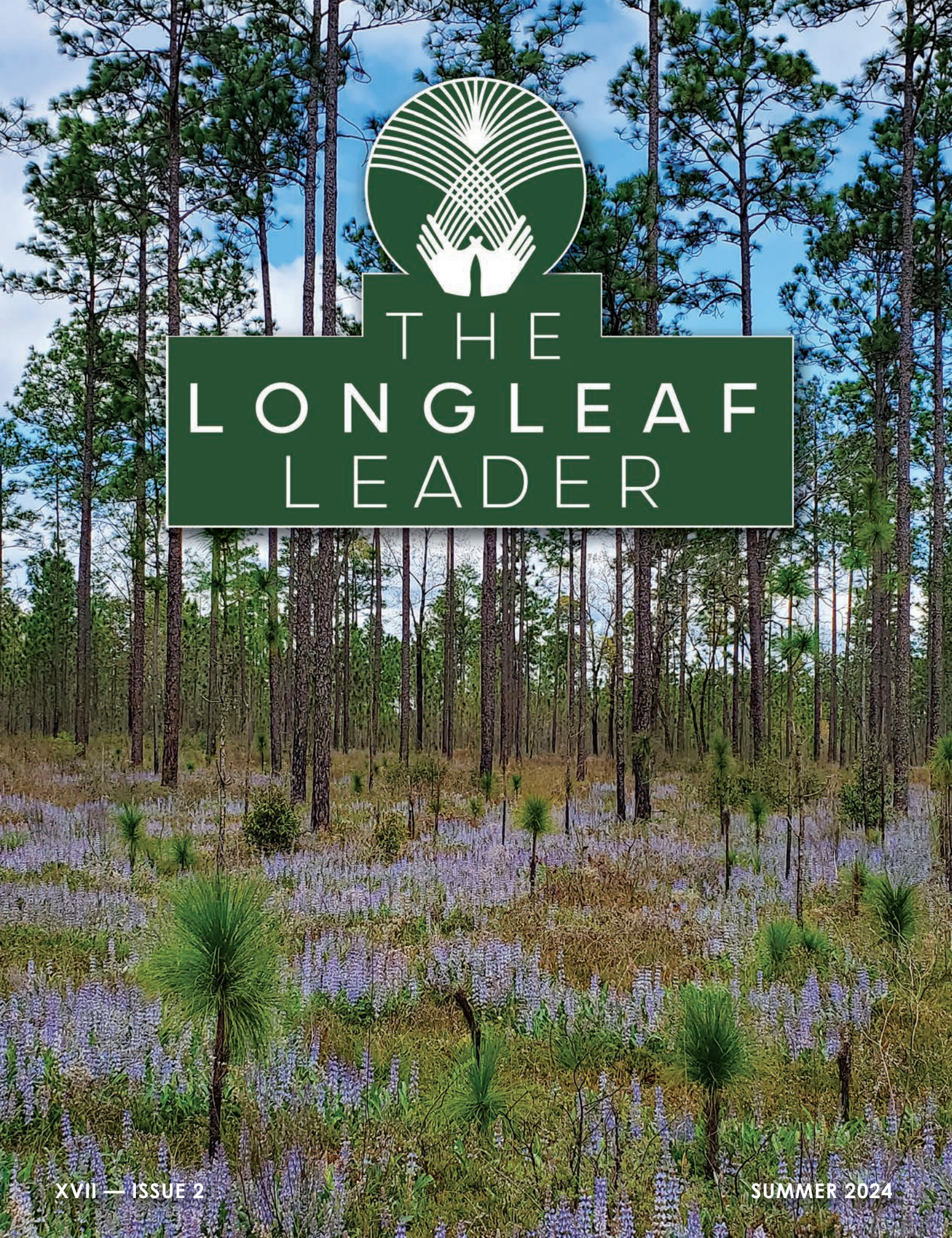

THE LONGLEAF LEADER

XVII — ISSUE 2

SUMMER 2024

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PUBLISHER The Longleaf Alliance EDITOR Sarah Crate
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COVER Longleaf pine restoration site at Blackwater River State Forest with a stunning field of sky-blue lupine. While lupine blooms in the spring, the Forest is blessed with an ever-changing display of wildflowers throughout the year. [Vernon Compton]

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

Longleaf Storytelling

Why longleaf? Why have we dedicated our time, resources, and land to restoring this forest? I think that part of what drives us is tied to the fascinating stories of longleaf. They draw us in with their many twists and turns and capture our attention with tales of fiery landscapes, incredible animal and plant assemblages, and historical connections between the land and the people who have inhabited it for thousands of years. This compelling narrative binds us to this ecosystem, drives us to keep learning about its many facets, and keeps us focused on the work we do to bring it back across the region.

These stories come in different forms – some are practical and help us in our day-to-day, some are technical and share findings of scientific research, while others inspire and pique curiosity by revealing the beauty and uniqueness of this forest. Last year I had the pleasure of working with our talented friends at Kumquat Productions on one of the latter to produce a beautifully made film titled *Longleaf Forever*. Directed by Laura Albritton, this short video project started with the intention to showcase the beauty of the longleaf ecosystem. However, in addition to focusing on the forest's biodiversity aspects, it evolved into a piece that delved into its relationship with fire, its historic decline and now restoration, and its connection with the Indigenous peoples of the southeastern woodlands. This film has now been launched to the public and is the subject of our Longleaf Art Spotlight in this issue. We hope you will take the time to view the film and share it widely with your friends, spreading the story of longleaf to those discovering it for the first time.

The Biennial Longleaf Conference in October will provide opportunities to share stories and lessons learned from active restoration efforts, silvicultural practices, and the latest scientific research. The conversations and narratives that take place during this event have often been the motivating force behind the development of innovative initiatives that help to fulfill our longleaf restoration and management objectives. As we approach October, we include examples of these projects in this issue to illustrate the power of collaboration. We share how the ideas of forming a new Prescribed Burn Association (PBA) and developing the "Longleaf on the Short" video outreach program were born. These outcomes are a tangible confirmation of the benefit of exchanging ideas in a Longleaf Conference environment.

The most impactful stories we can tell, though, are those that we communicate through the forests themselves. The way that you, as landowners and land managers, use management tools to nurture the longleaf landscape reveals much about the history of the land, the processes currently used to shape the forest, and your vision for a site's future. During a recent field trip here in Georgia, I was reminded how managing a forest is truly an art form. Instead of painting on a canvas, land managers set a vision for a property, adjust the forest structure to move toward that vision, and create a mosaic of habitats that come together to create an ecosystem. These visual stories of good forest management are so important in providing practical demonstrations for others restoring longleaf.

Please keep sharing your longleaf stories!

ONE LONG LEAF PINE PLANTED FOR EVERY CASE OF LONG LEAF IPA SOLD

MANAGEMENT CHECKLIST | SUMMER

EVALUATE YOUNG LONGLEAF STANDS

- **Inspect recent longleaf plantings** and plan future treatments as needed.
- **Mow or spray problematic species** such as crabgrass, coffee weed, partridge pea, hairy indigo, and other emergent weeds. Old fields seldom burn well until there is sufficient grass cover to carry a fire.

PREPARE FOR PLANTING LONGLEAF

- **Secure soil samples** from crop fields or pastures planned for longleaf restoration.
- **Check for hardpans** on former agricultural sites. If amelioration is needed, subsoil (rip) when dry; do so early enough to allow time and repeated rains to settle the furrow before planting.
- If you haven't yet, **order your longleaf seedlings now!** Find a list of preferred nurseries at longleafalliance.org.
- Secure contractors for **chemical site-prep treatments.** Proper timing of application yields better results. Foliar-active herbicides such as glyphosate should be applied to actively growing pasture grasses at their most receptive stage. If targeting waxy species, triclopyr may be applied now or delayed until after the first frost to minimize impact on herbaceous groundcover.

TACKLE INVASIVE SPECIES PROBLEMS

- **Repeated herbicide applications** are likely necessary to combat invasives such as kudzu, cogongrass, bermudagrass, climbing fern, lespedeza, bahiagrass, and fescue.

PRIORITIZE PRESCRIBED FIRE

- Continue **growing season burns** as the weather allows.
- **Conduct post-burn evaluations** to determine if previous burns achieved objectives, including woody control.
- Prepare for future burning by **creating firebreaks.**

NATURAL REGENERATION

- If natural regeneration is part of your plan, **conduct longleaf pine cone counts** to estimate the fall crop.
- **Perform a seedbed preparation burn** on mature longleaf stands with good cone crops before seed fall (usually October). The goal is to increase the likelihood that longleaf seed falls on bare mineral soil that is not so clean that predators can easily find/consume the new seed.

GROUNDCOVER RESTORATION

- **Order native seed early.** Seed from local ecotypes and some endemic species may be limited.

PLAN FOR COOLER WEATHER

- Now is a great time to **review, update, or create a management plan.**

Due to the poor longleaf pine cone crop predicted across much of the range in 2024, landowners with fair or better crops may have a potential income opportunity if their longleaf stands are decent-sized and easily operable. TLA can help connect good sites with specialists seeking places to harvest for seed extraction and seedling production.

Look for large green 2nd year cones (center of image). The limb pictured has three age classes of cones: 1st year developing cone, 2nd year cone to mature this fall, and last year's cone (left to right). Visit https://longeaf.info/cones for more information on cone counting methods.

Reach out to... The Longleaf Alliance for any questions about establishing and managing longleaf stands at longleafalliance.org/contact.

Q&A

Q. Dear Longleaf Alliance,

My brothers and I inherited ~30 acres, with the greater portion of the upland areas in mature loblolly pine. My grandfather, who owned and farmed this land nearly all his life, decided to plant trees to provide a source of income for us after his passing. We are nearing the final cut on these trees and would like to begin planning a transition to longleaf pine. I know the soils will support healthy longleaf as many remnant examples are along our property's boundary. What actions does The Longleaf Alliance recommend as we prepare to shift to a longleaf stand?

Moving on to Longleaf

A. Dear Moving,

One of the most important things you can do before a timber harvest is to walk through your existing stand(s) with someone that is botanically savvy. If you do not know someone who knows plants, find a professional to make site visits and provide you with recommendations. During this walk, we are not trying to identify each plant; we are looking for species we want to keep and those that are heavy competitors of up-and-coming longleaf seedlings. These competitors could be native or invasive species. Getting an idea of what types of plants we will need to target with our site preparation mix will help tailor an herbicide prescription to your particular site.

If you locate any aggressive invasive species (e.g., cogongrass, kudzu, bicolor lespedeza, etc.), make note and begin working to eradicate them as soon as possible. If the problem is minor before the mature trees are harvested, you should anticipate the situation compounding when the trees are removed, and more sunlight reaches the ground. Also, expect logging equipment to move invasives around the tract. The lesson here is that little problems will likely become major problems with more sunlight.

Traditional site preparation treatments most often utilize high rates of broad-spectrum herbicides (imazapyr and glyphosate). These chemicals do a great job of controlling competition but also negatively affect the species we want to retain. A very important suite of species for longleaf restoration is native warm-season grasses. These grasses provide extremely valuable fuels that enable fire to spread across the stand – exactly what we want, in a controlled fashion, of course! It is also worth mentioning that all grasses are not created equal. Broomsedge (*Andropogon virginicus*) readily moves into recently disturbed areas and will carry fire, but if you have species like little bluestem (*Schizachyrium scoparium*), big bluestem *(Andropogon gerardii)*, wiregrass (*Aristida* spp.*)*, Indiangrass (*Sorghastrum* spp.), dropseed (*Sporobolous* spp.), or muhly grass (*Muhlenbergia* spp.) already on your tract, do your best to retain these during site prep. These species are easily lost but not easily gained – the gold standard of grass species! They provide the best wildlife cover and nesting material, and some of their seeds are large enough to be targeted by upland gamebirds such as Eastern Wild Turkey and Northern Bobwhite and numerous migrating songbird species.

Like many others who may be reading this, your tract has had an extensive history of row crop agriculture before planting a stand of trees, and that is an important clue. While I anticipate little in the way of finding old-growth grassland species like the grasses mentioned above, you may be surprised. Even if you do not see them now, you'll have another chance to take that botanical walk many times after your trees are harvested. Expect to see the same species but notice how they have increased vigor with a little sunlight on their shoulders. You will also see new species that may have been hanging on and waiting for that much-needed sunlight.

As you move forward with your project and questions arise, we encourage you to contact us at The Longleaf Alliance.

Sincerely,
The Longleaf Alliance

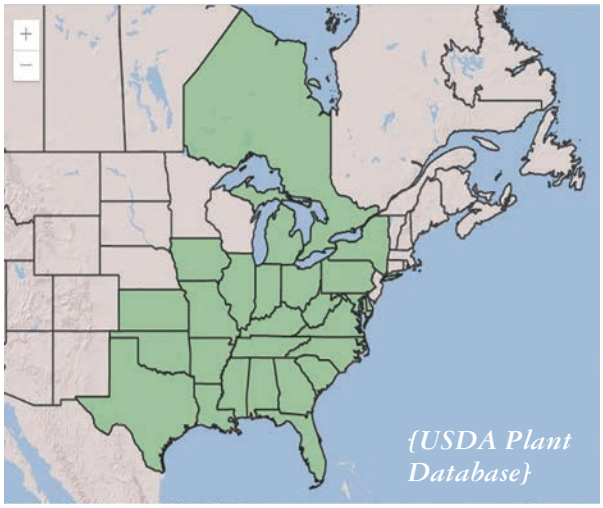
By Abraham Huang, The Longleaf Alliance

Groundcover

PLANT SPOTLIGHT

Vernonia gigantea (Walter) Trel.
Giant ironweed
Aster Family — Asteraceae


{Eleanor, CC BY-NC 2.0}


{USDA Plant Database}


{Cbaile19, CC0, via Wikimedia Commons}

Description

Hardy perennial herb with slender, toothed leaves. Conspicuous pink florets appear in summer through the fall; reaches heights of 3-10 feet

The genus name, *Vernonia*, is in honor of an English botanist, William Vernon. The species name, *gigantea*, means "of giants." The common name, ironwood, refers to the toughness of the stems of the plant.

