just the ecologists or botanists that one might imagine, but also community advocates, young enthusiasts, foresters, and artists.

Appealing to a broad reader audience, the author offers welcomed glimpses of hope that transcends through the people fighting to save these imperiled species.



These plants, {Eubanks} argues, are important not only to the natural environment but also to southern identity, and she finds her inspiration in talking with the heroes — the botanists, advocates, and conservationists young and old — on a quest to save these green gifts of the South for future generations. These passionate plant lovers caution all of us not to take for granted the sensitive ecosystems that contribute to the region's long-standing appeal, beauty, and character.



Multiple trails are available that wind through the Park's uplands. Evidence of fire, once long suppressed, can again be seen on the landscape. Photo courtesy of NPS.

Longleaf Destinations

By Karen Zilliox Brown, The Longleaf Alliance

CONGAREE NATIONAL PARK: A LAND OF FIRE AND FLOOD

Just 20 miles from the capital city of Columbia lies one of the wildest landscapes in all of South Carolina. Congaree National Park is the state's only national park and encompasses one of just a handful of designated wilderness areas in the southeast.

Here, wilderness has never been more accessible, finding thousands of acres of quiet to trek, paddle, float, birdwatch, photograph, and imagine these timeless landscapes.

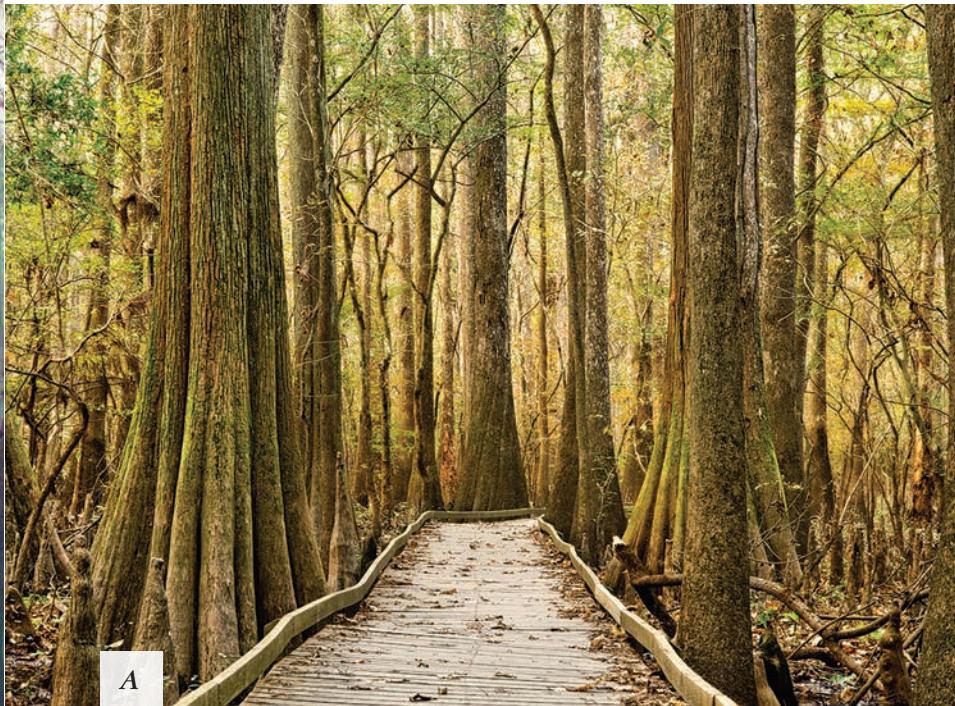
A refuge

This rugged landscape has a long history of use by many human communities. For thousands of years, indigenous peoples hunted and fished the land. The rich floodplain was later a haven for escaped and freed people. Known as "maroon

