THE LONGLEAF LEADER

Longleaf Communities

VOLUME XIII - ISSUE 1

SPRING 2020

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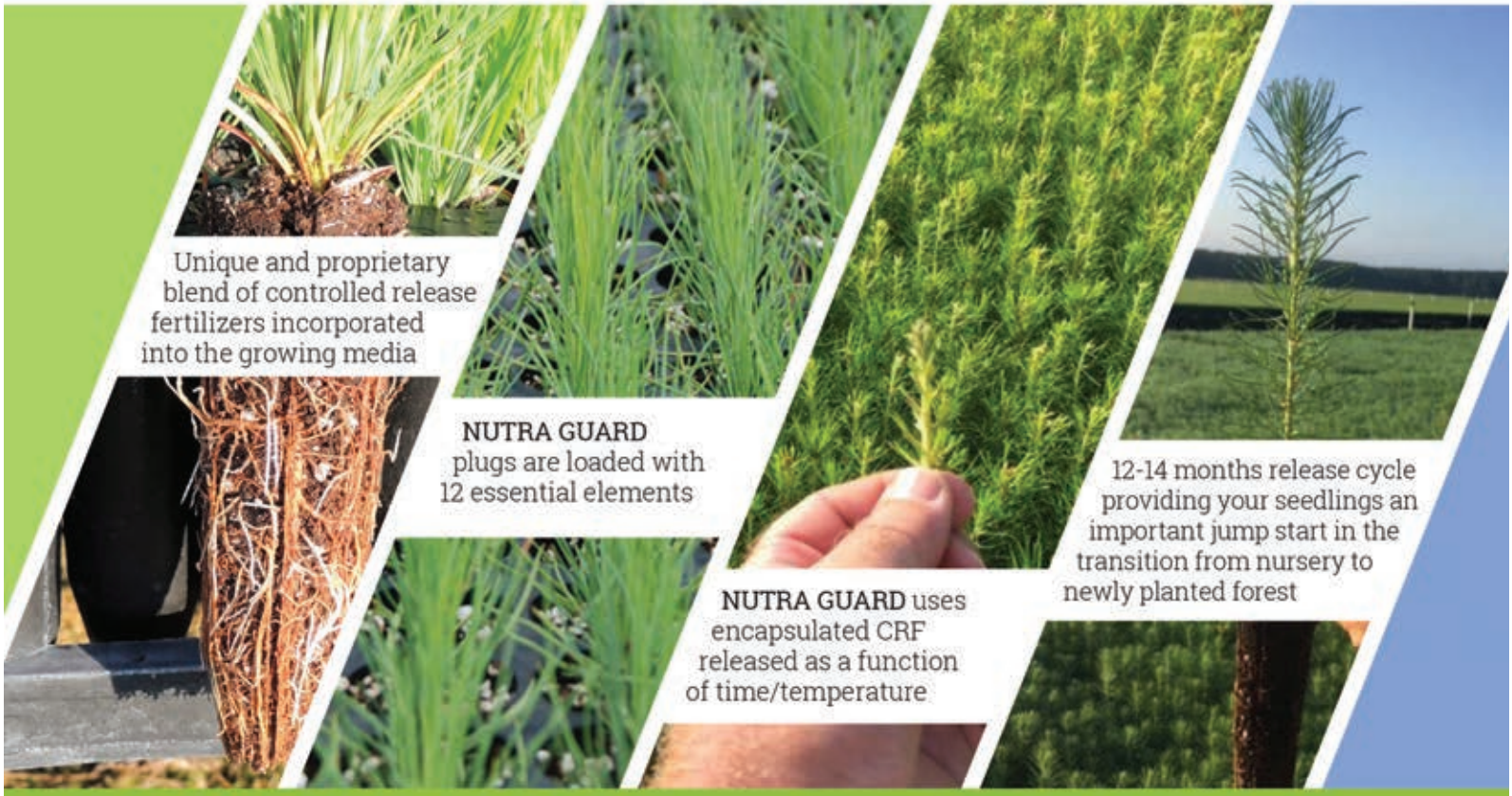

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COVER Burner Bob® leads a crowd to the prescribed fire demonstration at Party for the Pine in Southern Pines, NC (2018). Fire festivals bring communities together, connecting the importance of prescribed fire to longleaf pine conservation. Photo by Brady Beck.

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PRESIDENT'S MESSAGE

CAROL DENHOF

A Sense of Community

With this issue, we delve into the discussion of the resiliency of longleaf forests, the focus of our 13th Biennial Longleaf Conference that will be happening in Wilmington, North Carolina, in October 2020. The speaker tracks will explore how building resilient forests can positively impact communities, long-term conservation, healthy forests, and diverse ecosystems. Beginning with this issue, *The Longleaf Leader* will expand on each of these speaker track subjects to build momentum and interest as we approach the conference.

Community is a common thread that is woven through the story of longleaf. Whether you are talking about plant or animal communities, human communities that are affected by well-managed forests, or the community of partners who are working together to bring back longleaf, this sense of community drives our resolve to restore and protect longleaf ecosystems. With the first issue in this resilience series, we are narrowing in on the impacts that longleaf makes on our human communities.

One of the most significant benefits that well-managed longleaf forests can provide to communities is the reduced risk for wildfire. We live in a region where fire has always occurred on the landscape. Our forests first burned naturally due to the high density of lightning occurrences in this area and then as a result of human applied fire for managing the forests. When fire is prevented in these systems that have evolved with fire, it's not a matter of if it will burn, but when and how it will burn. By using prescribed fire to manage our longleaf forests, we are controlling the narrative so that the risk of wildfire is greatly reduced. This has a profound impact on the people who are living in that wildland-urban interface.

The Longleaf Alliance also collaborates with partners to learn more about other ecosystem services that longleaf forests can provide to communities. Landowners can not only manage their forests for traditional products like timber and pine straw, but they can also work with carbon companies to earn carbon credits for conserving longleaf habitat. Well-managed forest habitats also play an important role in water filtration that has profound effects on drinking water supplies.

We work with partners and landowners to bring more awareness to these benefits that forests, and longleaf forests in particular, provide to communities throughout the southeastern United States. Our message is that *forests matter, not only the animals and plants that inhabit the system but also* to *the people that depend on them*. By working together we can make these forests more healthy and resilient.

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2020 | Calendar

April 18
Day in the Woods
Gaskins Forest Education Center
Alapaha, Georgia

Party for the Pine
Boyd Tract, Weymouth Woods
Sandhills Nature Preserve
Southern Pines, North Carolina

May 12 - 14
Longleaf Academy: Longleaf 101
Pee Dee Research & Education Center
Florence, South Carolina

May 16
Longleaf Festival
Harris Lake County Park
New Hill, North Carolina

July 7 - 8
Longleaf Academy: Herbicides & Longleaf 201
Cumberland County,
North Carolina

August 11 - 13
Longleaf Academy: Herbicides & Longleaf 201
Wesley Center
Woodworth, Louisiana

October 20 - 23
13th Biennial Longleaf Conference
Hotel Ballast
Wilmington, North Carolina

Event dates subject to change before registration opens. For more information, please visit The Longleaf Alliance website (www.longleafalliance.org).