Habitat & Distribution

One of the most widespread *Vernonia* species, giant ironweed is adaptable to many habitats including sunny ravines/slopes, shady rich floodplain hammocks, peaty cabbage palm marshes, pine-hardwoods, pastures, and roadsides.

Giant ironweed is common throughout much of its range but rarer in its northern and southern extents. New York and Ontario classify the species imperiled.

Wildlife Value

Plants and insects also associated with giant ironweed include boneset, plantain, greenbrier, red mulberry, trumpet vine, carpenter/leafcutting bees, and the tarnished plant bug (*Lygus* spp.).

Related species

Around 20 *Vernonia* species and subspecies occur in the Southeast, including Oval-leaf ironweed *(Vernonia ovalifolia)* which was previously considered a subspecies of *V. gigantea* and several ironweeds associated with longleaf habitats: tall ironweed *(Vernonia angustifolia)*, *Vernonia pulchella*, and *Vernonia acaulis*. Hybrids are frequent between co-occurring species.

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By José Garrido, Amphibian and Reptile Conservancy

WINDOW into WILDLIFE

Frosted flatwoods salamander
(Ambystoma cingulatum)


B.


C.

A.

A. A gravid female frosted flatwoods salamander migrating back to the pond she was born in to lay her eggs. {Kevin Hutcheson} B. Developing embryos {Kevin Hutcheson} C. Larva {Rob Tiffin}

DESCRIPTION, DIET, & BEHAVIOR

If you're lucky enough to see one, there's no mistaking the frosted flatwoods salamander. This salamander's body is a charcoal gray hue against a tapestry of broken silver bands that resemble frost on a branch and give this species its name.

As adults, this iconic species requires little camouflage because it spends much of its life underground or crawling through the understory under cover of night, but as larvae swimming openly in the wetland, muted colors and a prominent stripe pattern help it to blend with the wetland vegetation.

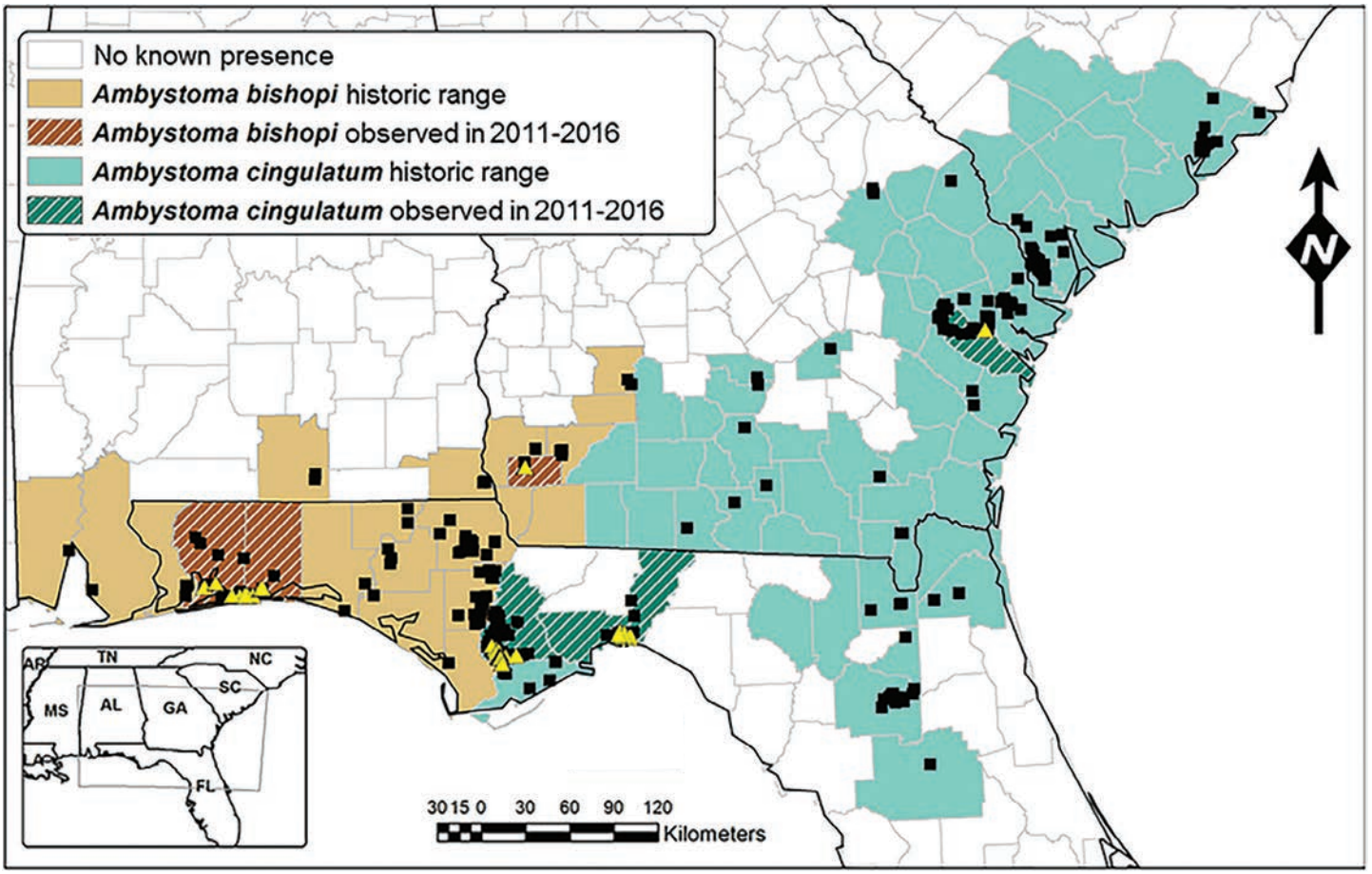
RELATED SPECIES

In 2007, genetic data confirmed many biologists' suspicions that the flatwoods salamander, whose distribution spans the southeastern Coastal Plain, is, in fact, two species. The reticulated flatwoods salamander (*Ambystoma bishopi*) now refers to flatwoods salamanders west of the Apalachicola-Flint Rivers and frosted flatwoods salamanders (*Ambystoma cingulatum*) to the east. Frosted flatwood salamanders tend to be larger and generally have more costal grooves (furrows on their sides associated with muscle attachments for ribs/vertebrae) than reticulated flatwood salamanders.

LIFE CYCLE & HABITAT

Flatwoods salamanders have an uncommon breeding strategy among amphibians; adults migrate to dry basins in late fall and lay small clusters of eggs on bare soil in pockets of dense herbaceous vegetation. Larvae develop in their eggs over several weeks, hatching as winter rains inundate the ephemeral wetlands. This strategy gives the larvae a slight head start and size advantage as they compete for food and survival with other wetland inhabitants.

The habitat of the frosted flatwoods salamander is one of duality. Due to their biphasic life cycle, they require not only isolated, ephemeral wetlands but also open pine flatwoods or savannas surrounding it. This picturesque setting hosts some of the world's most diverse herbaceous ground cover. A few of these plants, like hatpin (*Eriocaulon* spp.) and yellow-eyed grass (*Xyris* spp.), found in the ecotone of wetlands, are particularly important as nesting habitat. None of this would be possible without fire. Before colonization by Europeans, lightning and human-set fires in early summer would keep woody vegetation from growing too thick and shading out the critical ground cover.



Geographic distribution of frosted flatwoods salamanders (blue) and reticulated flatwoods salamanders (orange/tan) in the southeastern U.S. Black squares indicate all known records, while yellow triangles indicate current remaining localities. {O'Donnell et al. 2017.}

CONSERVATION STATUS

The frosted flatwoods salamander is arguably the most endangered amphibian in the eastern United States. Once ranging from coastal South Carolina to the Apalachicola-Flint River in Georgia and Florida, it has experienced drastic declines. It is thought to be extirpated from South Carolina and only known from two populations in Georgia, both on Fort Stewart. The stronghold of their range, in the panhandle of Florida, has fewer than 15 populations. Because of these factors, the U.S. Fish and Wildlife Service has listed it as federally threatened.

CONSERVATION EFFORTS

As with many imperiled species, habitat loss and fragmentation are the leading causes of decline for the frosted flatwoods salamander. Infrequent or nonexistent fire regimes allow woody shrubs to encroach into the open canopy wetland basins that flatwoods salamanders require, shading out herbaceous ground cover and creating increasingly unsuitable habitat. Clearing encroaching vegetation and restoring fire to flatwoods salamander habitat is vital to their continued existence. However, even with habitat restoration, these little salamanders could use a helping hand to boost their populations. This is where headstarting operations come in. By collecting eggs from the wild and rearing them in captivity till near metamorphosis, biologists boost the survival rate of this vulnerable life stage by roughly 90%.

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Dr. Trevor Walker (Principal Investigator) and Bobby Smith (NC Forest Service) tag the first second-generation longleaf pine selection from a test site in North Carolina. {Steve McKeand}

COOPERATIVE TREE IMPROVEMENT PROGRAM LIGHTS A FIRE IN LONGLEAF GENETICS

By Dr. Trevor Walker, Assistant Professor, Co-Director of Cooperative Tree Improvement Program, North Carolina State University

The Cooperative Tree Improvement Program (TIP) at North Carolina State University is best known for its loblolly pine breeding program, which is responsible for more than 90% of the genetic material in loblolly plantations east of the Mississippi River. The TIP recently embarked on a new genetic resource project focused on longleaf pine.

In July 2022, The Longleaf Alliance (TLA) convened federal, state, private, and research partners working with longleaf pine for a summit meeting to discuss improving the quantity and the quality of longleaf pine material for restoration (see *The Longleaf Leader* Fall 2022). The group considered various paths forward, and TLA then sought financial support for this essential work. In 2023, TLA was awarded $1,500,000 from the National Fish and Wildlife Foundation (NFWF) to fund a five-year project titled *Advancing Longleaf Pine Restoration and Seedling Capacity*. The grant included support for a proposal from the Cooperative Tree Improvement Program for a longleaf pine genetic resource project; TIP's contribution includes hiring a new TIP staff member dedicated to longleaf pine genetic resource development. This same award also included funding for the "Longleaf Enhancement Funds," to address bottlenecks that limit capacity of existing nursery and seed-producing partners.

Why should we be concerned about longleaf pine genetics?

Longleaf pine is planted across a range of environments from Texas to Virginia, so it is imperative to have a reliable source of seed with well-characterized genetics. Since longleaf pine is a masting species that only periodically produces a good seed crop, seed quantity and quality currently limits the pace of longleaf restoration. The genetic origins of a seed source must match the adaptability requirements of a particular region. Grafted seed orchards are the most efficient way to produce abundant seed with well-characterized genetics.

TIP's project will select adapted trees with desired traits from longleaf pine progeny tests. The primary objective of the new TIP longleaf effort is to secure a set of selected trees for grafting into orchards. The selected trees must have genes that are adapted to a range of planting environments. The genes should also meet the performance requirements of landowners.

Dr. Steve McKeand (Co-PI) grafts a longleaf pine second-generation selection onto slash pine rootstock at the Rayonier, Inc. facility in Georgia. {Chris Heim}

Graft success appears to be excellent 60 days after grafting the 24 longleaf pine selections. As of April 30, 2024, 86% of the 216 attempted grafts are alive and kicking at the Rayonier shade house. {Serenia O'Berry}

Progeny tests and selections

A progeny test is a trial where seed from many different parent trees are planted using an experimental design that allows us to determine which trees look good because of their genes (versus their environment). Progeny tests are important because they bring together diverse sets of genotypes in a single location and allow us to estimate which trees will make good parents in a seed orchard.

Longleaf pine progeny tests were planted by the TIP in 2011; other organizations, such as the USDA Forest Service (USFS) have older trials. These tests are at risk of being lost due to development, fire, harvesting, land sales, and land conversion to agriculture, and are steadily getting older. If these tests are lost, the longleaf genetic resource efforts will return to square one, so there is increasing urgency to capture these resources for the future.

The trees selected from this project are "open-source." They will be available for the seed orchard community to establish second-generation longleaf pine orchards. This resource should help ensure there is more abundant, better-quality seed for future longleaf restoration, and that the seed is characterized so it is more properly matched to planting locations.

This vital work is off to a fast start.

To jump-start the effort, TIP staff (with help from the North Carolina Forest Service) made 24 selections in February 2024 from a progeny test planted in 2011 in Scotland County, NC. This progeny test included around 120 open-pollinated progenies originally identified by many organizations, including the NC Forest Service and USFS. The series also includes some non-improved, wild seed from Alabama, Georgia, North Carolina, and South Carolina.[1]

[1] *62nd Annual Report of the Cooperative Tree Improvement Program. 2018. https://www.treeimprovement.org/annual-reports*

Chris Heim (TIP staff) counts all 10 of his fingers after pot grafting the first round of second-generation longleaf pine selections for the new project. These trees will be planted in an archive hosted by Rayonier, Inc. with scion made available to the tree improvement community. {Steve McKeand}

To make the recent selections, trees from families with high incidence of forking were removed from the candidate list, as were trees from families with high pitch canker and fusiform rust disease incidence. Of the remaining families, the 30 with the highest stem volume breeding values were evaluated. A breeding value indicates how well the tree will perform as a parent. The top three trees for volume breeding value in each family were visually inspected in the field, and the best-looking tree (in terms of straightness, disease, and branching habit) was selected from each of 24 families.

The genetic origins of these trees come from six states (**Table** 1). Based on the non-improved, wild seedlots, we expect considerable gains in stem volume and height, and modest gains in stem straightness (**Figure** 1). Seed from these vigorous and thriving trees are expected to produce resilient seedlings for the next generation of longleaf pine.