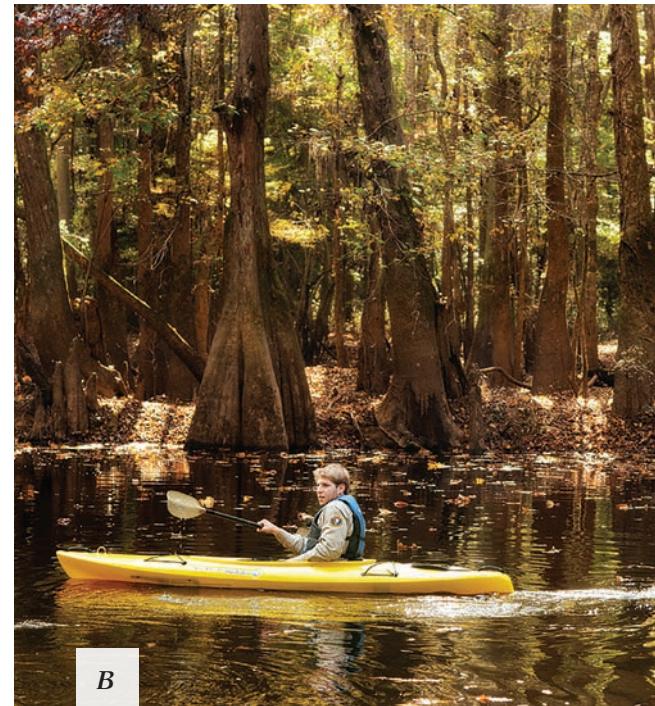
communities," the formerly enslaved would often seek out wilderness areas, like the land now a part of the Congaree National Park, where detection was less likely, and new dwellings could be established. Some accounts indicate its inhabitants preferred to stay close to the familiar landscape of their former lives and remain near enslaved family members rather than making the risky journey north.

The Bottomlands

The Park boasts the largest expanse of bottomland hardwood forest in the southeast. Much of the Park's 26,700 acres are part of the floodplains of the Congaree and Wateree rivers, whose waters regularly flood and recede, recharging and nourishing this old-growth and second-growth ecosystem.



A



B

A) Large Bald Cypress and Water Tupelos can be seen all along the popular Boardwalk Trail. Photo by James and Jenny Tarpley, courtesy of NPS. B) Whether with a tour group or on your own, paddling Cedar Creek is a wonderful way to experience the Park's peaceful yet dynamic environment. Tours are seasonally offered by the Park as well as several local outfitters. Photo by James and Jenny Tarpley, courtesy of NPS.

In this bottomland forest, you'll find champion trees. That's not just a matter of opinion. These giants represent the largest documented specimen of their species in the state and even a few national champions among them.

The uplands

The Congaree also has areas of mixed pine-hardwoods forest. You can't miss it as the entrance road goes right through this habitat. This area sits atop a bluff above the short but steep drop-off into the bottomlands.

While the overstory, dominated by mature loblolly, is dense in areas, the understory remains grassy and open. This is thanks to the frequent prescribed burning that the National Park Service (NPS) and partners from the South Carolina Forestry Commission have been doing to keep fire as a natural management tool since the mid-1980s.

The Bluff and Longleaf Trails are excellent places to go looking for longleaf in the uplands. You'll see evidence of prescribed burning in the Park, on the trunks and blackened ground. And you may even be treated to a sighting of a fox squirrel, Bachman's Sparrow, Barred Owl, hognose and kingsnake, or broadhead skink.

Longleaf pine was never the dominant cover type for the Congaree or surrounding lands. A stand mixed with longleaf, loblolly and shortleaf pines, alongside diverse hardwoods, was most likely in a land historically frequented by disturbance from fire and flood.

Best times to visit

Spring and Fall are the best seasons to visit Congaree. Temperatures are milder, and rain and storms are more predictable than the pop-up thunderstorms common during the summer months. Hikers will have their pick of trails.

The boardwalk loop (2.6- or 1-mile option) shouldn't be missed. These trails give you an elevated view for much of the way and drop down to water level in some sections. While flooding may sometimes preclude using the larger loop section, the inner boardwalk trail remains high and dry, and is wheelchair and stroller accessible.