SPRING 2020 MANAGEMENT CHECKLIST

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

- **Planting Longleaf:** Order seedlings for future plantings early. Sometimes nurseries sell out of preferred seed sources by early summer. A list of preferred nurseries can be found at www.longleafalliance.org.

- **Herbicide Treatments:** Assess stands for herbaceous competition to determine if there is a need for chemical release, especially on former agricultural sites. If using any Oust® product, test pH to ensure it is below 6.2 to avoid seedling mortality. For any release, avoid periods of stress or late-planted seedlings.

  Apply hexazinone as a site prep treatment or to control oaks on sandy sites after bud-break but before full leaf-out. Hexazinone is tough on oaks but easy on many desirable understory species.

  For site preparation following a cutover, ensure adequate time for resprouting to develop before applying a herbicide treatment. If in doubt, wait a year to improve the effectiveness of treatment.

- **Prescribed Fire:** Evaluate what you burned in the winter to determine if you accomplished your desired fire effects.

  Burn young longleaf stands invaded by short needle pines or hardwoods that are too large to control with winter burns.

  Avoid disking firelines around wetlands and ponds; reptiles and amphibians are actively traveling to wetter areas for breeding.

  Use growing season fire in wiregrass to promote viable seed production and increase wildflowers.

  Conduct a seedbed preparation burn on mature longleaf stands that have good cone crops developing to promote better natural regeneration. The goal for when natural seed fall occurs in October/November is to increase the likelihood that seed falls on bare mineral soil, but not so clean that predators will find and eat most of the new seed.

- **Mowing Treatments:** Avoid complete mowing in the spring to early summer to reduce the loss of ground-nesting birds. Mowing can be a tactical tool but consider combining it with periodic patch burning to enhance habitat development and condition. Most birds will re-nest if damage does occur, and suitable habitat is near.

- **Plant Native Warm-Season Grasses:** Plant before mid-May and hopefully avoid summer droughts.

Give The Longleaf Alliance a call with any questions you may have pertaining to establishing or managing longleaf stands. 334.427.1029

Q&A

Q. Dear Longleaf Alliance,

I have scattered 30-50-year-old longleaf trees that are dying on my property in west Georgia. I am, of course, concerned that there is something that might be spreading. Which bugs or diseases should I be worried about?

Worried in Vienna

A. Dear Worried,

Longleaf pine is the most insect and disease resistant of all the southern pines. But the tree is not immune to insects and disease. The usual suspects for scattered mortality are pine bark beetles, specifically *Ips* beetles and black turpentine beetles. These beetles attack trees already under stress from drought, lightning strikes, root damage from wind or logging, and from competition in thick stands. Both *Ips* and black turpentine beetles are not as aggressive or spread as rapidly as southern pine beetles, but the scattered mortality they cause can be problematic. There usually is not enough volume of dead and dying trees to warrant salvaging the timber, so any mortality is lost income.

Ips engraver beetles are opportunists that are attracted to stressed trees, logging debris, and damaged branches. They usually infest the crown of the tree by boring through the bark, tunneling, and feeding on the live tissue underneath the bark, and laying eggs. While the initial attack is in the crown, the beetles will spread down the stem. The first evidence is yellowing and browning of the crown. The infestation may spread to 3-8 adjacent trees. By that time, woodpeckers, sapsuckers, and clerid beetles will find the infestation, and their feeding will cause the spot to collapse, ending any further damage. Mortality is usually limited to single trees or small groups.

Black turpentine beetles are the largest of the pine bark beetles in the South and usually get into trees damaged in logging operations or with some root damage. They typically infest the lower 6-8 feet of the tree trunk where the adult beetle entrance holes are marked by a large, conspicuous, quarter to half-dollar sized glob of pitch. Like *Ips* beetles, they bore into the bark and make tunnels in the living tissue underneath, feeding and breeding. Usually, black turpentine beetles are limited to single trees or small groups, and healthy trees may survive the attack.

Root rot caused by *Heterobasidion annosum* can also cause mortality that starts as scattered groups of trees dying, but the patches gradually increase in size. Root rot can enter a stand of pines on sandy soils after logging during the cooler months of the year when the fungus is producing spores that land on fresh-cut stumps. Recommendations are usually to log in the hot months when warm temperatures readily kill the spores or treat the fresh-cut stumps with borax if logging during the cooler months. Root rot is not usually a significant problem in longleaf. The fungus can infect longleaf pine roots, but the disease progresses much slower than with loblolly or slash pine, so you may see scattered mortality.

Pines that have been subject to high wind events such as hurricanes or tornados can also suffer mortality, often months after the event. Many times, trees that show little or no damage after the storm will start dying months later from root damage.

Finally, prolonged drought can take out weaker trees. When you go from really wet weather to a period of hot, dry weather as much of the South experienced this past fall, mortality can occur. Going from one extreme to the other may stress trees, and the weaker trees are more susceptible. Sometimes, multiple factors combine, whether lightning, insects, disease, wind, and extremes. While one factor alone may not have caused the death of the trees, a combination of factors can. What our friend, the late Dr. Bob Mitchell, termed “an accumulation of insults.”

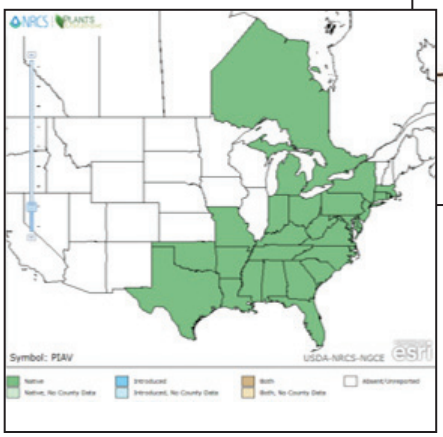
The bottom line is to seek professional expertise to make the correct diagnosis. Your local forestry commission, extension service, or consulting forester can assist you in the field to determine the cause of mortality and possible remedies and has the advantage of knowing local conditions, markets, and weather. The staff of The Alliance responds to requests like this by phone, email, trading photos, or, if possible, a site visit, but also teams up with expert partners across the South for faster response times.

Sincerely,
The Longleaf Alliance

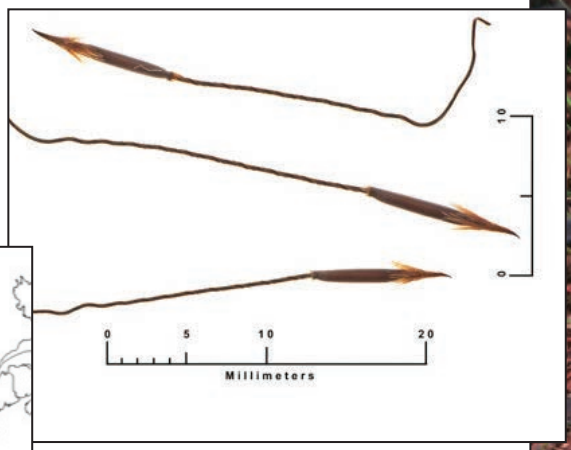
By Carol Denhof, The Longleaf Alliance

PLANT SPOTLIGHT

Piptochaetium avenaceum (L.) Parodi
Blackseed Needlegrass
Grass Family – Poaceae



Map showing distribution of blackseed needlegrass. USDA PLANTS Database.