Propagating the Selections

Scions (young shoots) were collected for grafting onto 300 slash pine rootstock that were graciously donated by Rayonier company. Steve McKeand (Co-Principal Investigator) and Chris Heim (TIP Operations Manager) grafted the longleaf selections at the Rayonier facility in Georgia on March 1-2, 2024. After 60 days of excellent aftercare by Serenia O'Berry and her staff at Rayonier, the graft success was 86%, not too shabby for novice longleaf grafters.

These pot grafts will go into the first round of archives hosted by Rayonier. The TIP staff appreciates the contributions of the NC Forest Service and Rayonier to this important cause. We were delighted to have the opportunity to make quick progress on this project thanks to strong support from the seed orchard community!

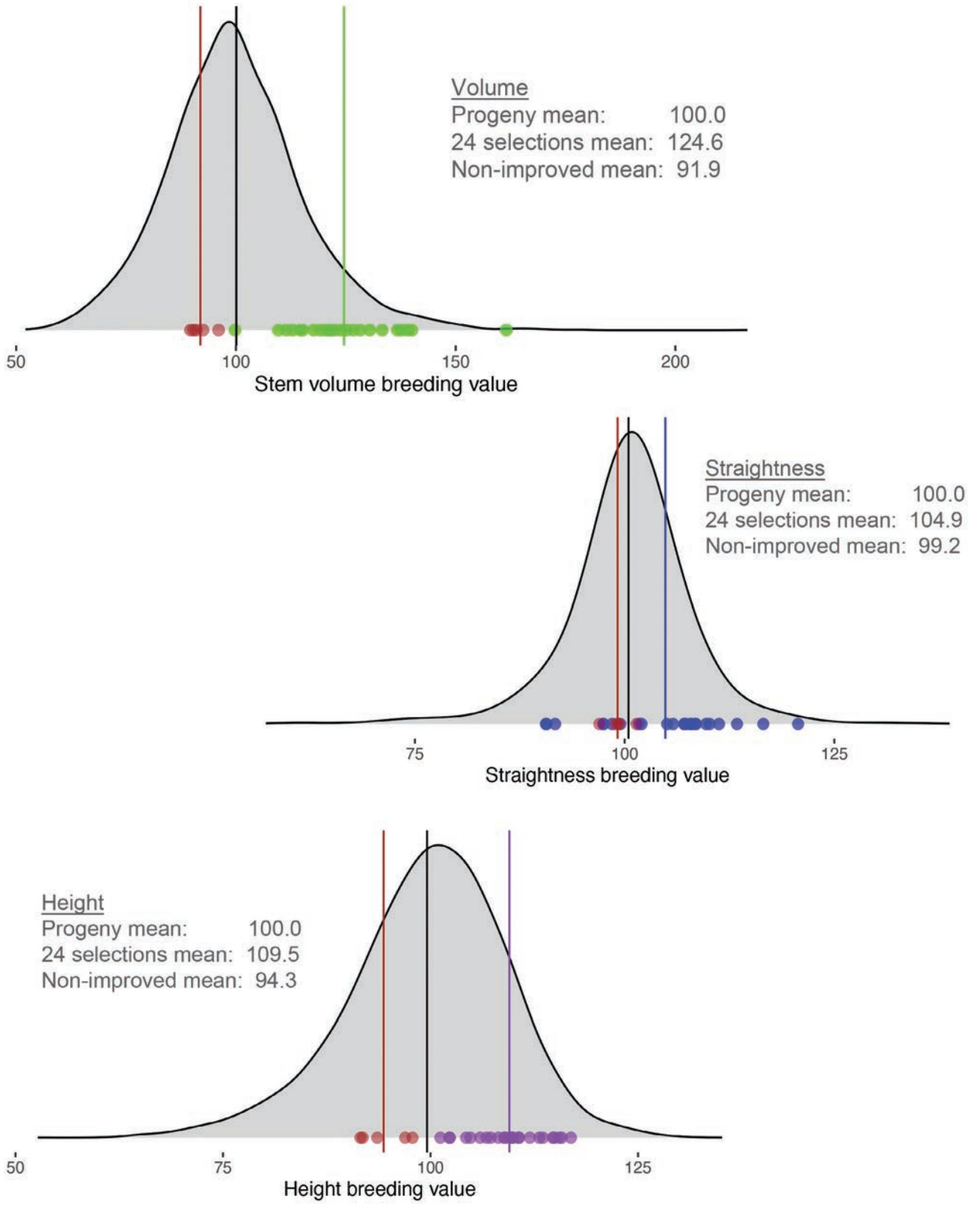
Table 1.

2024 Longleaf pine selections from the NC Forest Service 2011 (LL1) progeny test come from a wide range of provenances.

State of ancestor's origins	Number of selections made in 2024
NC	6
FL	1
AL	7
MS	3
LA	3
TX	4
Total	24

Figure 1.

Distribution of breeding values for progeny in the longleaf pine progeny test series established by the TIP in 2011. Values are in standardized points where the mean is 100, and values above 100 represent the % gain over the mean. The selected trees have 24.6% greater stem volume and 9.5% taller heights at around age six compared to the mean of all trees in the test. The non-improved trees had poorer growth, with 8.1% less volume, 5.7% shorter height. The straightness differences were modest.



The best way to help gopher tortoises is to protect their habitat and to use management techniques (like prescribed burning, thinning, and promoting groundcover) to improve the quality of that habitat.

Legumes, like the lupine seen here with Jessica Radich, USFWS Biologist (left), and Shan Cammack, Georgia DNR Wildlife Biologist III (right), are quick to sprout following fire, providing critical cover and nutritious forage for young tortoises. The orange flag marks the location of a headstart burrow. {Laura Albritton}

KEEPING OUR KEYSTONE SPECIES SAFE
HEADSTARTING GOPHER TORTOISES

By Jessica Radich, U.S. Fish & Wildlife Service

The Warm Springs National Fish Hatchery (NFH) Gopher Tortoise Headstart Program began in 2018 when the Georgia Department of Natural Resources (DNR) approached us about partnering on a program to bolster native populations. Gopher tortoises naturally experience low survival throughout the early life stages, and introduced predators (including fire ants and armadillos) can increase mortality rates for hatchlings. The goal of the program is to combat high mortality rates within the first year of life by hatching eggs collected from the wild and headstarting the hatchlings for one to two years. Headstarting gives the tortoises a boost in growth – typically, a year-and-a-half-old headstart ready for release is about the size of a three to five-year-old wild tortoise. Tortoises of this size are less susceptible to predation and can dig deeper/longer burrows to evade predators, have shelter from inclement weather, and protect themselves from fire.

I joined Warm Springs NFH in July 2018 (right around the initiation of the Headstart Program) as the Fish Biologist overseeing the Gopher Tortoise, Gopher Frog, and Freshwater Mussel Programs. I had previously worked in a diamondback terrapin headstart program at the Wetlands Institute and Stockton University in New Jersey. This experience laid the framework for taking on the Gopher Tortoise Program along with assistance and protocols developed by our partners at The Nature Conservancy at Camp Shelby, Mississippi. The late James Lee was instrumental in helping Warm Springs set up grow-out facilities to hatch and house juvenile tortoises that provide their feeding and care requirements. Over time, the program has expanded from the first four juveniles to holding up to 150 juveniles at any point in time.

We have acquired eggs and young tortoises in many ways. Some tortoises were hatched at the University of Georgia's Marine Extension Lab in Brunswick, Georgia (another invaluable partner in this program) and transferred to Warm Springs NFH for headstarting. Others are eggs laid on/near roadways and considered at high risk of mortality. We received some from Oxbow Meadows Environmental Learning Center, whose onsite outreach tortoises took a liking to each other and laid eggs. Another clutch of eggs we received last year came from a local landowner digging up their septic tank and unearthing eggs in the process (these were dubbed the ninja turtles).

A crew from Georgia DNR and USFWS release headstarted juvenile gopher tortoises in fire-maintained longleaf pine habitat at the Thompson Tree Farm. Juvenile tortoises experience higher mortality than adult tortoises and their survival is more dependent on high-quality sites. Disturbed or fire-suppressed areas do not have sufficient cover or low-growing plants with nutritious new-growth. {Jessica Radich}

Gopher tortoise hatchlings – the pattern of young gopher tortoises' shells helps protect them from predators by blending in under varied light conditions, especially in areas with native groundcover. {Reese Thompson}

Headstarted juvenile gopher tortoise inspects its new home. Young tortoises forage close to their burrows so need nearby native grasses and forbs for food and protective cover. {Jessica Radich}

Prescribed burning promotes great tortoise habitat {Shan Cammack}

One clutch of eggs came to us from the Thompson Family, who are tree farmers and avid conservationists working to enhance and protect longleaf ecosystems and the species that dwell there – including the longleaf ecosystem keystone species: the gopher tortoise. Reese Thompson and Reese Thompson II came across a nesting female on their property in Wheeler County, Georgia. When she finished laying, they put a protective barrier around the nest and returned three months later to 11 hatchlings! Knowing their vulnerability in the first year of life, the Thompsons wanted to give the hatchlings the best chance possible to persist on the land. They reached out to us, asking if we could headstart the tortoises for eventual release back onto their property. We raised the hatchlings for 18 months:

- Feeding them a mix of greens, vitamins, and a commercial pellet for added nutrition.
- Giving the tortoises daily care and weekly baths to promote hydration.
- Providing plenty of sand to practice excavating.

The headstarted "Thompson Tortoises" returned to their home on March 26, 2024, weighing in at an average of 0.65lbs and ready to live their best lives back in the wild. We excavated burrows for the 11 headstarts, giving them two starter burrows per tortoise located near existing adult burrows to maximize their ability to seek immediate shelter. The tortoises took to the landscape quickly and began excavating deeper into their starter burrows less than an hour after their release!

"We are grateful for Jessica's dedication and the USFWS support. Headstarting gopher tortoises will have a positive ripple effect on the population," said Reese Thompson.

Nathaniel Blount with Ad Platt, The Longleaf Alliance

LAND AS FOUNDATION, NOT JUST FOR WEALTH BUT FOR FAMILY

Nathaniel Blount is a longleaf pine landowner near Pleasant Home in Covington County, Alabama. The son of Anthony and Gladys Blount, he is the middle child of seven siblings and was raised on family land acquired by his formerly enslaved great-grandfather. Nathaniel was taught to work hard while paying attention to what was happening by a firm father who was intent on the long-term outcome.

Growing up in the country gave the family access to things and experiences town people didn't have. The Blounts grew a lot of food, sold cucumbers and peas (crowder, pink eye, purple hull, cream 40s), and raised up to 45 hogs in the bottoms and branch heads, giving them occasional access to cropped areas. They needed to grow a lot of corn for the hogs, but they also gave away a lot of food to share with others. In this life, neighbors, black and white, were important relations; the Jay, Raley, and Blount families are still close "brothers from another mother." Neighbors helped neighbors. The Blount children didn't receive an allowance but were paid for their work on the farm, had bank accounts, and were taught money management. The boys had the "outdoor" jobs, and the girls had the "indoor" jobs, but everyone worked. "Daddy would carry us to the bank, and we had our own bank book. We would buy our clothes and presents for others but mostly didn't touch our savings. All were raised to 'go and do things,'" reminisced Nathaniel. Most of the family moved across the country, looking for a better way to make a living, and have done well.

But Nathaniel stayed close.

Although the pull of the land was strong, his father was intense. As a young man he was ready to get away from the farm and make his own way. Knowing he needed to find another place to live, Nathaniel built his own house by the time he was 20 years old, before he even bought his first car. This also freed him from rent or house payments.

Trade school and industrial electronics training led to one of the best local jobs at the power plant, but his other job was building and financing housing. Having the needed skills, he built and financed his first house for others at age 25 — and has built 40 more since — for people who believed they could never afford a decent place to live. He started building more homes, saving every dime, and putting it back into his business. Equipment skills then led to becoming a minority contractor for the highway department. Hurricanes led to more work locally following Hurricane Opal and in south Mississippi after Hurricane Katrina, which led to more equipment and expanding business.

Still, the pull of the land kept him close.

Nathaniel commented, "You don't realize how much property means until you get older." Others in the family,

A. The liberated longleaf stand after hand cutting competing oaks, sprout spraying, and burning {Ad Platt}

B. Gopher tortoises make themselves at home {Ad Platt}

C. Nathaniel and son Nathaniel Jr. on his first hunt

and most of the first cousins raised on the larger property moved away as they came of age. Nathaniel also worked away from home at times, but he always felt the tug of the land. As a young man he hunted to spend time in the woods – and for food, not sport. Now, just watching the wildlife is pleasure enough. "The land has come between me and many other choices I could have made," but he is content with his choice.

As the farm needed more attention, the family looked to him to take the lead after the elder Blount passed. The isolation during the pandemic provided an opportunity to spend the time needed.

His habit of hard work and always learning new skills were turned to freeing up a young longleaf stand from fierce oak competition. While the Blount children grew up burning the land, it tended to be winter burns only, with his father clearing the lines and the boys keeping it in the box with a green pine top. This was not enough to control the oaks, which steadily became taller, resulting in more mixed pine-hardwood stands.

So, he did the work by hand with an industrial brush cutter, working through it over the summer. When the stumps sprouted, he followed up with an herbicide application applied from his farm tractor, steadily working to ensure he wouldn't have to brush cut it again. This stand has been transformed, and the gopher tortoises within it have had their "leases" extended.

His objective on this part of the property is to put it into pine straw production for the near term and provide his children and grandchildren with the opportunity to benefit if they themselves put something into it. The initial attempt to contract the straw harvesting turned sour, but as always, he watched and learned how to do this too, and from that education he is confident he can market it better himself.