To extend your hike, the Weston Lake Loop ties into the boardwalk trail. Here you can experience more old-growth and less foot traffic. You'll also be alongside Cedar Creek for much of the walk, with the option to tie into more sections of trail.

Speaking of the creek, Congaree has miles and miles of water trails. Three major waterways can bring you through and around the Park: Cedar Creek and the Congaree and Wateree Rivers. Whether you're here for a day or looking to make it an overnight trek, spending time on these waterways can be one of the most peaceful and restorative ways to experience the wildness of this park.

Two walk-in tent campgrounds are located in the upland portion of the Park. If you prefer the solitude of the extended stretches of wilderness trails, you can camp in the backcountry with a free permit.

The majority of the Park lies within the bottomland hardwoods of the Congaree River floodplain. Photo by James and Jenny Tarpley, courtesy of NPS.



With assistance from the SC Forestry Commission, Congaree utilizes prescribed fire to help restore the upland ecosystem. Photo courtesy of NPS.

Champion Trees of Congaree*

Loblolly pine, *Pinus taeda* — National champion

Cherrybark oak, *Quercus pagodifolia* — National champion

Red and Silver maples, *Acer rubrum* and *A. saccharinum* — SC champions

Swamp tupelo, *Nyssa biflora* — SC champion

Bald cypress, *Taxodium distichum* — SC champion

American elm, *Ulmus americana* — SC champion

Laurel oak, *Quercus laurifolia* — SC champion

*The Park hosts even more “champions.” Records as of 2017.

Summer — Though it's not actually a swamp, it does have characteristics of one in the summer: hot, very humid, and a literal breeding ground for mosquitoes and other menacing insects. It's no accident that the Harry Hampton Visitor Center has its own “Mosquito Meter” to alert guests on what to expect. It goes all the way up to “War Zone,” just after “Ruthless.”

If you visit during May or early June, you may catch the remarkable sight of synchronous fireflies. Fireflies perform this visual display in the hopes of finding a mate. This experience has become so popular in recent years that the Park Service uses a lottery system to manage the number of visitors during the roughly two weeks that it occurs. This phenomenon is so unique that the nearby minor league baseball team is named the Columbia Fireflies.

Winter provides another relatively bug-free season and gives visitors a different look at the bottomland forest in a mostly leafless condition. Sunlight abounds in this normally shaded ecosystem. Views can expand deeper into the cypress groves, observing the massive trunks reflected on the still waters.

Closing thoughts

Visitors are highly encouraged to plan their visit on the National Park Service website ahead of time.

Thank you to our friends at the Park for guiding us through this remarkable landscape.

Throughout the southeast, the American Forest Foundation (AFF) is building partnerships to **help family forest owners care for their land.**



AFF and the U.S. Fish & Wildlife Service's Partners for Fish and Wildlife program have teamed up to invest resources that will improve forest management and benefit listed and at-risk wildlife species on family forest land.

Opportunities are currently available for landowners to receive financial and technical assistance for forest management activities in key landscapes within Alabama, Florida, Georgia, Mississippi, South Carolina, and Tennessee.



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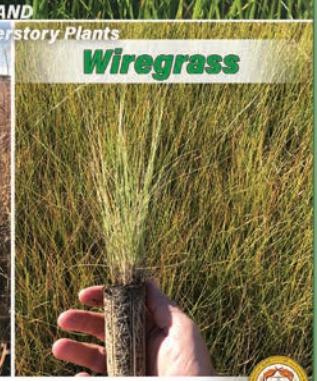
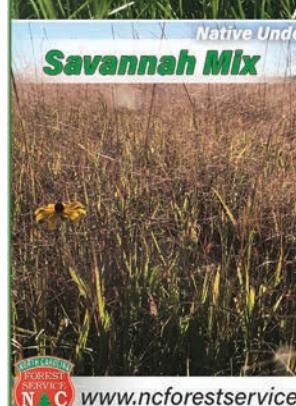
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*By Vernon Compton,
Gulf Coastal Plain Ecosystem Partnership Director,
The Longleaf Alliance*