Long-awned seed of blackseed needlegrass. Photo courtesy Bruce Leander, Lady Bird Johnson Wildflower Center.

Tufted grass clump of blackseed needlegrass. Photo by James H. Miller & Ted Bodner, Southern Weed Science Society, Bugwood.org.

Description

Blackseed needlegrass is a densely tufted, perennial grass with relatively short, wiry leaves that measure up to 20 inches in length. The leaves are dark green in color and have a wiry appearance because the leaf blades are tightly curled inward. This is one of the few grass species in longleaf forests that bloom in the spring. The flowering stem of blackseed needlegrass is arranged in loose panicles with multiple spikelets (grass flowers). The spikelets have long awns that will twist and contort as they mature.

Distribution & Habitat

This grass species occurs in dry, open hardwood forests, longleaf pine forests, dry to mesic mixed pine/hardwood forests, and sandy woods. This species is a dominant grass species in montane and piedmont longleaf forests. It has a wide distribution, growing beyond the boundaries of the longleaf range.

Wildlife/Medicinal Uses

This species has limited wildlife food value; however, the seeds are sometimes consumed by songbirds. It is an important prescribed fire fuel source though in parts of the longleaf range where it is a dominant groundcover component. These prescribed fires are essential for maintaining quality wildlife habitat.

Plant Availability

This plant is sometimes available through native plant nurseries and seed companies.

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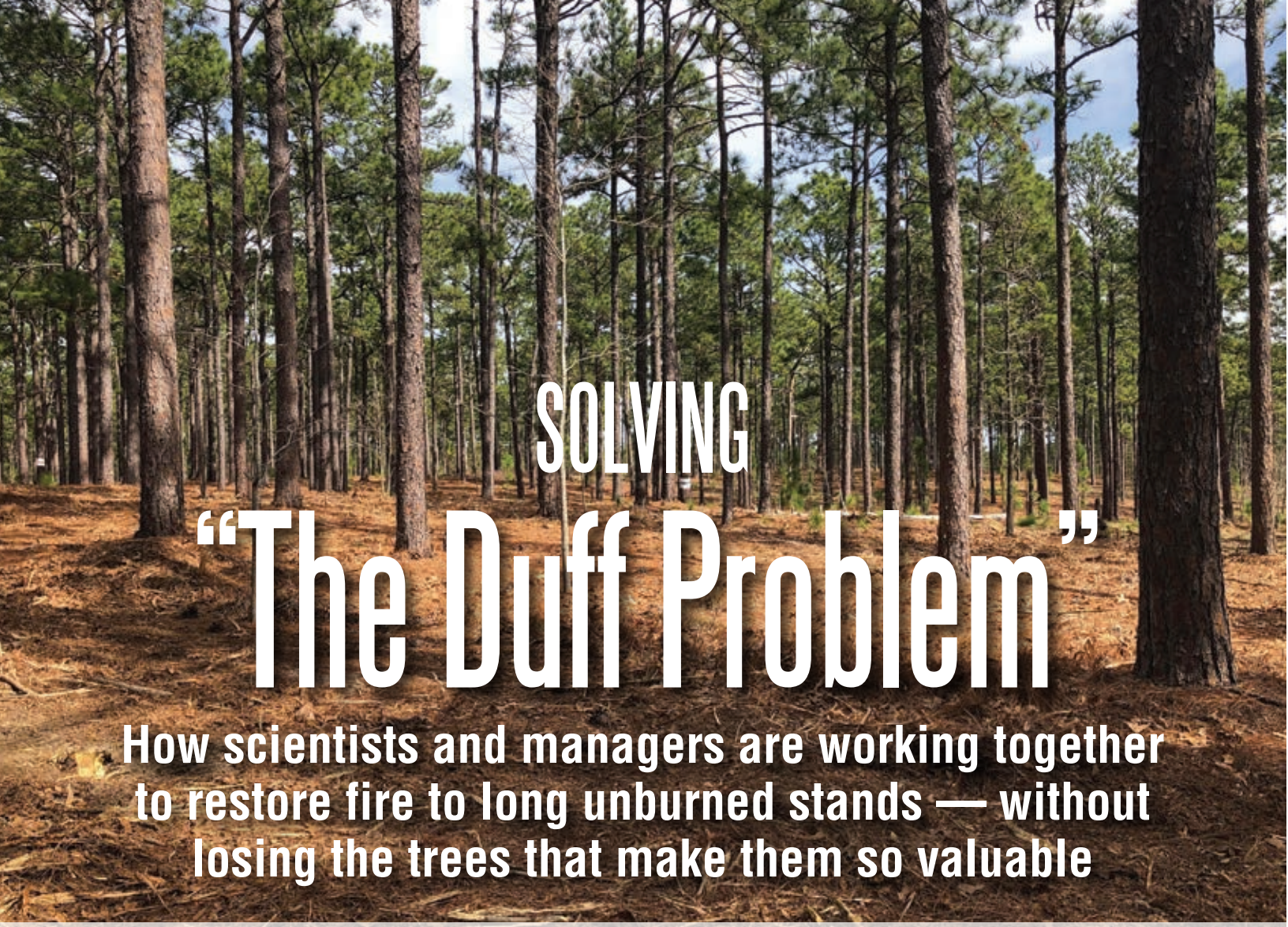


SOLVING "The Duff Problem"

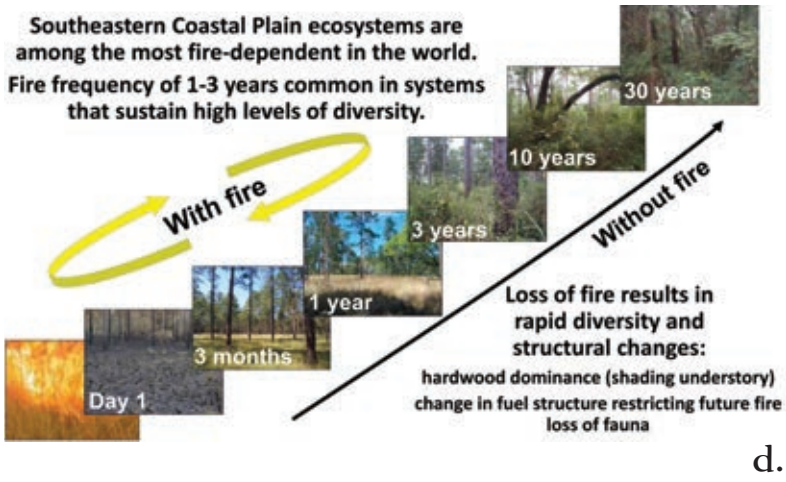
How scientists and managers are working together to restore fire to long unburned stands — without losing the trees that make them so valuable

By Laurel Kays and Dr. David Godwin, Southern Fire Exchange

Mechanical understory removal at Bonnie Doone. Photo by Laurel Kays.

The basics of the longleaf pine story are familiar – an ecosystem of incredible biodiversity stretching across some 90 million acres was winnowed down to a tiny fraction of its former glory by timbering, the naval stores and other forest industries, land clearing, and fire suppression. Today, remnants of old-growth longleaf pine are few and often far between. Those old-growth stands that remain, along with younger stands that still contain large trees, are precious resources and often priorities for restoration efforts. Counterintuitively, one of the pressing threats to some stands comes from the very thing that they need the most – fire. The collaboration between scientists, managers, and science communicators to address this challenge offers a potential roadmap for addressing other complex management problems.