Blount family, 1988

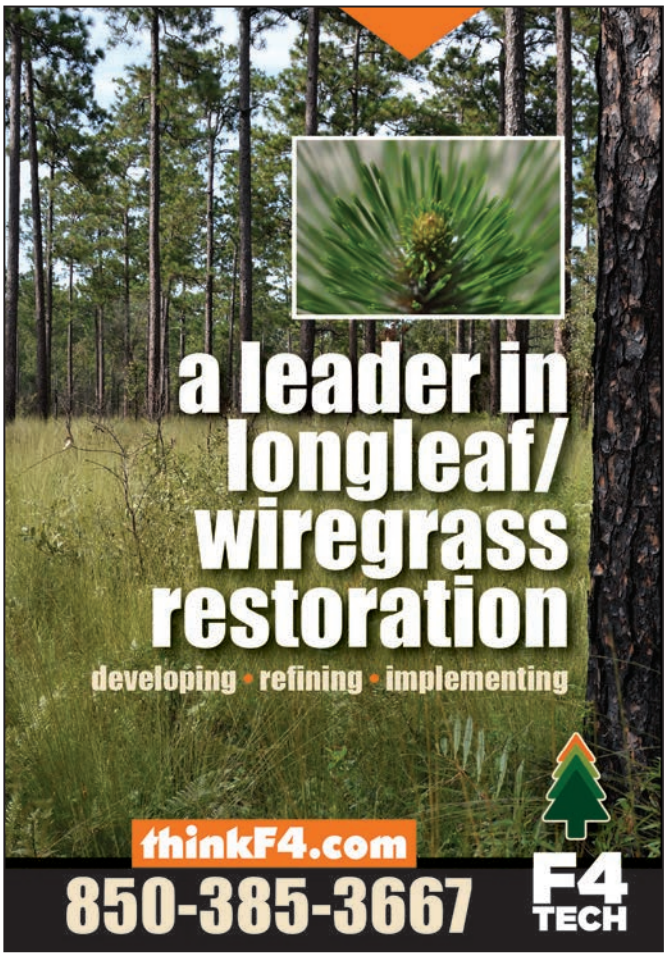
"Just do what needs doing; don't wait to be told to do it."

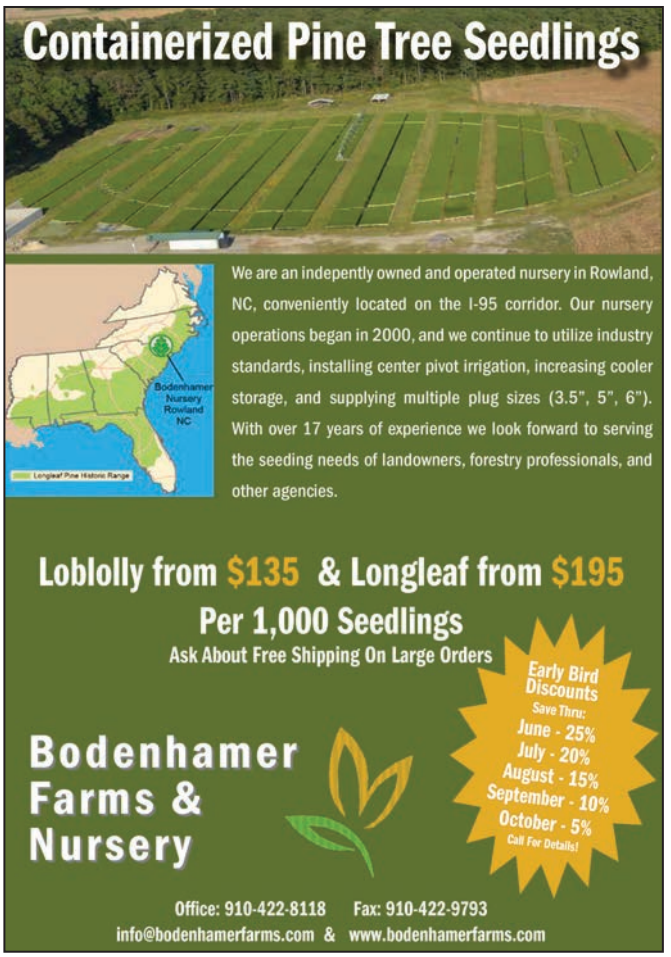
This past year, he turned his attention to clearing, treating, and planting a new stand of longleaf pine for one of his sisters on her part of the farm with assistance from The Longleaf Alliance and incentives from NRCS. He also expanded his knowledge by attending a Longleaf 101 Academy in Alabama and the recent Herbicides and Longleaf 201 Academy in Georgia. The bigger goals for the property are to learn more about keeping the different stands healthy and growing, thinning when it is the right time, and to manage towards big, old timber. An older hardwood stand downslope of the longleaf adds another type of diversity to the property. He wants the grandchildren to see good examples of healthy and productive timber and experience the same enjoyment of abundant wildlife, particularly the turkey and quail he gets to work with. And it won't hurt if they also learn how to turn effort into profit.

"My Daddy taught me the value of hard work. He told me at 23, 'Son, I don't know how much longer I can teach you.' And then one fine day, he said, 'Son, I can't tell if you did that, or I did.'" Turns out, it wasn't even about the work; it was more about the ways of the world and providing a safe place for his children to grow up and learn, knowing going in that they would be held to a higher standard.

"Just do what needs doing; don't wait to be told to do it."

In 2021, the National Wildlife Federation (NWF) established the Longleaf for All Landowner Mentorship Program in partnership with the Natural Resources Conservation Service (NRCS) and America's Longleaf Restoration Initiative. This program was developed to identify exemplary landowners in the historic longleaf range, provide peer-to-peer mentorship opportunities to fellow landowners, and engage with professionals, organizations, and agencies. The Longleaf for All Landowner Mentorship program aims to highlight the success stories of historically underserved (HU) landowners, as well as identify challenges and opportunities faced by HU landowners such as estate planning, heirs property, and access to federal and state resources. Due to the success of the inaugural program in South Georgia with Mr. Herbert Hodges, the program is expanding in 2024. Mr. Nathaniel Blount of Alabama is one of NWF's newest landowner mentors.





Assessing stand condition post-prescribed burn

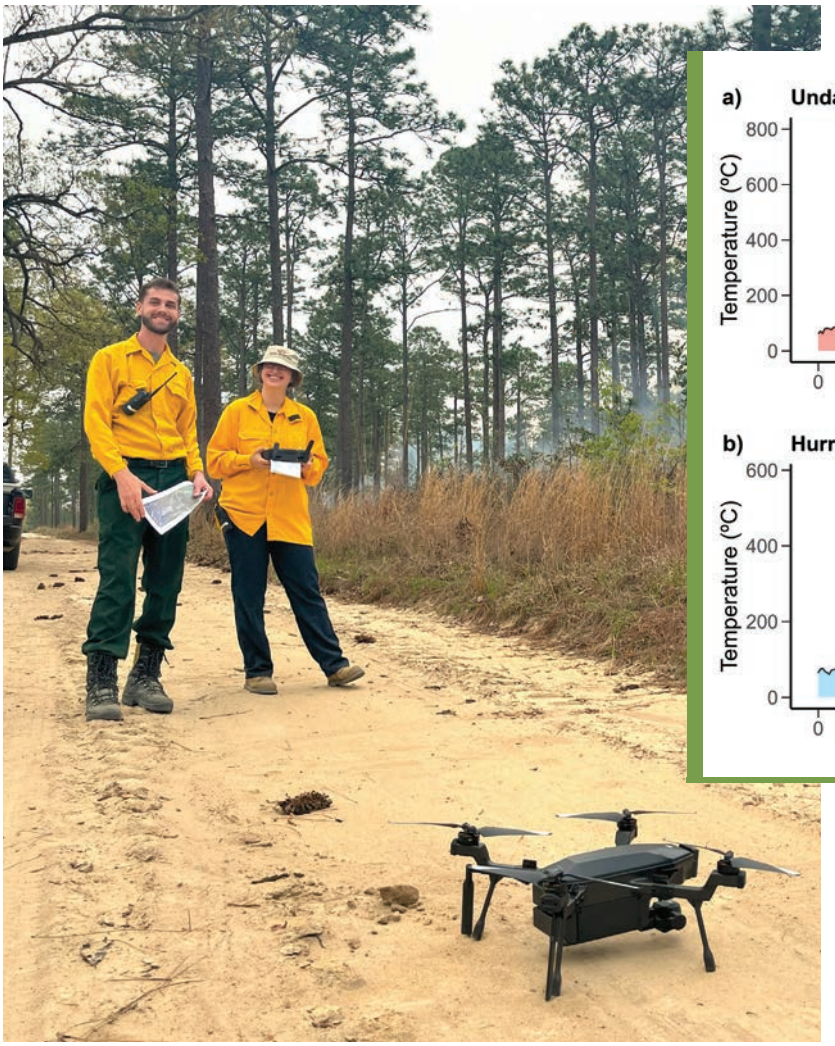
By Arthur Lamounier Moura, Auburn University, Dr. Heather Alexander, Auburn University, and Dr. Jeffery Cannon, The Jones Center at Ichauway

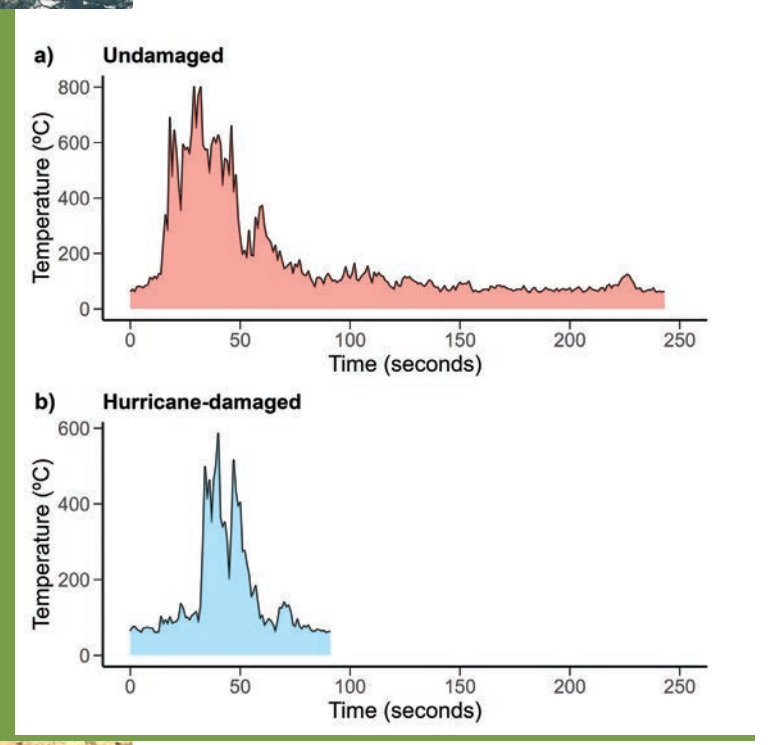
HURRICANE MICHAEL'S AFTERMATH:

HOW FUELS AND FIRE CHANGE AFTER SEVERE WIND

Forest managers work daily to restore longleaf pine ecosystems, maintain their biodiversity, and implement frequent prescribed burns. Fire is necessary to **promote** important plant and animal species and to **prevent** encroachment and competition from others. However, managers face various challenges in implementing safe and effective burns, such as smoke management, permitting, and resource availability. Unexpected events, like hurricanes, present new challenges to fire management in these ecosystems. This article explores insights from our research on how hurricanes can alter forest fuels and impact our ability to conduct prescribed burns in a longleaf pine ecosystem effectively.

Routine burning can be complicated by intentional canopy disturbances, such as in thinning operations, or unintentional ones from hurricanes. Hurricanes and storms cause considerable damage to forests, adding large, downed logs that hold moisture and create issues for smoke management. The glut of downed logs may be removed through post-storm salvage logging. However, the extensive loss of tree cover can change the fuel conditions for years. The newly opened areas will receive more sunlight and soil water, promoting understory vegetation growth. Fewer overstory trees reduce the input of pine needles, an important fuel in longleaf pine ecosystems. If fuel changes after hurricanes, so too can the behavior and effects of prescribed fires.





▲ *Changes in temperature over time as recorded by thermocouple sensors in undamaged (top) and hurricane-damaged plots (bottom).*

◀ *Arthur Lamounier (left) and Daryn Sagel (right) preparing for drone takeoff to collect data on smoke plume and fire behavior.*

To better understand how hurricane damage changes fuel conditions and fire behavior, we began a study at The Jones Center at Ichauway — an ecological research center in Georgia focused on research and conservation of longleaf pine ecosystems. On October 10th, 2018, the landfall of the powerful and destructive Category 5 Hurricane Michael caused considerable canopy damage to many stands in the region. This presented a unique opportunity to study how understory vegetation responds to hurricane disturbance and how fire behavior might be influenced during subsequent prescribed burns.

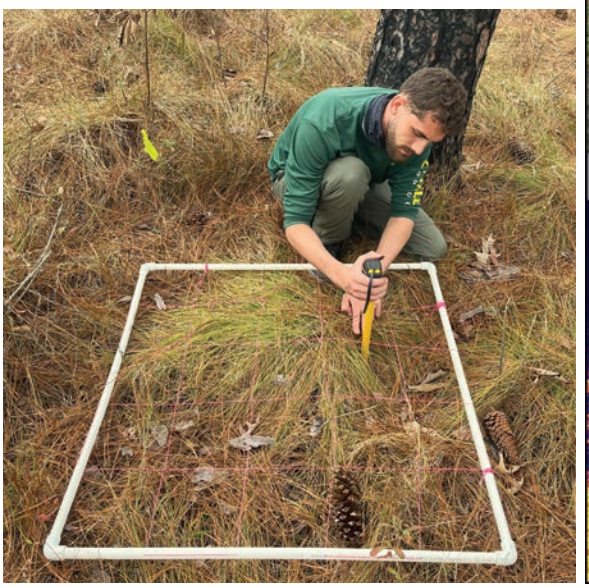
How do hurricanes alter forest structure and fuels?