Salute to Wildland Fire Veteran *Bob Wilken*

Photo courtesy of The Longleaf Alliance

Bob Wilken, a long-time wildland fire expert, is retiring after 47 years of service in wildland fire management and habitat restoration and protection. A graduate of Southeastern Illinois College with a degree in Forestry, his career spans across longleaf ecosystems in Mississippi, Alabama, and Florida, the pine barrens of the Northeast, the prairies of the Midwest, the deserts of the Southwest, and the mountains of the Pacific and interior Northwest.

Bob's fire experience began while in college, where he received training and certification as a Wildland Fire Fighter with the Shawnee National Forest in southern Illinois. Bob then worked his way west to Oregon and up in the fire world, becoming a Smokejumper for the U.S. Forest Service in 1978. For years, he spent summers in fire suppression all over the western states. Opportunities in the private sector led him to help start a company that provided contract prescribed fire, reforestation, and firefighting services to federal and state agencies.

Since 1985 Bob has served as Burn Boss lead on many fires and as a training mentor for even more in the fire world. This is especially true in the Gulf Coastal Plain Ecosystem Partnership (GCPEP) landscape, where Bob worked for The

Nature Conservancy and then The Longleaf Alliance. During that time, he provided live training opportunities for GCPEP staff and partners, helping complete performance-based task books that were key to meeting the requirements for agency fire implementation. For over 15 years, all GCPEP staff were taught and mentored by Bob, leaving a legacy of fire practitioners through his training.

Bob returned to the Pacific Northwest during the summer months and assisted agencies and partners with prescribed fire team development or wildland incident emergency management based out of Joint Base Lewis-McChord near Tacoma, Washington. His qualifications, built over a career in wildland fire, include Prescribed Fire Burn Boss Type 1 (RXB1), Incident Commander Type 3 (ICT3), Division Supervisor (DIVS), Faller Type C, and many more.

Bob has and will continue to have a lasting impact on fire-adapted ecosystems across the country, including the longleaf ecosystem, due to the hundreds of students he trained and mentored who ultimately played critical roles in prescribed fire implementation and wildland fire suppression. On behalf of GCPEP staff and partners, we thank you, Bob, for the tremendous difference you have made and wish you the very best in your retirement.



By Lynnsey Basala, The Longleaf Alliance

WE LOVE OUR MEMBERS

The Longleaf Alliance hosted its second annual "We Love Our Members Week" in conjunction with Valentine's Day. At the root of Valentine's Day are warm feelings of friendship, fellowship, and a deep appreciation for those within our support network; for us, it is the thousands of dedicated individuals and teams that allow The Alliance to guide the restoration, stewardship, and conservation of the longleaf pine ecosystems across the Southeast. We are incredibly lucky to have a dedicated community of people who share our passion.

President Carol Denhof kicked off "We Love Our Members Week" with a heartfelt message, "These forests are important in providing biodiversity, timber, and a multitude of ecosystem benefits in this region, and we thank each and every one of you for the part you play in bringing longleaf back."

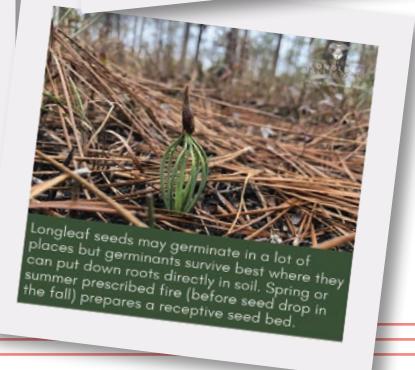
From there, a multitude of activities ranging from longleaf trivia, member testimonials, store discounts, giveaways, and good old-fashioned fun peppered social media channels throughout the week. And because Valentine's Day would not be complete without beautiful stationery, personalized cards were mailed directly to all members.