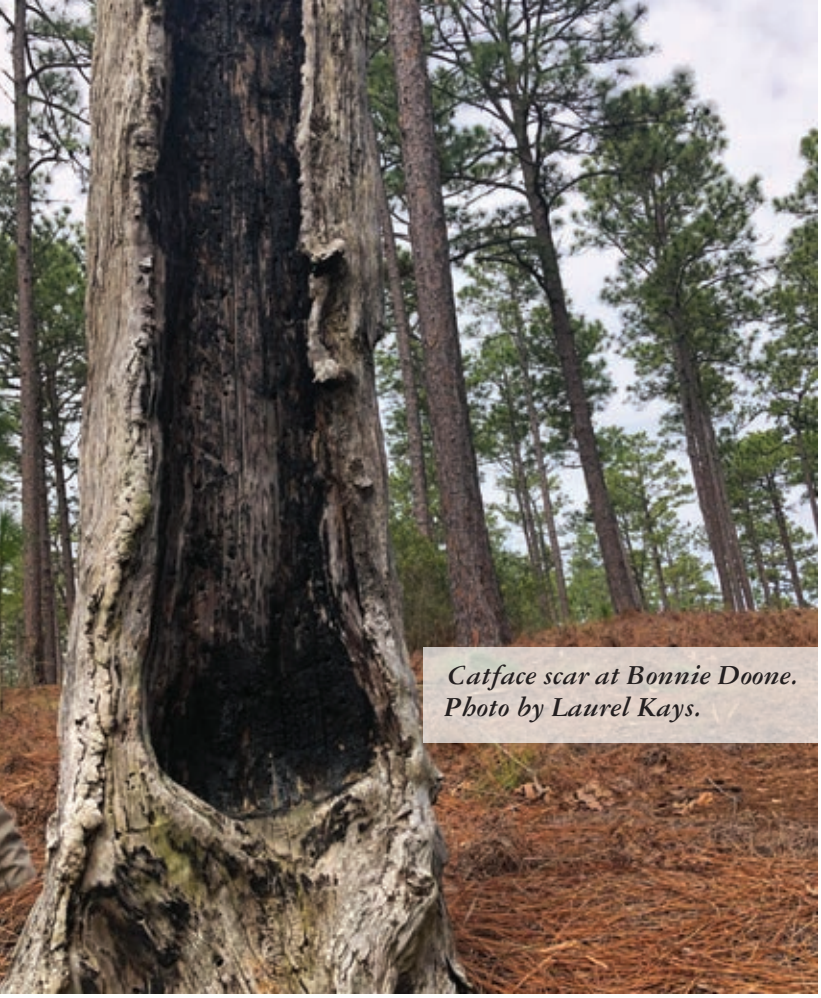
Reintroducing fire into old-growth longleaf stands, or younger stands containing large trees can be challenging because of the changes that take place in the absence of fire. When fire is excluded, pine needles, leaf litter, bark, and other material accumulate and form a layer of duff. This can happen surprisingly quickly due to the long growing seasons and short fire-return intervals to which longleaf ecosystems are adapted. Duff collects most noticeably in mounds around larger, often older, trees. If fire is reintroduced without careful consideration, it can easily ignite these duff mounds, resulting in long-term smoldering that can lead to the death of these most ecologically and economically valuable trees. Mortality is often delayed, appearing 12-18 months after what may have previously appeared to be a successful burn. Duff fires can also pose significant challenges for land managers that include prolonged smoldering, lingering smoke production, difficult mop-up, and potential for unplanned reignition. Yet for all these challenges, reintroducing fire remains essential to restoring degraded longleaf stands. Inaction comes with its own, inevitable threats: a lack of longleaf regeneration that eventually converts the stand to another forest type or a wildfire that causes mortality through crown scorch or duff smoldering. This "duff problem" occurs in many areas across the United States, where mature trees historically experienced frequent, low-intensity fires and where fire has been excluded. Affected species include not only longleaf and some other southern pines, but red pine, ponderosa pine, and many others.



a. Dr. Morgan Varner examines the duff mound of a longleaf pine on the Bonnie Doone tract. Photo by Laurel Kays. b. Participant at the first duff workshop in Florida in 2017 using a moisture meter to measure duff moisture content. Photo by Dr. David Godwin. c. Duff layer in unburned pine stand. Photo by Dr. Morgan Varner. d. Fire as a maintainer in southern pine systems. Graphic adapted from Kevin Hiers. e. Large duff mound at the base of a longleaf pine tree. Photo by Dr. David Godwin.

Fire managers in the South have been observing duff-related mortality for over two decades in southern pine species, most notably longleaf. Growing awareness of the imperilment of the longleaf ecosystem in the 1990s led to efforts not only to reestablish longleaf stands across the native range, but also to restore, maintain, and protect remaining stands. That, of course, meant reintroducing fire. In locations such as Eglin Air Force Base, home to some of the largest remaining areas of old-growth longleaf in the South (Turner et al. 2003), early fire restoration efforts led to substantial overstory tree mortality. At that time, the underlying mechanisms behind these losses and strategies to prevent them were not well understood.

Scientists took note, and working together with managers they ultimately concluded that smoldering duff led to the consumption of the tree's vital feeder roots. If too many feeder roots were burned away, the tree would perish. Managers working in areas facing significant duff-related issues also began to develop strategies to reintroduce fire without causing mortality. While there are certainly no silver bullets, managers found that a key element of successful duff reduction is burning when duff is sufficiently moist at all horizons. This means carefully tracking and assessing duff fuel moisture at multiple locations throughout the stand is crucial. Unfortunately, existing tools for tracking moisture, such as KBDI, may not be sufficient for assessing duff moisture. Experienced managers often suggest digging into the duff around multiple mature trees on a tract prior to



Catface scar at Bonnie Doone. Photo by Laurel Kays.

burning to assess the underlying moisture conditions. Some managers have learned to use moisture probes to rapidly assess duff moisture levels to develop site-specific quantitative moisture content thresholds to help them make burning decisions (Klaus 2016). Many managers will also suggest timing prescribed fires to burn on the margins of combustion (particularly after *and* before rain) to slowly consume small amounts of duff over a period of multiple burns.

Unfortunately, advances in understanding the "duff problem" that are documented in scientific journal articles and academic conference proceedings may hold little value for busy natural resource managers who may not be aware of or have access to such materials. Likewise, management knowledge gathered from hands-on experience may not be documented in these academic outlets. The Southern Fire Exchange, a Joint Fire Science Program funded partnership among the University of Florida, Tall Timbers Research Station, NC State University, and US Forest Service Southern Research Station, exists to bridge this gap between the fire science and natural management community in the South. Over the last three years, SFE has partnered with leading duff researchers and managers such as Dr. Morgan Varner and Kevin Hiers (both with Tall Timbers Research Station) to share their duff fire science research and management experience in ways that are accessible to the management community. This effort has included three videos, a fact sheet, a site visit, three workshops, and an additional workshop scheduled for this spring.