We used aerial lidar to locate trees damaged by Hurricane Michael. Aerial lidar works like a scanner, sending laser pulses from a plane and measuring how long they take to bounce back. By comparing pre- and post-hurricane scans, we identified changes in forest height caused by the hurricane. After locating hurricane-affected areas, we took a closer look at the understory in these areas. We surveyed height, cover, and weight of dead and live fuels, which allowed us to obtain two key aspects of the fuelbed: **fuel load** and **bulk density**.

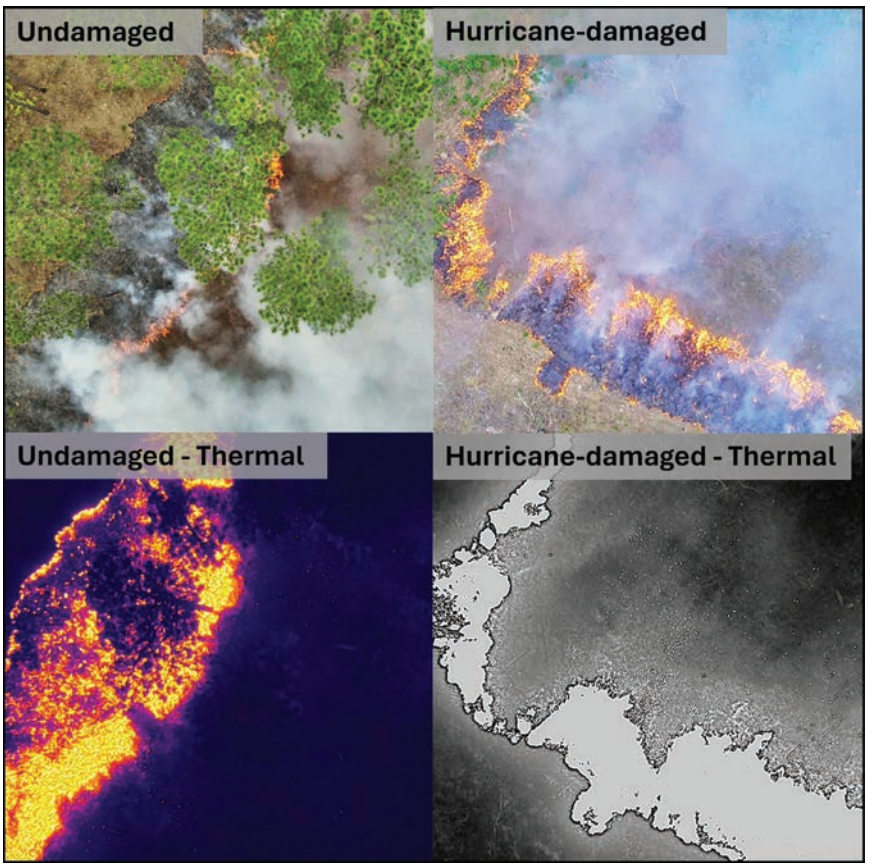
Simply put, fuel load is the amount of fuel present within a certain area. High fuel loading provides flammable material available to burn, potentially leading to more intense fires. Bulk density, on the other hand, is a measure of how tightly or loosely packed the fuels are in a given volume. The higher the bulk density, the more heavily packed the fuels are within the same space, which can lead to a more intense fire or increase fire residence time. Residence time measures how long a fire remains active in an area and is important for fire practitioners and forest managers concerned with conservation. Longer residence times can cause more plant damage. This is particularly relevant in scenarios where there is a hardwood encroachment.

Fuelbeds in longleaf pine woodlands are composed of leaf litter, grasses, woody plants, and herbs. Our survey showed that, of all fuel types, the biggest change occurred in the leaf litter loads and total bulk density, which were much lower in areas affected by the passage of the hurricane. Longleaf pine trees drop large amounts of needles in their immediate vicinity, and this effect is lost when the canopy is absent or damaged. Pine needles and bulk density are key drivers of how longleaf pine ecosystems carry fire. By reducing this important fuel source, hurricanes may disrupt fuel continuity.

◀ *Road dividing the two study stands where prescribed burns were conducted.*



▲ *Field survey and data collection on the understory fuelbed*



▲ *Drone-captured imagery of undamaged (left) and hurricane-damaged (right) plots, along with corresponding thermal imaging (bottom).*

How do fuelbeds changes affect fire behavior after a hurricane?

After confirming that hurricanes alter fuelbeds, we asked how they change fire behavior in areas affected by hurricanes. To do that, we conducted prescribed burns in the hurricane-affected areas. Using thermocouples – sensors capable of capturing various fire behavior metrics – we measured how fast the fire moved, its intensity, residence time, and more. One key fire behavior metric that stood out was heat flux, which combines fire duration and intensity. Interestingly, hurricane-damaged areas had a much lower heat flux relative to areas unaffected by the passage of the hurricane. This result is consistent with the reductions in bulk density and decreased leaf litter loads resulting from the hurricane.

Our findings on heat flux and fuel load reduction in hurricane-impacted areas represent some of the changes following major disturbance events. **Lower-intensity fires after hurricane damage could facilitate hardwood species encroachment.** This does not mean the whole ecosystem will transform overnight, but the processes that could slowly make the challenge of burning even more difficult. This highlights the importance of the pine component in the system and its role in forest flammability, emphasizing the management consequences in the face of the increasing hurricane frequency and intensity, especially in the eastern coastal states of the U.S.

Research Highlights

- Hurricane Michael's passage caused considerable damage to longleaf pine woodlands, leading to altered fuelbed structure.
- Subsequent prescribed burns showed a reduction in heat flux in damaged areas, which could allow opportunistic hardwood species to establish.

Our study reveals the interplay between hurricane disturbances, changes in fuelbed structure, and their impact on fire management in longleaf pine ecosystems.

News from the LONGLEAF PARTNERSHIP COUNCIL

By Jason Dockery, Longleaf Partnership Chair, Alabama Forestry Commission

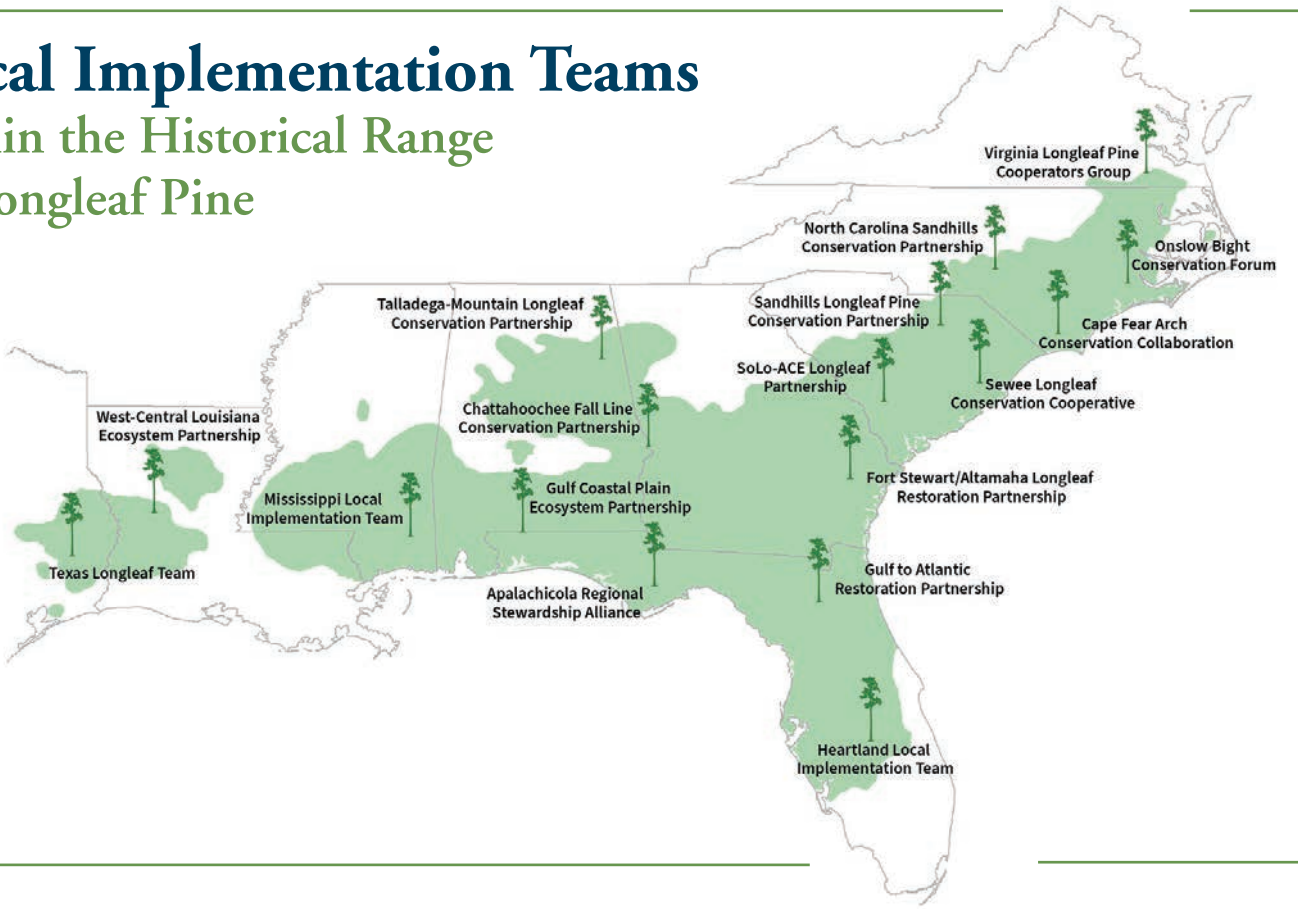
The Longleaf Partnership Council met at the Auburn University College of Forestry, Wildlife and Environment in April. The meeting was very informative, and we had some great networking opportunities. With the recent update of the *Range-wide Conservation Plan for Longleaf Pine*, the Council spent time in the meeting to begin updating the 5-Year Strategic Priorities and Actions (SPA) Plans for 2025-2030. The SPA Plans will provide a more focused view of the actions needed to help meet the goals and objectives of the Conservation Plan.

Ron Smith (center) and Dr. Rashida Faird (left) hosted a tour of Camp Atkins at Tuskegee University for LPC participants.

During the meeting, breakout groups met for each of the six strategies for longleaf conservation identified in the Conservation Plan. These strategies include Public Lands, Private Lands, Longleaf Ecosystem Restoration, Prescribed Fire Management, Economic and Market-based Financial, and Climate Resilience and Co-benefits. Council members discussed and gave input on specific actions with potential for the greatest impact on our ability to accomplish the strategies. Leads have been identified for organizing and writing each strategy's section. Work is underway this summer to have a draft of the SPA Plans available this fall.

Immediately following the meeting in Auburn, the Council was invited to tour Camp Atkins at Tuskegee University with Longleaf for All. It was great to meet with the University staff and their many partners to see the work they are doing towards longleaf restoration at Camp Atkins.

Local Implementation Teams
within the Historical Range of Longleaf Pine



Salamander habitat sign at Fort Stewart (Erin Cork)

Hatching Hope:

HEADSTARTING TO CONSERVE THE FROSTED FLATWOODS SALAMANDER

By José Garrido, Amphibian and Reptile Conservancy, and Erin Cork, Georgia Department of Natural Resources

The frosted flatwoods salamander (*Ambystoma cingulatum*) is a remarkable and elusive species once widespread across the Coastal Plain's vast wetlands matrix. However, in the last few decades, populations have plummeted by over 90%, leaving only a handful of breeding sites that are the focus of a major conservation initiative. At the Fort Stewart-Hunter Army Airfield in coastal Georgia, biologists with the Amphibian and Reptile Conservancy (ARC) are working with partners including Georgia Department of Natural Resources to monitor and recover the last known population in the Atlantic Coastal Plain.

This past December, on a warm and rainy night, the first adult salamander recorded in Georgia in over 15 years was seen meandering through the grass – likely just having laid her eggs. Unfortunately, drought, disease, and predation mean less than 5% of those eggs live to reach metamorphosis. The few salamanders that survive through metamorphosis must migrate into the upland forests and survive several years before making the arduous trek back to breed.

The lone female observed was not only a sign that this wetland was occupied, but a "starting pistol" that signaled the onset of a busy nesting season. Assisted metamorphosis, or headstarting, is an important tool ARC uses to bolster populations by helping larvae through the most dangerous early stages of development. With this technique, ARC collects eggs from the wild and raises them until they are near metamorphosis. A team of biologists from ARC, the Fort Stewart Fish and Wildlife Branch, Georgia Department of Natural Resources, and numerous organizations systematically combed through patches of wetland plants in search of egg clusters. After a few weeks, over 300 eggs were collected and brought to a series of 250-gallon tanks, prepared with local vegetation and feeder plankton to mimic local conditions. After several months, 98% of the collected eggs hatched, developed legs, and were returned to their home pond.

Frosted flatwoods salamander larva {Erin Cork}

Salamander larvae ready for release {Erin Cork}

Mesocosm for rearing eggs {Devin Welch}

Frosted flatwoods female in situ after laying eggs {Kevin Hutcheson}

This small success story is the beginning of a greater conservation plan to recover and reintroduce the species to their historic range, using ecological forestry techniques to recover suitable habitat. Those familiar with the longleaf ecosystems recognize the importance of fire; however, they often overlook the impact of seasonally appropriate burns on wetlands. Historically, low-intensity fires in summer helped burn through the dry wetland basins, but many of today's prescribed burns occur in the winter months when wetlands are full or occur during the growing season when fuel/soil moisture is too high (out of concern for upland fire behavior) to carry fire through pond basins. This allows trees and shrubs to become established, altering hydrology and shading out potential breeding grounds. While conservationists are often daunted by the scale of widespread threats like drought and sea level rise, prescribed burning and thinning pine stands have immediate benefits for a wide range of imperiled flora and fauna.