While there were many high points, we most enjoyed hearing from old and new friends on social media, as well as

email and telephone. All of these interactions made us hopeful for an in-person regional conference in October with ample time to reconnect and converse with friends we've missed, while making new ones.

If you are new to the Alliance, becoming a member is easy! One-year memberships start at \$25 for students and \$50 or more for individuals and conservation partners. You may donate through our website or mail a check to our headquarters in Andalusia. All members receive a subscription to *The Longleaf Leader* magazine (plus annual recognition in the Winter issue), longleaf-themed gifts, invitations to member-exclusive events across the range, access to on-demand educational programs such as Longleaf Foundations, and a discount to the 14th Biennial Longleaf Conference in Wilmington, North Carolina on October 25-28th. Remember, TLA allocated 86% of its income to programs and services last year, so you are undoubtedly making a high-impact donation.

Take a look at some of the photos from the week. We will continue adding layers of fun to this annual week-long celebration, and we have more member incentives planned this year!



A CALL TO A CREATIVE CURIOSITY

By Karen Manning, Pro-Serve, Inc.



*I*t started with a call in the Spring of 2020. It led to curiosity and creativity. And then my partnership with The Longleaf Alliance.

But first, the disclaimer. And yes, every article needs to have a disclaimer or two to make it hopefully as truthful as the writer can make it in their own words. So here it is. In no manner, shape, or form, do I profess to know what you do about longleaf pine. I know less than what most of you will forget in your sleep tonight. But that makes my journey more simplistic, and for me, more profound.

Our company, Pro-Serve, Inc., is in the business of killing things. Not quite closely aligned with my personal values, but as they say, "it is what it is." We manufacture and sell herbicides to control unwanted plants. I'm new to the family business, having spent most of my career in consumer package goods marketing. The family business is a legacy to our children, and as I moved to a new stage in my professional life, I decided to give it a go. And then came the call.

A longleaf tree farmer from Georgia named Reese Thompson called our office to order herbicide. I was both



grateful and blessed to have been on the receiving end of that call. Reese helped me understand, through countless calls and emails, how our products work to help longleaf landowners restore the forests destroyed over the last 150 years. He piqued my interest in learning more about longleaf pine.

At first, my curiosity drove me to understand more about the resiliency of the longleaf seedling to prescribed burns. How could something so small and seemingly fragile survive the intensity and heat of a fire? And then I read and researched more. What I found that gave that little plant in its grass stage part of the power to survive was its taproot. Stretching deep into the ground for strength and stability, it stored everything needed to survive - to be resilient.

Like the longleaf pine, our taproots, be they family, friends, faith, or values, give us the strength to be resilient in times of adversity. And personally, I needed that revelation. If a tiny

longleaf pine can make it by relying on its taproot, so should I rely on mine. I am fortunate to speak to many young people about my professional career and what I've learned – offering any advice or guidance I can provide. I've used the longleaf pine seedling example in many of my talks to testify to the importance of learning resilience.

And finally, the creativity. Through the relationships I've built over the last two years, I now understand how our products can help promote the natural habitat of countless animals and plants native to the longleaf pine forests. I am obsessed with baby gopher tortoises, Bobwhite Quail, and now, thanks to Reese, trumpet pitcher plants.

I have several original paintings to donate to The Longleaf Alliance's upcoming events. From my paintings of birds and animals to flowers and, of course, the pines themselves, I'm proud to be part of your journey.



14TH BIENNIAL LONGLEAF CONFERENCE

*Rekindling
Our
Connections*

OCTOBER
25-28, 2022

HOTEL BALLAST
WILMINGTON, NC

- + Conference proposals are being accepted until April 30th. Submit online at longleafconference.com.
- + Early registration will open this summer. Members of The Longleaf Alliance are eligible for discounted registration.
- + For sponsorships, exhibits, or donations, please contact Lynnsey Basala at lynnsey@longleafalliance.org.
- + Stay up-to-date by subscribing to conference news at longleafconference.com/contact.