Find SFE's videos and fact sheets at go.ncsu.edu/duffresources

The three workshops alone were attended by over 100 scientists, managers, landowners, and outreach professionals who collectively own, manage, or influence over 4.3 million acres. One of those workshops was specifically organized for landowner members of the NC Sandhills Area Prescribed Burn Association. These landowners were unable to attend a previous duff workshop held in the area due both to capacity restrictions and the fact that the workshop was held during weekday business hours to target land management professionals. The landowner-focused workshop allowed PBA members to learn about duff fire science and management during a shorter evening program that was tailored to suit their needs. Across all workshops, including the PBA-focused one, evaluation data indicates that many of these participants intend to change their management based on the information they learned during the workshop.

Longleaf pine on the Bonnie Doone tract. Photo by Wendy Dunaway,

The professional-focused duff workshop held in North Carolina also included a pre-workshop visit to the kind of site where duff-related issues loom the largest. The 262-acre Bonnie Doone tract is one of the largest remaining old-growth longleaf pine stands in North Carolina. Owned by the City of Fayetteville Public Works Commission, those managing the site seek to restore it not only to provide red-cockaded woodpecker habitat and preserve the history of the area but to diminish the threat of stand loss or damage due to wildfire. The Southern Fire Exchange-led visit brought leading scientists and managers from organizations including NC State Extension Forestry, Tall Timbers Research Station, Alachua Conservation Trust, and US Forest Service together with those managing Bonnie Doone to discuss how to practically reintroduce fire to the site while minimizing the risk of losing the old trees that make it so precious. While even those duff experts had no easy answers, the conversation provided actionable steps to begin the process of

reintroducing fire to Bonnie Doone. The visit also opened a line of communication for the visiting experts to continue to provide assistance to local site managers and potentially gather data to further inform scientific investigations into duff.

Smoldering duff-induced mortality and the management techniques that can effectively restore fire to long unburned stands while minimizing overstory mortality are by no means settled issues. Many questions remain, and scientific research and management practices continue to develop. It is not known, for example, how research conducted in longleaf pine systems translates to certain other pine ecosystems, such as those found in the Southern Appalachian Mountains. These questions are increasingly pressing, particularly as climate change is predicted to increase wildfire incidence and make prescribed fires progressively more challenging to conduct in the Southeast. This collaboration among science, natural resource management, and knowledge exchange partners to address "the duff problem" offers a successful model for addressing the many challenges, climate change-related and otherwise, that face the longleaf pine ecosystems of the South.

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Coauthor Heather Moylett in search of bees at one of the study sites at the Walthour Moss Foundation. Photo by Clyde Sorenson.

Prescribed Fire is Beneficial for Native Bees in Longleaf Savannas

By Clyde Sorenson, Heather Moylett, and Elsa Youngsteadt
North Carolina State University

A cellophane bee (Colletes) *gathering nectar. This is a solitary, ground-nesting native bee that likely benefits from increased bare soil and floral resources after a fire. Photo by Clyde Sorenson.*

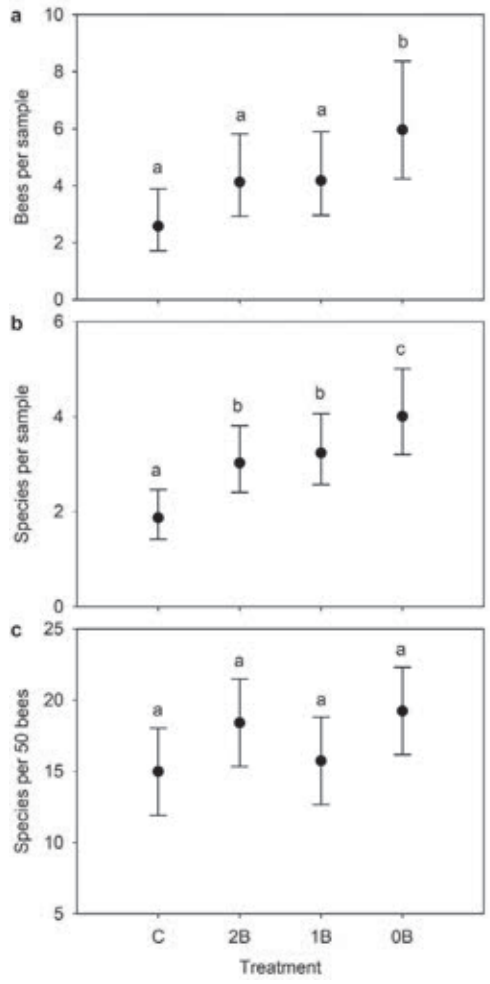
Gazing at a healthy longleaf pine savanna, most of us reading this publication will probably be aware of two things. First, the lovely vista before us would not be there except for the occurrence of frequent, low-intensity fire. Second, (and here I might be asking you to draw on that introductory botany course you took in college), the dominant plants in this vista, the pines themselves and the grasses underneath, are wind-pollinated. However, the real biological beauty of a longleaf ecosystem is the tremendous diversity of other, mostly herbaceous plants that thrive among the pines and the wiregrass; these, in turn, help support a great diversity of animals. Insects pollinate most of these other plants, and, as in most ecosystems, native bees are the most important pollinators.

Native bees in the southeastern United States range in size from perhaps an eighth of an inch to well over an inch in length. While a few are social insects that establish fairly populous colonies, most are solitary creatures, with each female establishing her own nest and taking care of her offspring. Native bees nest in a diversity of habitats, from tunneling into solid wood, to occupying a stump hole, excavating the pith out of the dried stems of herbaceous plants or, most frequently, burrowing into the soil. Our natives also exploit nectar resources in a wide range of ways. Some are tightly tied to one particular nectar resource and only emerge when that group of plants is blooming, while others forage on almost any nectar-bearing flower and persist pretty

much throughout the growing season. Given this great diversity in lifecycles and behavior, it's reasonable to assume that fire might affect some differently from others.

To document the effects of prescribed fire on native bee diversity and abundance, we conducted experiments on the property of the Walthour-Moss Foundation north of Southern Pines, North Carolina. The roughly 4,000 acres are largely covered in upland longleaf savannas typical of the Carolina Sandhills, and the managers have instituted a three-year burn rotation in burn blocks of approximately 50 acres on about 90 percent of the property. This landscape provided an ideal opportunity to investigate the effects of fire on bees. The fire management regimen allowed us to simultaneously sample plots that had been burned that year, one year earlier, and two years earlier—or that hadn't seen fire in more than 50 years. These no-burn control blocks were similar in size and soil type to the burned blocks but had converted to a closed canopy, oak and pine forest. At the time of our studies, the managers used dormant season burns.

To survey the bee community, we deployed bee bowls—traps made of small plastic cups painted white, blue, or yellow and filled with soapy water. We sampled bees on transects in four plots per burn treatment (16 plots total), every two weeks throughout the growing seasons of 2012 and 2013, for a total of 23 sampling events. We also measured vegetation characteristics each year in all our plots. Over the two years, we caught 2,276 bees of 109 species. (Between this study and another conducted at the same time, we captured a total of 137 species of bees, which is about ¼ of the total diversity of bees in North Carolina, on this relatively small property!) Our data analysis indicates that there are still more species to be found on the site.