ARC recently discovered new frosted flatwood salamander populations in Georgia and Florida and continues to survey the southeastern U.S. for any remaining populations. But if this salamander will ever be a conservation success story, it won't be from the work of a single organization. The Fort Stewart/Altamaha Longleaf Restoration Partnership prioritizes both the frosted flatwoods salamander and its habitat in its conservation plan and wants to work with stakeholders to support those efforts. The involvement of state and federal agencies, NGOs, and private forest landowners is critical to ensure a sustainable recovery of this iconic species across the landscape.

Failed Longleaf Cone Crop Predicted in 2024

By Ad Platt, The Longleaf Alliance

RANGE-WIDE

longleaf.info/cones

More so than other southern yellow pine species, longleaf pine cone production is variable, with infrequent good crops. The process is influenced by many environmental factors over the course of the cones' two-year development, with large differences observed from year to year and from place to place. Having an idea of upcoming cone crops helps longleaf growers plan for nursery seedling production and informs land managers' upcoming activities to promote natural regeneration, like prescribed burning or selective harvesting. The USDA Forest Service and collaborators monitor longleaf pine cone production at 11 locations throughout the Southeast each year.

The 2024 Longleaf Pine Cone Prospects report projects a FAILED crop this year at 8 of the 11 cooperating locations, estimating around 6.6 cones/tree. Three sites are projecting a POOR crop, estimated at 12 cones per tree.

By comparison, a GOOD crop like we experienced in some locations in 2022 was around 50 -99 cones per tree, and strong efforts successfully collected all we could process that year. A considerable portion of the seed collected in 2022 went into producing the 2023 seedling crop, and more was used to grow this year's (2024) seedling crop. Seed supply is again becoming limited.

Even in a bad year, there is usually a decent cone crop somewhere. If you are lucky enough to have mature longleaf, please assess what kind of cone production you may have this summer. This is best done on a clear morning with the sun at your back using binoculars to count the large, developing green (2nd year) cones. Landowners with fair or better cone crops may have a potential income opportunity if their longleaf stands are large enough and easily operable (low density with machine access for collection). TLA can help connect good sites with those specialists seeking places to harvest. Reach out at longleafalliance.org/contact or email Ad Platt at ad@longleafalliance.org.

Education and Outreach Events in the GCPEP Landscape Increases Knowledge and Support of Longleaf Conservation Efforts

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

FLORIDA

Jimmy Stiles showing a snake to attendees at the Indigo Snake Festival {Vernon Compton}

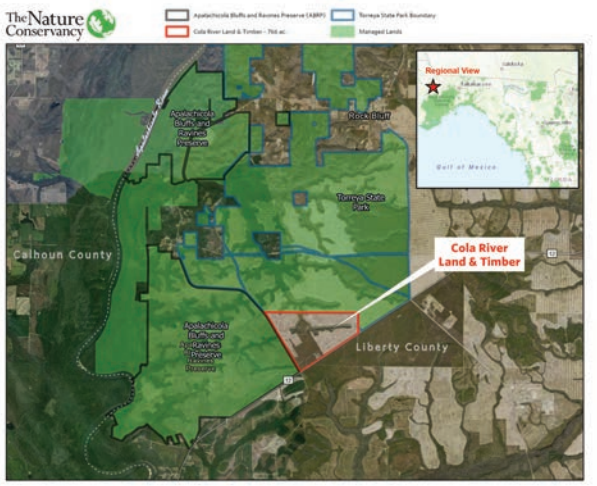
Partners in the Gulf Coastal Plain Ecosystem Partnership (GCPEP) landscape have collaborated on several successful education and outreach events, bringing people of all ages together to learn about the longleaf ecosystem and the diverse plants and animals found within. The Pensacola & Perdido Bays Estuary Program hosted one event in March, a Restoration Ramble on the Blackwater River State Forest. This event focused on the use of prescribed fire in the longleaf forests and the many positive impacts that occur as a result. The Florida Forest Service has a long history and dedication to the use of prescribed fire as a management and restoration tool, and participants in the Restoration Ramble learned about the science behind implementing fire on the ground and were able to see natural community benefits while walking through the Forest.

The second event in early May was the Eastern Indigo Snake Festival for private landowners and their children in the Alabama counties that surround the Conecuh National Forest. The Festival included a forest tour and multiple partner educational stations at the Open Pond Recreation Area. Participants were able to see and learn about several rare species including the gopher tortoise and the Eastern indigo snake and how the outstanding Conecuh National Forest fire management program has played a key role in recovery efforts associated with these and other species.

Conservation Successes along the Northern Apalachicola River

By Diane Alix, The Nature Conservancy

FLORIDA



Thus far, 2024 has held some exciting news for the beautiful portion of the longleaf range near Bristol, Florida. In March, the last unprotected parcel, 758 acres among a 22,000-acre conservation hub, was brought into protection through a partnership between The Nature Conservancy (TNC) and the Florida Department of Environmental Protection. This piece connects TNC's Apalachicola Bluffs and Ravines Preserve (ABRP) with Torreya State Park to provide continuous habitat and protect a tributary of the Apalachicola River. This parcel will streamline efforts to manage land between partners, including prescribed fire, invasive species control, and longleaf pine restoration, while supporting wildlife like the Eastern indigo snake.

The Eastern indigo snake reintroduction on ABRP marked its eighth year this spring with the largest-ever release. Forty-one young snakes, 20 females and 21 males, were released on April 30th. A significant milestone was reached last fall with the first documented wild-born hatchling snakes found in different portions of the Preserve.

Though the first snakes were released in 2017, the work behind this project began decades ago. It included many partners: TNC, the Orianne Center for Indigo Conservation, the Florida Fish and Wildlife Conservation Commission, U.S. Fish and Wildlife Service, Welaka National Fish Hatchery, The Jones Center at Ichauway, Southern Company through the National Fish and Wildlife Foundation, and the Fish & Wildlife Foundation of Florida. The continuing habitat restoration work on both ABRP and Torreya State Park will provide a healthy longleaf ecosystem for this large-ranging species' long-term survival, resulting in successful reproduction and proving the power of long-term habitat restoration and land protection.

Volunteers Learn and Work at Sam Houston Jones State Park

By Will deGravelles, The Nature Conservancy

LOUISIANA

Young volunteer with longleaf {Will deGravelles}

In April, The Nature Conservancy (TNC) of Louisiana held a combination education and workday for volunteers at Sam Houston Jones State Park in Calcasieu Parish, Louisiana, aimed at furthering longleaf pine restoration and outreach in efforts to continue the Park's recovery from Hurricane Laura in 2020. The hurricane's 150-mph winds battered the Park in late August of that year, leading to the loss of ~10% of the ~1,000-acre park's trees, including some longleaf but more loblolly pine and bottomland hardwoods.

TNC first led 25 local volunteers on a nature walk, combining birding with education on insects and botany/plant ID within the context of longleaf ecology and restoration. Following this, volunteers went to work removing invasive Chinese tallow trees from a ~20-acre restoration area. While working, participants observed longleaf pine seedlings planted in previous years beginning to exit the grass stage and initiate height growth.

The Nature Conservancy (TNC) and the Louisiana Office of State Parks have endeavored to 'make lemonade out of lemons' for several years and utilize newly opened areas to sustain savanna-like conditions through prescribed fire, brush control, and tree planting. Volunteers and contractors have planted over 10,000 trees, including longleaf pine seedlings in savanna restoration areas and larger potted pines and hardwoods for shade in recreation areas.

A Partnership to Measure the Impacts of Attending the Fire in the Pines Festival

NORTH CAROLINA

By Troy Frensley, University of North Carolina Wilmington, and Michelle Ly, The Nature Conservancy, North Carolina

Knowledge Questions		
How much did you learn about each of the following things by participating in the Fire in the Pines festival?	Mean (N = 118) 2022	Mean (N =120) 2023
Controlled burns benefit the natural environment.	8.55	8.67
Skilled professionals can safely conduct controlled burns	8.92	8.78
The importance of the longleaf pine ecosystem	8.78	8.82
The benefits of controlled burns for people	8.15	8.50
Controlled burns can help reduce the risk of wildfires	8.87	8.96
Longleaf pine ecosystems are home to species that benefit from frequent fire	8.92	8.82
Controlled burning is necessary to keep longleaf pine ecosystems healthy	9.07	8.95
Immediately suppressing wildfire over the last 60 years has contributed to extreme wildfires	7.93	8.48
What happens in the longleaf pine ecosystem impacts my life	8.32	8.92
Attitudes Questions		
Did this festival make you feel more strongly about any of the following things?	Mean (N = 118) 2022	Mean (N = 120) 2023
It is important to protect the longleaf pine ecosystem using controlled burns	8.93	8.92
I feel safe knowing that professionals are conducting controlled burns	9.41	9.17
Knowing the environment is protected makes me feel good	9.47	9.28
The benefits of a controlled burn outweigh any inconvenience I may experience from smoke in my community	9.33	8.94
I support controlled burning to protect the natural environment	9.53	9.43

▲ *Values summarize survey responses using a Likert-type scale from 0 to 10; 0 = nothing at all/not at all; 5 = a fair amount; 10 = a huge amount*

The Nature Conservancy of North Carolina and Dr. Troy Frensley (University of North Carolina Wilmington, Environmental Sciences Department) have partnered to evaluate the impacts of the Fire in the Pines Festival. The festival is in its 11th year and brings together members of the conservation community to celebrate and educate the public about how fire, native plants, wildlife, and conservation are all connected. Over a dozen undergraduate and graduate students from Dr. Frensley's lab have worked with festival organizers to develop a short survey and collect data to assess participants' satisfaction and changes in their knowledge, attitudes, and behavioral intentions.

Evaluation data collected from a sample of adult participants attending the 2022 and 2023 festivals suggest this annual event has a strong positive impact (see Table). Individuals report learning a great deal about fire, controlled burns, and conservation. They also report very positive shifts in attitudes about prescribed burning and support of these practices to conserve natural ecosystems. Individuals also reported high satisfaction with the festival, and they were more likely to talk with others about what they learned and visit a longleaf pine forest after participating.

We thank The Orton Foundation for their ongoing support of this fire festival evaluation project. We are also looking for others who want to join us in assessing their fire education festivals as we seek to develop a "community of evaluation" to learn and improve together.

Volunteers Rally to Restore a Community Forest with Longleaf Pine and Wiregrass

NORTH CAROLINA

By Shelby Diehl, National Wildlife Federation

Participants dig a hole to plant a longleaf seedling alongside project leaders Luther Jones (pictured at the top) and Rob Drummond (far right). {Tiffany Woods}

In the North Carolina Sandhills stands Hoke Community Forest, which has over 500 acres of protected forest land belonging to the citizens of Hoke County. This forest once sat idle and underutilized, but now efforts are underway to rehabilitate the property into a thriving ecosystem and to provide recreational and educational opportunities for local citizens. To support these restoration efforts, the National Wildlife Federation partnered with Longleaf for All, the North Carolina Sandhills Prescribed Burn Association, Milliken Advisors, USDA Natural Resources Conservation Service, USDA Forest Service, and Hoke County staff to host its second annual longleaf pine tree planting this past December.

The event drew in over 30 participants, including children from local after-school programs such as Scouting America and 4-H. Volunteers were supplied with rakes, dibble bar planting tools, longleaf pine seedlings, and wiregrass seed to bring life back to a portion of Hoke Community Forest. By sundown, participants planted more than 200 trees and were given more to plant on their own properties.

The success of the seed and tree plantings are reminders of the community's dedication to conserving the natural landscapes that belong to them and their part in restoring this forest. This includes the young participants, who will be able to watch the trees grow along with them.

Learn more about the project at blog.nwf.org/2024/04/restoring-longleaf-pine-in-the-hoke-community-forest/

Show Me the Money — for Conservation Efforts

By Jennie Haskell, The Longleaf Alliance

SOUTH CAROLINA

Longleaf pine seedling and dibble bar {Jennie Haskell}

Partners within the Sewee Longleaf Conservation Cooperative collaborated to provide landowners information about financial opportunities for conservation activities in several workshops this spring. USDA Natural Resources Conservation Service (NRCS), South Carolina Forestry Commission, the Climate Smart Forestry Program with Clemson Extension, Partners for Fish and Wildlife Program, and The Longleaf Alliance shared information about the programs that are offered and how to apply. The cost-share programs cover a variety of forest management activities, like site preparation, tree planting, prescribed burning, invasive species reduction, and midstory control.

The USDA NRCS offers financial assistance with the Environmental Quality Incentives Program (EQIP) and the Conservation Stewardship Program for many conservation activities.

Now is a great time to apply because of the funding from the Inflation Reduction Act.

The SC Forestry Commission's Forest Renewal Program and the Southern Pine Beetle Program (SPB) will assist with planting trees with different restrictions. The SPB also assists with precommercial thinning or removing unmerchantable trees to reduce stress from competition. The Wildland Urban Interface program will assist with the cost of prescribed burning in specific situations.

The Climate Smart Forestry Program is the newest program available in South Carolina. It promotes agriculture and forest products to reduce greenhouse gases and sequester carbon. This pilot program is still accepting applicants for conversion from agricultural land to forest land or unmanaged forest land to a managed forest. For more information, contact climatesmartforestry@clemson.edu.

USFWS Partners for Fish and Wildlife Program provides assistance for properties that provide habitat for at-risk species, especially those within the longleaf pine ecosystem. On average, this funding provides a 50% cost-share for many restoration treatments. Contact Sudie Thomas at Sudie_Thomas@fws.gov or Bret Beasley at Brett_Beasley@fws.gov for more information.

Although the application window has closed for The Longleaf Alliance's 2024 Longleaf Planting Fund, make a note to apply in 2025 for this program available for landowners planting more than 5,000 seedlings and usually covers just the cost of the seedlings. Landowners are responsible for coordinating the planting efforts, including reserving the seedlings. TLA recommends landowners order the seedlings early to ensure seedling availability. This program is available for public and private lands.

The SLCC has limited funds for prescribed burning and planting efforts in Williamsburg, Georgetown, and portions of Berkeley and Charleston counties. For more information or to apply, contact Jennie Haskell at jennie@longleafalliance.org.