Effect of burn treatment on model-predicted mean of (a) number of individual bees per sample, (b) number of bee species per sample, and (c) rarefied bee richness—a measure of diversity that controls for total number of bees caught. In each panel, means with a shared letter are not significantly different; bars show 95% confidence intervals. Treatments are C (control, not burned in 50+ years), 2B (2 years since burn), 1B (1 year since burn), and 0B (year of burn).

What we found, beyond the sheer diversity of bee species, was fascinating. Bee abundance was highest the summer immediately after a burn; there were more than twice as many bees in these samples compared to the unburned control plots. Similarly, there were twice as many species in the plots burned the same years as in the unburned plots, with the other two burn treatments intermediate between them. Our vegetation measurements found greater diversity and abundance of floral resources in recently burned plots, which may help explain the greater bee presence.

We were concerned that fire might destroy the nesting habitat for those species that rely on small diameter woody debris and hollow plant stems. However, we did not detect any decline in these species in burned plots compared to the unburned plots, suggesting that the low intensity of these fires was not enough to consume these nesting resources. On the other hand, soil-nesting bees responded very positively to fire; we suspect that they benefit from the increased availability of exposed soil and a beneficial microclimate. As dense vegetation returned in the years after a fire, these bees started to decline.

While we think that prescribed fire is indeed beneficial to native bees, other questions remain. One of the most important is the question of timing. The low intensity fires that maintain longleaf savanna ecosystems were prehistorically caused by lightning strikes, typically in the growing season. Many land managers are transitioning from dormant season burns to this more "natural" timing for prescribed burns, so it would be wise to look at these same questions in growing season burn regimens. We also need to investigate the ideal scale of burn units for bee conservation. Protecting and encouraging native bees in the longleaf ecosystem ultimately benefits the entire system, and well-managed fire is an excellent tool for achieving that goal.

Smoke in the distance from a prescribed fire at Walthour Moss Foundation in North Carolina. Photo by Clyde Sorenson.

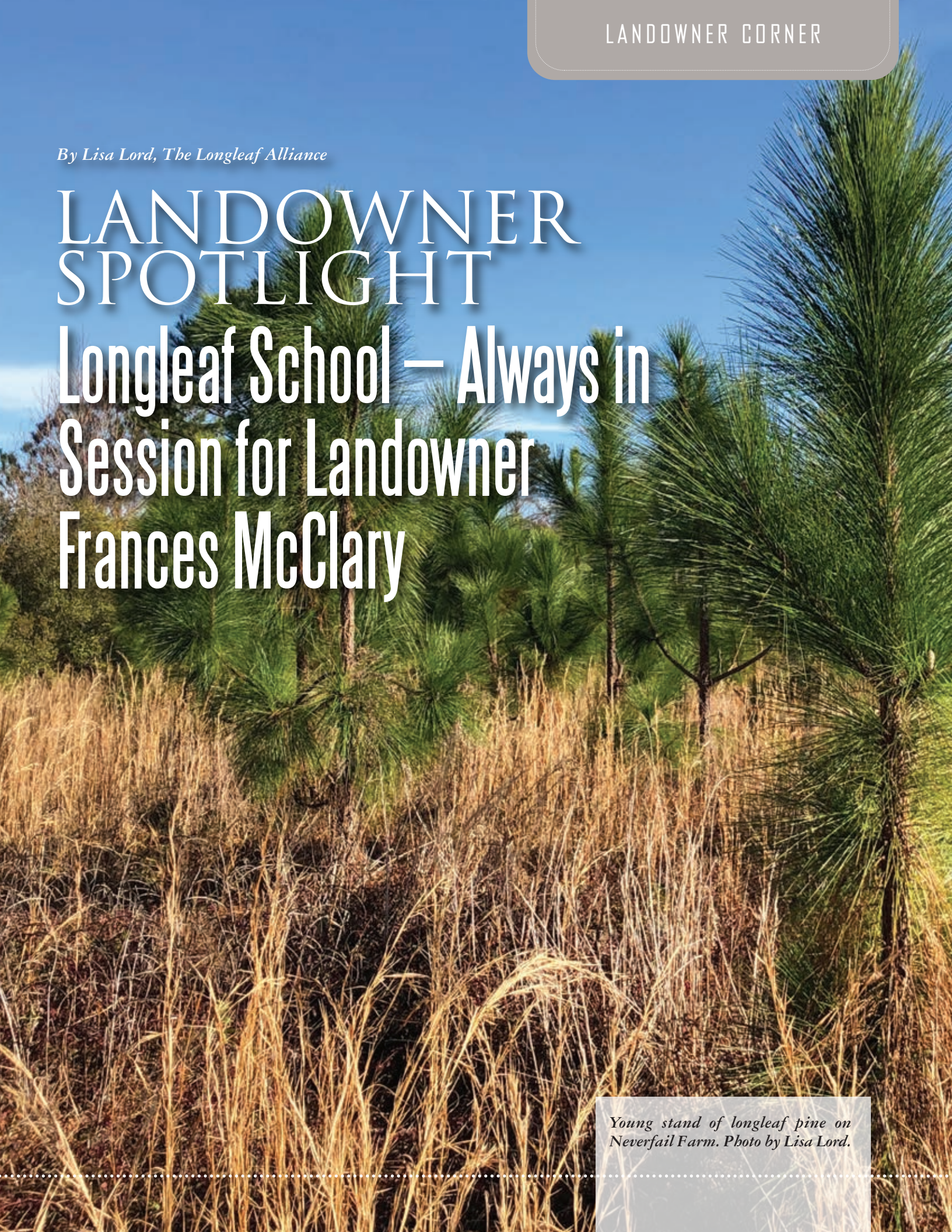
Burning stump from a prescribed fire. Photo by Clyde Sorenson.

The paper, "The Impact of Prescribed Burning on Native Bee Communities (Hymenoptera: Apoidea: Anthophila) in Longleaf Pine Savannas in the North Carolina Sandhills," was published in the journal *Environmental Entomology* on 27 December, 2019. The paper was authored by Heather Moylett and Clyde Sorenson of NC State's Department of Entomology and Plant Pathology and Elsa Youngsteadt of the Department of Applied Ecology. All authors contributed to the work equally. The research was funded in part by the Walthour-Moss Foundation.

By Lisa Lord, The Longleaf Alliance

LANDOWNER SPOTLIGHT

Longleaf School – Always in Session for Landowner Frances McClary



Young stand of longleaf pine on Neverfail Farm. Photo by Lisa Lord.

In 1981, Frances McClary bought her homeplace, known as the Tumuli Schoolhouse, in Williamsburg County, South Carolina. Growing up, she always wanted to live in the woods. Tumuli is a place she came to call home, and later, plant longleaf on this former soybean farm. The property was also the site of an old schoolhouse, established before the Civil War. ('Tumuli' comes from the Latin *tumulus* meaning "heap of earth" or a burial mound.)

Frances traces her family's roots back to the mid-1700s in Williamsburg County. Born into a large family that lived off the land, with several family members in forestry or the forest industry, land ownership has always provided her a sense of place and belonging. Frances credits her grandmother as an important influence, demonstrating what good stewardship of the land looks like. She instills these same values in her children and grandchildren by spending time with them taking long walks on her property. As a child raised on a farm, she spent a lot of time outside; looking back, her best childhood memories are attached to being outdoors. Now, Francis says, her time is still best spent outdoors — especially when burning.

Frances McClary on her farm in Williamsburg County. Photo by Lisa Lord.

A phrase that clearly describes Frances is "early adapter." In 1986, she undertook her first longleaf pine planting at Tumuli. She planted 1,000 longleaf seedlings in an old field site, and at the same time, she planted 1,000 loblolly seedlings in an adjacent stand as a comparison. The longleaf seedlings were so hard to come by at that time. The South Carolina Forestry Commission looked far and wide, finally finding bareroot seedlings in Georgia. Over the next few years, Frances noted the explosion of native yellow sunflowers and bobwhite quail that lived amongst her young longleaf, demonstrating the benefits of the longleaf stand versus the adjacent loblolly stand, which she noted displayed and harbored few of the same species.

Frances was the first woman to graduate from Horry-Georgetown Technical College with a degree in agriculture with an emphasis on forestry. After college, she went to work at Hobcaw Barony, a 16,000-acre property in Georgetown County that's now owned by the Belle W. Baruch Foundation and dedicated to outreach and education. At Hobcaw, she assisted with red-cockaded woodpecker management. She also met and worked with Rhett Johnson, who was working on his master's degree at Clemson at the time. After Rhett co-founded The Longleaf Alliance in 1995, Frances shortly thereafter became a member in 1996 and has continued to be an advocate for The Alliance and longleaf pine. Frances later worked for the Farm Bureau and sold insurance, which allowed her to meet and work with farmers and landowners throughout the county, learning a lot about the industry, and the challenges landowners face owning and managing land. Before retirement, Frances also worked for a short time as a timber buyer and real estate appraiser, always staying connected to the land throughout her life and career in one way or another. She still maintains her real estate appraiser license, working on occasional projects.

In addition to owning Tumuli, Frances owns another property, Neverfail Farm. Both properties, interestingly, are tied to historic schoolhouses. Neverfail Farm was named as a tribute to her ancestors and four-times-great grandfather, who built a local school in 1854 called Neverfail Academy. Purchased by her grandfather in 1938, the farm was passed to Frances's dad, and she later bought it from her brother in 1991.

Longleaf restoration began on Neverfail Farm in 2004, and many lessons were learned along the way. Establishing longleaf on the property in agricultural fields that had been planted in corn, tobacco, cabbage, and soybeans for generations came with many challenges, including invasive weeds and tree form issues. Stands planted in different years yielded variable levels

of success, depending on the seedlings, soil, and weather, all of which have been lessons she's shared with others about growing longleaf. Also, planting *Lespedez thunbergii* (which came highly recommended at the time for wildlife) turned into a multi-year invasive removal project she's still wrestling. Frances recommends thoroughly researching before planting anything for wildlife, especially if it's non-native.

Burning has always been an important part of the overall longleaf management strategy on her properties. Frances learned to burn from her dad and other family members, taking their bits of advice such as avoiding burning on an east wind and how to burn around structures. Frances and her son also became Certified Prescribed Burn Managers together after teaching him to burn on the family property.

As for sharing lessons learned, Frances is an engaged member of the conservation community. She has been involved with the Williamsburg County Chamber of Commerce Board and Historical Society. She is active with the South Carolina Tree Farm Program, the Williamsburg Soil and Water Conservation District Board, and the Black Scenic River Advisory Council. She's also a Master Tree Farmer through Clemson Extension. In 2019, Frances was recognized as the 2019 Agriculturalist of the Year by the Williamsburg Chamber of Commerce. Recently, Frances was a crucial steering committee member of the Williamsburg County Forest Landowners Association, helping to launch and connect the group with interested landowners. She feels that participation in these conservation and community organizations and boards have been, and continue to be, vital for her. Landowners should take advantage of the knowledge available to them from fellow landowners and professionals involved.

Signage at Neverfail Farm, including some of the conservation efforts Frances supports. Photos by Lisa Lord.

Frances points out the importance of getting to know your local NRCS District Conservationist and Soil Conservationist. NRCS produced her first Farm Plan, and later a Conservation Plan, providing maps and resources at the time she couldn't find anywhere else. She enrolled in the Conservation Reserve Program (CRP) and planted longleaf. And later, the Conservation Stewardship Program (CSP) provided Frances financial assistance for installing firelines, burning, fallow disking, and more recently, pollinator habitat. Frances likewise has used the resources at the South Carolina Forestry Commission (SCFC) regularly, and they've provided a Forest Stewardship Plan to assist with management. The SCFC also offered a scholarship for her attendance at the 2009 Biennial Longleaf Conference in Columbia.

In addition to using the excellent public assistance that is available, Frances recommends using consulting foresters to help sell timber and reestablish trees on the site, even if you are knowledgeable. She's cut timber seven times during her ownership of Tumuli and Neverfail Farm and used a consulting forester to help navigate the timber sales.

As Frances looks forward, she wants to continue enjoying her woods while teaching her family, other landowners, and the larger community to enjoy them too, sharing resources and lessons learned along the way. Frances has a vision for the future, with a strong foundation built on the past. Not all of us may have grown up with the same access to the land as Frances, but restoring and managing longleaf can provide us all with a similar sense of place and forests for the future.

By America's Longleaf Restoration Initiative Communications Team

News from the Longleaf Partnership Council

Interview with LPC Chair Tiffany Woods, The National Wildlife Federation

LPC Chair Tiffany Woods with Gary Burger, Past-Chair and mentor, holding an education indigo snake at a field day near Ft. Benning. Courtesy of T. Woods.

How did you become involved in longleaf restoration and America's Longleaf Restoration Initiative?

I joined the National Wildlife Federation (NWF)'s Forestry Program in 2012, working closely with our affiliate, the Alabama Wildlife Federation (AWF), to provide outreach to private landowners to restore longleaf pine with a specific focus for wildlife habitat restoration. I fell in love with the project, and from there, I worked with AWF and NWF to implement similar outreach programs for both Georgia Wildlife Federation and Florida Wildlife Federation. It is incredibly rewarding to be a part of innovative landowner outreach programs centered around longleaf pine restoration and to know that we are changing how private landowners think about and manage their properties to improve habitat for wildlife.

I took on the NWF Longleaf Partnership Council seat for America's Longleaf Restoration Initiative (ALRI) during my first year on the job—I was very much a "newbie" to the Initiative's efforts, but there were so many wonderful members on the council that mentored and guided me into the position to learn and eventually take on a leadership role. If you had told me during those initial years that I would one day take on the Chair position, I wouldn't have believed it. I am so grateful to the leadership team and for the guidance of the past chairs to provide me the skills and knowledge as I work to lead the Initiative into this new decade.

What is the most rewarding experience in your work with the Longleaf Partnership Council (LPC)?

This Initiative has taught me the importance of community and the immense value in working beyond the mission and goals of my organization. New projects and partnerships have developed solely because of the Initiative, as there is immense value of having biannual face-to-face meetings and the connections that the Initiative provides. For instance, NWF recently gained the Sandhill Prescribed Burn Association (PBA) as one of our programs, which is a landowner group that works to educate and provide peer-to-peer learning opportunities for prescribed fire in North Carolina. Jesse Wimberly, the leader of this PBA, hosted the Longleaf Partnership Council on his farm a few years back—this was how we met, and I was able to see first-hand the amazing work that he and the PBA were doing. When the opportunity arose to help him find an organization for the PBA, NWF jumped at the chance because of the wonderful work they do and the benefits to forestry and wildlife. This venture would have never happened had we both not been involved with ALRI. The community and regional connections are incredibly special.