Restoring Longleaf Pine at Lisa Matthews Memorial Bay

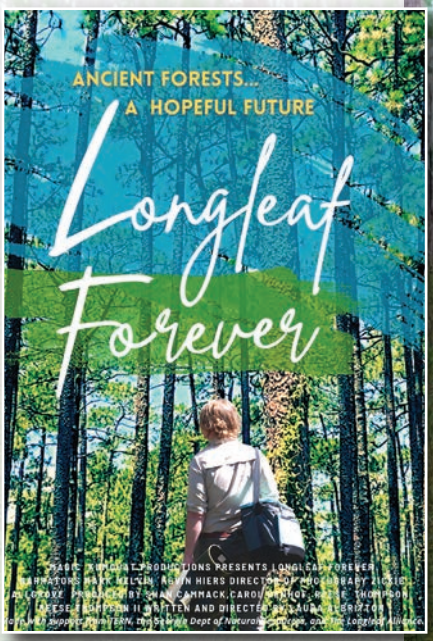
By Lisa Lord, The Longleaf Alliance

SOUTH CAROLINA

SCNPS and SoLoACE Partnership volunteers plant longleaf pine at LMMB. {Lisa Lord}

In the heart of Bamberg County, South Carolina, lies the Lisa Matthews Memorial Bay (LMMB), a 52-acre property rich with botanical diversity owned by the South Carolina Native Plant Society (SCNPS). The key feature and management focus is a population of federally endangered Canby's Dropwort (*Tiedemannia canbyi*) that occurs within the Carolina bay. The uplands have also been transforming for nearly two decades through longleaf pine restoration and the reintroduction of prescribed fire. The work at the LMMB has been carried out almost entirely by volunteers, many of whom have hand-planted longleaf pine and various native groundcover species, participated in burning, assisted with hardwood control, and helped with many other restoration activities.

In February, the SoLo-ACE (South Lowcountry and ACE Basin) Longleaf Partnership partnered with SCNPS to host a longleaf pine planting day, with volunteers from across the state participating. This day also helped to complete a stewardship activity included in the SCNPS's Natural Resources Conservation Service (NRCS) Conservation Stewardship Program (CSP) Agreement, the second agreement the SCNPS has had with NRCS to enhance stewardship of the property. The Solo-ACE Longleaf Partnership members provided valuable insights into best practices for planting longleaf pine seedlings, which, combined with the volunteers' passion, made this event a success!



Director Laura Albritton interviews Amaad Blades during filming

Today, landowners, biologists, and land managers are turning a story of habitat loss and decline into a hopeful environmental narrative of restoration and renewal.

Videographer Zickie Allgrove on location in an embedded wetland

Longleaf Forever is a compelling, short documentary film that plunges viewers into one of the most biologically diverse ecosystems on the planet. Divided into chapters, the film begins with an introduction by a forester, Paul Massey, who has spent his life conserving longleaf ecosystems in Georgia's Red Hills. The focus shifts to the remarkable life cycle of longleaf pines, beginning with seedlings that grow into 100-foot trees. In South Carolina, Nancy Basket, a Native pine needle basket maker, narrates how the histories of Indigenous peoples and longleaf forests are intertwined. On the Florida Panhandle, we discover the essential role of fire in longleaf forests, where animals, insects, and plants have evolved to thrive with regular fire cycles. Throughout the film, we hear from ecology experts including Mark Melvin, Kevin Heirs, Carol Denhof, Amaad Blade, Shan Cammack, Rick Anderson, Stephanie Heirs, and Erin Cork.

With more than 1 million acres of longleaf restored, the future of these ancient forests looks more hopeful. Director Laura Albritton explains, "Longleaf forests have faced destruction and exploitation for hundreds of years, but *Longleaf Forever* is ultimately not a tragic environmental story. One thing that attracted my filmmaking partner, Zickie Allgrove, and me to this subject is the ongoing commitment of conservationists, scientists, and landowners who have made a profound, positive difference."

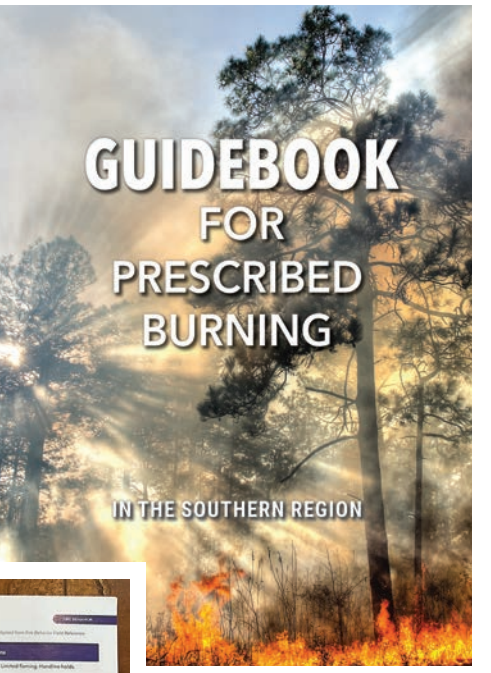
Official Selection at:
Outer Banks Environmental Film Festival
Wildlife Arts Festival
Ely Film Festival (Minnesota)
Colorado Environmental Film Festival
South Georgia Film Festival
Covey Film Festival
Redfish Film Fest (Florida)
Longleaf Film Festival
Wildlife Conservation Film Festival*
*Awarded Best North America Short

Watch* Longleaf Forever *at The Alliance's YouTube channel: https://longleaf.info/longleaf-forever

Longleaf Forever was directed by Laura Albritton with videography by Zickie Allgrove. Produced by Shan Cammack, Georgia Dept of Natural Resources, Carol Denhof, The Longleaf Alliance, Reese Thompson, and Reese Thompson II. Made with assistance from the Georgia Department of Natural Resources' Wildlife Division, The Longleaf Alliance, and The Environmental Resources Network (TERN).

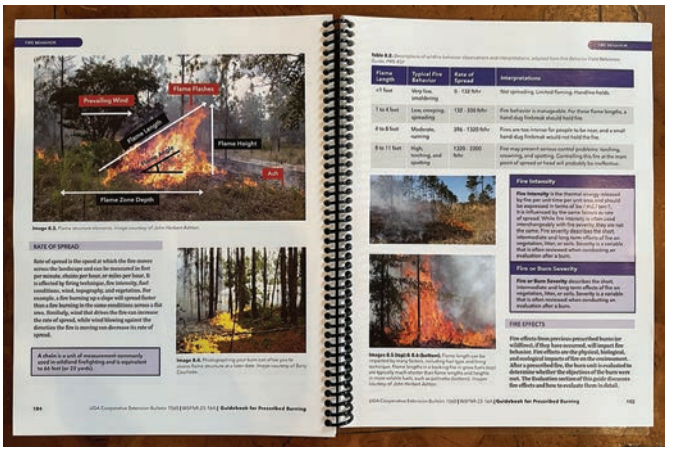
Reviewed by Lindsay Thomas Jr.

GUIDEBOOK FOR PRESCRIBED BURNING IN THE SOUTHERN REGION



Available online and in print, the Guidebook *uses graphics, tables, photos, and sidebars for quick and easy reference.*

To learn to use prescribed fire for deer habitat management, there's no substitute for participation in a well-run burn. Reading about fire, taking an indoor training course, and even watching videos won't fully prepare you for the experience of lighting a drip-torch and igniting your own prescribed fire. But safe, effective fire is a result of early planning and preparation.



As books on prescribed burning go, a new one from University of Georgia Cooperative Extension – available as a free PDF or a printed, spiral-bound edition for sale – is an excellent guide to the critical stages of preparing and planning your first fire.

The *Guidebook for Prescribed Burning* is not a book you'll read cover to cover and then put away. Instead, it's a process that helps you plan a prescribed fire by leading you through every step, from the earliest stages, months or even a year before you light any fire.

"Action" chapters make up the first half of the *Guidebook*, and they explain each step of determining your goals for the fire and planning the appropriate burn, including checklists you can check off as you go – right up until the actions you should take the day before and the morning of your planned burn. The action chapters take you all the way through conducting the burn and then evaluating your success and effectiveness.

The second half of the *Guidebook* dives deeper into information you'll use throughout the process, including a thorough understanding of how weather affects the safety and effectiveness of a burn, how to evaluate fuels, managing smoke, and understanding fire behavior. The amount of information is enormous: guides to tools and equipment, lists of online resources and apps, liability discussions, mapping tips, and much more.

The publication relies heavily on graphics, charts, diagrams, sidebars, photos, and tables to present the information, and all of it is well organized and labeled with prominent subheadings. Even experienced burn bosses will find useful information here, as the authors compiled tons of information and helpful resources for even the most sooty veteran. In fact, there are tables titled "Resources for Beginning Burners" and "Resources for Advanced Burners."

I particularly like that the printed version is spiral-bound. Not only is it easy to mark your place, but the book remains open to an important page if you need hands-free reference on a truck tailgate. For example, when you're following the instructions for assembling, filling, and lighting your new drip torch or reviewing the list of critical weather factors as you look them up in an online fire weather forecast on your phone.

How to Get the *Guidebook for Prescribed Burning*

Electronic PDFs of the *Guidebook for Prescribed Burning* are available for free. You can also purchase printed, spiral-bound copies online from the UGA Extension store for $42, which includes tax and shipping.

Boby, L.A., Fawcett, J.E., Clabo, D., Harriman, H., Maggard, A., Coulliette, B., Kays, L. & McNair, S. (2023). *Guidebook for Prescribed Burning in the Southern Region*. University of Georgia Cooperative Extension Bulletin 1560. UGA Warnell School of Forestry & Natural Resources Outreach Publication, WSFNR-23-16A

Lindsay Thomas Jr. of Georgia is the Chief Communications Officer for the non-profit National Deer Association.

Longleaf Destinations

Blackwater River State Forest

Prescribed burning around Red-cockaded Woodpecker cavity trees {Jacob Barrett}

While Florida is renowned for its humidity and heat, a visit in October offers a refreshing change and a comfortable time to explore its western Panhandle. When planning your visit to Sandestin Golf & Beach Resort for the 15th Biennial Conference (October 8-11), consider adding an excursion to Blackwater River State Forest.

Blackwater River State Forest is known for its longleaf pine/wiregrass ecosystem, which, in combination with the Conecuh National Forest to the north and Eglin Air Force Base to the south, is the largest contiguous ecological community of this type in the world. It is also the largest state forest in Florida.

Blackwater River

Blackwater River State Forest is named for the Blackwater River, which begins to the north in Alabama and meanders approximately 57 miles southwestward through the Forest into Blackwater Bay, near Milton, Florida. It is considered one of the cleanest rivers in the Panhandle.

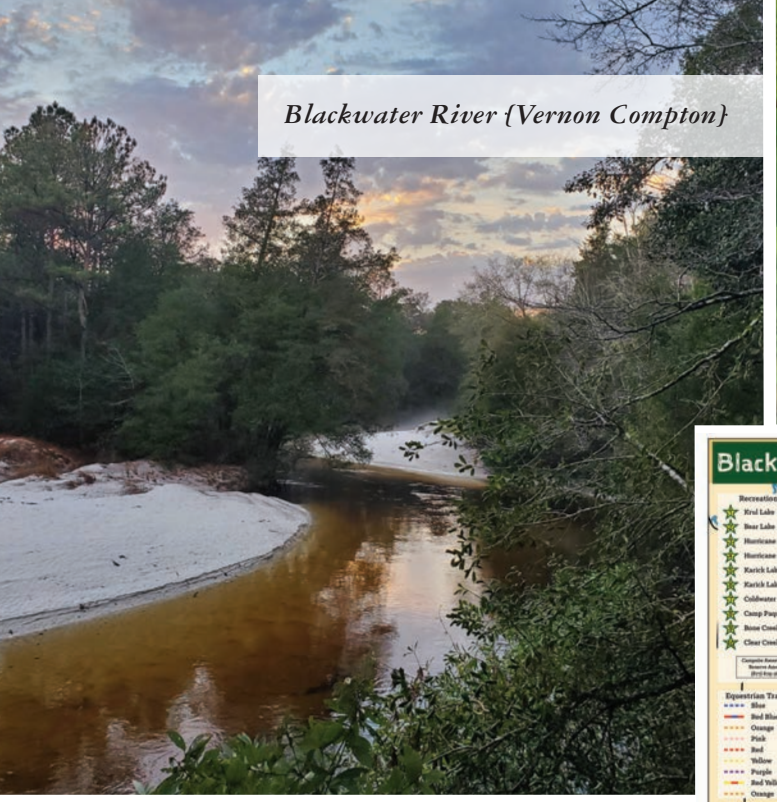
Blackwater River is one of the few shifting sand bottom streams that remains in its natural state for nearly its entire length. Other notable streams that flow through the Forest include Juniper Creek, Coldwater Creek, and Sweetwater Creek.

Canoeing and kayaking on these waterways are popular because of the cold summer waters and the plentiful white sand bars where you can stop and enjoy a swim or a meal. Several vendors provide canoe/kayak rentals and a variety of trips on the Blackwater River and Coldwater and Juniper Creeks. They include Adventure Unlimited Outdoor Center (www.adventuresunlimited.com, 850-623-6197), Blackwater Canoe Rental (www.blackwatercanoes.com, 850-623-0235), and Bob's Canoes (850-623-5457).

Natural Features

The Forest lies on the southern tip of sandy, red clay soil deposited over west Florida. Erosion shaped the land's surface into low rolling hills separated by winding water courses and broad floodplains. The changes in soil composition and the varying degree of moisture present in the Forest support at least five principal types of plant communities: longleaf pine/scrub oak, slash pine, swamp hardwood, loblolly pine/hardwood, and Atlantic white cedar.

Its pitcher plant bogs contain a diversity of carnivorous plants, including glistening sundews, butterworts, bladderworts, and four species of pitcher plants. Blackwater River State Forest has some of the largest pitcher plant bogs and seepage slopes found in Northwest Florida. Although abundant, these natural communities have sensitive soils, so please enjoy them with proper respect to the natural habitat to protect soils and water movement, which are vital to the health and resiliency of the bogs and seepage slopes.



Blackwater River {Vernon Compton}

White top pitcher plants {Vernon Compton}

Blackwater River State Forest is in the Florida Panhandle northeast of Pensacola, borders the Conecuh National Forest to the north, and extends southward toward Eglin Air Force Base. The approximate distance between the Longleaf Conference hotel and canoe rentals is 75 miles.

Total Acreage: 219,077
Counties: Santa Rosa, Okaloosa

Jackson Trail on Blackwater River State Forest is one of the many hiking trails that allows one to wander through the longleaf forests. Hiking trails stretch from just north of Eglin Air Force Base all the way to Conecuh National Forest through the Blackwater River State Forest. {Vernon Compton}

The Florida Forest Service maintains a proper balance between resource utilization and resource protection through sound multiple-use management practices. The Forest is managed for timber, watershed protection, wildlife habitat, endangered and threatened species, and recreation. The prescribed burn program enhances the habitat of native fauna and flora by controlling the hardwoods and underbrush that can replace the variety of fragile species. Thus, it helps maintain this critical longleaf pine landscape.

Things to do

Blackwater River State Forest offers outstanding recreational opportunities, such as hiking, canoeing, camping, birding, fishing, hunting, horseback riding, highway vehicle riding, and mountain biking. Ten developed recreation areas are located throughout. Visitors help support these outstanding recreational opportunities through modest fees for day-use activities and camping, where posted.

Three freshwater lakes serve as the focal point for freshwater fishing and camping. The lakes have picnic tables and grills, and one is an equestrian campground along Coldwater Creek that offers 69 miles of horse trails. All the lakes have tent camping, RV sites, and hiking trails; Bear Lake also has a loop bike trail. A boardwalk and hiking trail connect Krul Lake and Bear Lake, featuring an operational grist mill and a suspension bridge over Sweetwater Creek. Krul Lake is spring-fed and a favorite swimming spot for locals and tourists alike.

Plan accordingly; check the website for permit and pass fees, possible closures of recreation facilities and roads, and updates. www.fdacs.gov

TLA STAFF NEWS

Joel Lett joined TLA in early 2024 as the Invasive Species Technician, working with Invasive Species Coordinator Emma McKee. Joel is a Pensacola native with a diverse conservation and restoration background. From 2021 until 2023, he was a member of the Conservation Corps of The Forgotten & Emerald Coast. Starting as a crew member, Joel worked his way to crew leader, leading a five-person crew through many conservation and restoration projects. Joel has partnered with multiple state and federal agencies to preserve and conserve coastal, woodland, and wetland ecosystems. He is pursuing his Associate of Science in Natural Resource Conservation at Pensacola State College and plans to continue his education by pursuing a Bachelor of Science in Natural Resource Conservation with a focus in Forestry at the University of Florida. Welcome, Joel!

Donna Vassallo accepted a Herpetologist Research Assistant position with Eglin Air Force Base and the gopher tortoise recovery program in April 2024. Donna became the longest-standing member of the GCPEP Ecosystem Support Team (EST), which was formed in 2004 to help partners meet management and restoration goals associated with prescribed fire, invasive species, and rare species recovery. Donna started with the EST in February 2011 with The Nature Conservancy and began with The Longleaf Alliance when the EST moved to the organization in July 2012. Donna has had a tremendous impact on longleaf ecosystem restoration and management, becoming an expert with many vital actions, especially prescribed fire and rare species recovery. She also taught many staff members how to become better practitioners over the years. One of her greatest impacts was with the recovery of the Red-cockaded Woodpecker in the GCPEP landscape, particularly in Conecuh National Forest and Blackwater River State Forest. Populations were in danger of disappearing from these two forests at one time and have now reached a recovered population thanks to habitat management, fire, and a lot of cavity installation and maintenance. Donna's hard work and positive effects on the longleaf ecosystem are visible across the GCPEP landscape. We cannot thank you enough, Donna!

Samantha Dillon recently began a Research Associate / Master's Program with Texas A&M University studying border wall impacts on imperiled species. Samantha joined The Alliance in 2020 as a part-time seasonal restoration crew member with the reticulated flatwoods salamander (*Ambystoma bishopi*, AMBBIS for short) team. Her hard work ethic and great attitude quickly resulted in a full-time promotion to the Wetland Ecosystem Support Team and eventually back to the AMBBIS team as the lead Wildlife Technician. Sam has an impressive passion and knowledge for longleaf species ecosystem restoration and an infectious love for even the smallest of plants and animals. She developed an exceptional rapport with numerous GCPEP partners with her talent, skills, and leadership capabilities in the world of prescribed fire. Sam's impact in her time with TLA is immeasurable, and we look forward to the results of her continued career in conservation. Thank you, Sam, and best of luck!

Our network resembles an ecological ecosystem because of its complex interdependent parts.

Like an ecosystem, we network and support each other as we work toward our common goal of restoring and maintaining the well-managed longleaf pine forest and its precious and fascinating ecosystem. So, we offer support in all ways we can, travel many miles for this cause, and willingly carry out strenuous, challenging fieldwork.

With its unique blend of educational sessions, networking opportunities, and camaraderie, the Biennial Longleaf Conference (our 15th!) stands as the country's largest and longest-running longleaf gathering. Participants from across the range and businesses of all shapes and sizes contribute directly to this event, expanding our network and forming relationships that will energize all.

Although this anticipated event is just three months away (October 8-11th), there is plenty of time to commit to sponsoring as an individual or business. Please know that if you are considering a sponsorship, you are not putting money into our pockets; you are offsetting conference expenses, thus investing in the promise of securing and protecting the scenic longleaf vistas and the numerous wildlife and plant species that are dependent upon an open pine forest, and that we all treasure.

We could not host this event without the generosity of others. Please help us reach our $92,000 sponsorship goal!

15th BIENNIAL LONGLEAF CONFERENCE SPONSORSHIP OPPORTUNITIES

	GIVING LEVELS & INCENTIVES	$10,000	$5,000	$2,500	$1,000	$500
The Longleaf Leader	Quarterly Magazine Issues	✓	✓	✓	✓	✓
	Complimentary Advertisement*	Full Page (4)	½ Page (4)	¼ Page (4)		
	Electronic Delivery *(for Internal Use)*	✓	✓			
	Recognition in Winter Issue - Annual Report	✓	✓	✓	✓	✓
	Magazine Submission*	2-Page Article	1-Page Article	½ Page Article	Photo & Caption	
Media & Gifts	Press Release Acknowledging Contribution	✓				
	Quote for Company Use	✓	✓			
	Company Logo on TLA Website	✓	✓	✓	✓	
	Recognition at TLA Academies & Workshops	✓	✓	✓		
	Longleaf Themed Gift	✓	✓	✓	✓	✓
Biennial Conference	Individual Annual Membership – *Includes registration discount*	1	1	1	1	1
	Official Sponsor of Conference Social Event	Evening Celebration	Meal or Field Tour	Break	Hospitality Room	
	Complimentary Exhibit Space** & 1 Full Conference Registration	✓	✓	✓		
	Additional Complimentary Registrations	3	1			
	Company Logo on Printed Conference Materials	Prominent Placement	Prominent Placement	✓	✓	✓
	Company Logo & Link on Conference Website	Prominent Placement	Prominent Placement	✓		

**Partner must work with magazine editor on article content/publication timeline and follow submission guidelines. The Longleaf Alliance reserves the right to accept or reject advertising or editorial material submitted for publication.*
***Additional fees for exhibit may apply.*

Ready to join us? Contact Lynnsey Basala at (314) 288-5654 or Lynnsey@longleafalliance.org.

Interested in the Biennial Longleaf Conference but working with limited finances?

The 15th Biennial Longleaf Conference is coming to Sandestin, Florida on October 8-11, 2024. TLA established a fund to assist those who would not otherwise have the means to attend the Biennial Longleaf Conference. Waivers are awarded on a first-come, first-serve basis until funding is depleted. More information will be available July 1 at longleafconference.com.

Special thanks to Dick & Rita Porterfield and Ralph Lewis Withrow Legacy Fund.

{Samantha Dillon}

CONFERENCE CONNECTIONS

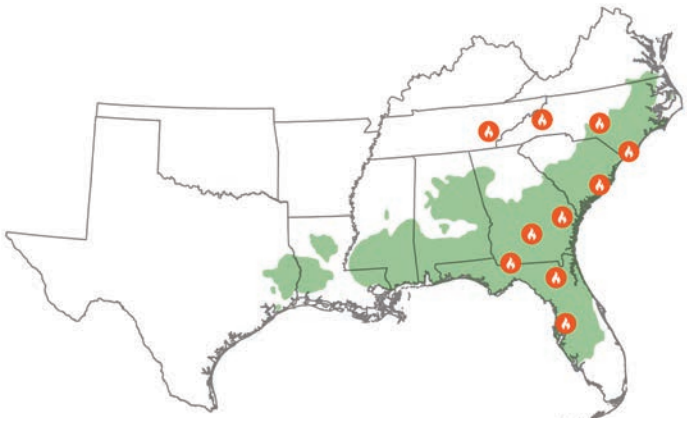
We are looking forward to the 15th Biennial Longleaf Conference, which will be held from October 8 to 11th at the Sandestin Golf & Beach Resort in Miramar Beach, Florida.

As organizers of the Biennial Longleaf Conference, The Longleaf Alliance aims to provide a venue where people interested in and passionate about the longleaf landscape can learn from, brainstorm with, and connect to fellow longleaf enthusiasts and practitioners. Conference attendees form new relationships with potential collaborators from different regions or even their own "backyard." Just as important, the Conference's synergy provides new perspectives and collaboration opportunities with existing partners and longleaf friends. **We hope this year's attendees have such positive experiences and outcomes as those shared here.**

2008 Longleaf Conference in Sandestin, Florida: Dean Gjerstad (left), Rhett Johnson (right), with keynote speaker E.O. Wilson

We had our **first region-wide longleaf conference** almost on a shoestring and on the spur of the moment in Mobile, Alabama, in 1996, just one year after founding The Alliance. We had no idea what to expect and were surprised to have about 250 attendees from an amazing diversity of backgrounds and interests. In fact, we started calling our conferences the "boots to sandals" crowd; we had foresters, loggers, entomologists, ornithologists, herpetologists, historians – people from a lot of different perspectives who were interested in the longleaf forests. We knew then that we were onto something. – *Rhett Johnson, Co-founder of The Longleaf Alliance*

Following the "Fire It Up! - Planning and Leveraging Fire Festival Events" panel organized by Wendy J. Ledbetter at the 2022 Longleaf Conference, there was interest from festival organizers in learning more about each other's efforts. Since then, a **Fire Festival Learning Group** was formed and has been meeting regularly; we even have a collaborative event planned for this year's conference. Hope to see you there! - *Jennifer Fawcett, North Carolina State University*



Festival locations with representatives participating in the Fire Festival Learning Group

Prescribed fire with Aiken Prescribed Fire Cooperative members {Bennett Tucker}

The development of the **Aiken Prescribed Fire Cooperative** (APFC) was fueled by the 2022 Biennial Longleaf Conference in Wilmington. During the poster presentation and evening social, several SoLo-ACE Longleaf Partnership members discussed the presentations they enjoyed earlier in the day; someone asked, "So what would it take to get a PBA in the Aiken area?" In just a few minutes, several people in the room joined the conversation and enthusiastically began brainstorming. Jenn Fawcett had coordinated a session earlier in the day on Prescribed Burn Associations and how they impact the communities and increase fire on the landscape. Many of us have wanted to do just that, but having a core group of interested people willing to plan landowner meetings and coordinate was all we needed to light the torch that has become the APFC.

– Jennie Haskell, The Longleaf Alliance, and Bennett Tucker, Hitchcock Woods Foundation

Before the popularity/rise of TikToks and Instagram reels, the idea of concise educational videos was relatively unexplored; yet the opportunity to grab people's attention on various media platforms has always been brief. In 2018, at the Longleaf Conference in Louisiana, two North Carolinians enjoyed refreshments at one of the many socials while chatting about these topics. The spark of an idea took shape. Fast forward a year – scripts were written, Brady Beck shot all the video, and Abigail Dowd was recruited as narrator. The result? The **Longleaf on the Short video series** with eight 1-minute segments focusing on a different topic related to the longleaf ecosystem. Sometimes collaborators need a change of scenery, the opportunity to socialize, and a fresh perspective to be inspired – the Longleaf Conference does precisely that. *– North Carolina Longleaf Coalition*

In 2016, I jumped into the 11th Biennial Longleaf Conference in Savannah, Georgia, despite it only being my second week as the Longleaf Pine Coordinator for the North Carolina Forest Service. The Conference not only introduced me to leaders in the field from across the Southeast but also allowed me to meet and interact with many partners from my state. It would have taken me months to achieve the same results independently. Now it's 2024, and the upcoming 15th Biennial Longleaf Conference will be my third stint as conference coordinator and my fifth time attending. Reflecting on previous conferences, I can quickly identify how each experience led to **professional milestones**, not to mention the many happy memories of connecting with longleaf friends. I hope you have (or soon will) experience the same.

– Sarah Crate, The Longleaf Alliance

I spent weeks and months poring over maps, searching the literature, and patiently setting up meeting after meeting to identify research sites in all nine longleaf states for my **genetic study of longleaf pine**. But I accomplished more work in 2 days of the Longleaf Conference in Wilmington, NC (my 3rd!) than in all that time at my desk. It was an incredible accelerator – I was able to ask a question and be pointed across the room to the expert with the answer… over and over again! I left that meeting with all the knowledge and contacts I needed to complete the second half of my research sampling, and I met a lot of delightful people along the way that I look forward to catching up with in October!

– Kelly Petersen, University of Georgia

Registration details at longleafconference.com

Sign up by August 15th for discounted rates. Registration waivers also available.