What is the LPC working on this spring?

This year marks ALRI's 10th Anniversary, and we are incredibly proud to elevate the Initiative's decade-long work to reverse the decline of longleaf. While we are disappointed that the March celebration in Washington D.C. was postponed due to travel concerns around COVID-19, we will continue to look for opportunities to share our group's successes. We are excited to unveil our 2019 Accomplishment Report this spring, and we are also working on documents that describe the value and resiliency of longleaf.

How does it feel to be elected the first female LPC chair?

It is such an honor to be nominated and elected and a huge privilege to be both the first female and youngest chair to date. I think this is representative of the number of women that are joining the fields of forestry, wildlife, and prescribed fire. We are seeing so many different leaders throughout this work that are females—my hope is for other women entering this field to see someone like them and know that these opportunities await them. The LPC is unique in the diversity of representation among non-profits, businesses, government agencies, extension/educators, and landowners, and over the past few years, more women have taken a seat at our table. There is a place for all when it comes to longleaf pine restoration.

You are quite an outdoor recreation enthusiast! What is your favorite way to get outdoors in the piney woods?

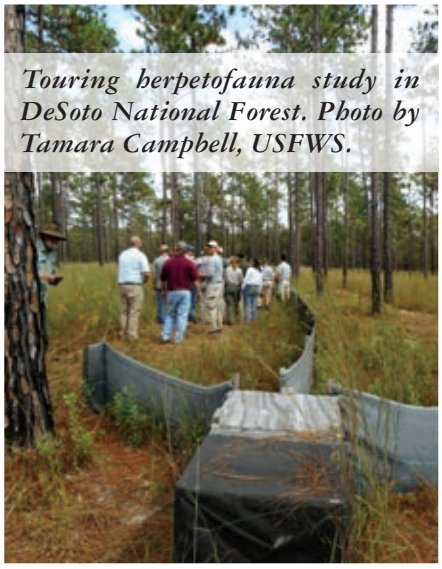
One of the biggest perks of this work is that I get to travel throughout the Southeast to see these incredible landscapes. I love endurance sports, and my favorite way to connect with nature is running through the woods. I have been lucky enough to run the trails at places like Weymouth Woods, as well as running on rural roads in the Southeast with tall pines swaying overhead—it is quite the experience.

By the Mississippi Longleaf Implementation Team

The Mississippi LIT – A Confident Conservation Team Meeting its Goals

Sandhill Crane National Wildlife Refuge. Photo by Scott Hereford, USFWS.

Inspecting Hurricane Katrina damage. Photo by James Cummins, Wildlife Mississippi.



Touring herpetofauna study in DeSoto National Forest. Photo by Tamara Campbell, USFWS.

In Mississippi, we understand constraints. We are one of the poorest states in the nation. Yet here we are today, the "Hospitality State," fully integrated and functional, and considered one of the most charitable states in the union, based on federal reports. As far as longleaf implementation teams go, we have a unique history among the region, one with resolve, tenacity, and a strong value for collaboration that has strengthened our partnership, helped us overcome challenges, accomplished goals, and expanded our boundaries.

At times we may have appeared defiant and unruly, like a strong-willed child. "There they go again, only in Mississippi." We were told to focus our efforts and prioritize activities due to shrinking budgets and reduced capacity. To us, "hone your vision" meant "think small." We responded, however, not small, but collaboratively. We broadened our partner base. We leveraged existing programs and empowered those partners to partake in our vision and goals. We've become more than a natural resource network; we've become a partnership team.

> **Team:** (*noun*) a group of people who work together (*adj*) marked by devotion to teamwork rather than individual achievement. 2. Two or more draft animals yoked together to pull the same vehicle.

Although we may at times appear more akin to definition #2, the Mississippi Longleaf Implementation Team (MS LIT) embodies the essence of teamwork.

Our team struggled to find our identity, as evidenced by multiple inquiries from external partners, and occasional disgruntled correspondence from internal partners. As with any expectant family, there's initial excitement, followed by a phase of discomfort and fatigue, then the reality of problematic disruptions and near derailments. However, during those challenges, relationships may be strengthened, resolve deepened, and hope sustained for a successful future. With the proper ingredients over time, a beautiful family can develop and thrive.

This is a normal process in building resilience in the face of challenges. Our team suffered from leadership changes, the BP oil spill incident, some initial distrust that may accompany territoriality, membership turnover (retirements), reduced capacity, and the usual growing pains and misconceptions that come with listing a new species for federal protection (the black pinesnake) within our operational area.

Nevertheless, with grace and fortitude, our transparency has built trust among our members, and our relentless drive propelled momentum when challenges threatened to derail our efforts. We are now recognized as having one of the strongest conservation teams in the state, and dare we say, the region?

History of the MS LIT:

Longleaf pine restoration in Mississippi was stimulated by events such as Hurricane Katrina (2005) and release of America's Longleaf Range-wide Conservation Plan (2009), where private and public land interests were peaked due to superior native qualities and resiliency of longleaf pine compared to other southern pines, and in an increase in financial incentives, such as the Longleaf Pine Initiative authorized by the Farm Bill. The development of the Longleaf Pine Implementation

Team organized entities in the longleaf pine management community and advanced coordinated conservation delivery efforts.

Initiated by the Forest Service, America's Longleaf, and the Mississippi Forestry Commission in April 2010, the first partner meeting birthed the MS LIT - committed to longleaf pine restoration and sustainability. Although a Significant Geographic Area (SGA) was identified around Camp Shelby/DeSoto National Forest, the MS LIT elected to focus activities across the entire historic range of MS, which included 16 counties in the Piney Woods Region with the greatest potential for increasing longleaf pine acreage in priority areas. Beginning in 2012, partners of the Camp Shelby/DeSoto SGA, facilitated by the US Forest Service and The Nature Conservancy, received grant support from the National Fish and Wildlife Foundation Longleaf Stewardship Fund to advance restoration of fire-maintained longleaf and pine-grassland communities in the Camp Shelby/DeSoto area through on-the-ground establishment and enhancement activities.

Growth and Progress:

Following the inception of the MS LIT, partners defined organizational structure and bylaws, creating a Steering Committee and separate Membership with specific roles. This addressed turnover, deepened investment, and provided opportunities for new ideas through rotational leadership. In 2018, partners of the MS LIT and Camp Shelby/DeSoto SGA combined efforts to operate as one team improving efficiency in multi-agency program delivery. Further expanding influence in priority areas, the Southwestern portion of Alabama and a portion of the Florida Parishes in Louisiana recently combined with the MS LIT due to collaborative partnerships and high-value conservation impact.

Map showing Mississippi Longleaf Implementation Team focal area including recent expansion into Louisiana and Alabama.

Of the many accomplishments and highlights in the past 10 years, the MS LIT is especially proud to announce the completion of the Mississippi Longleaf Pine Ecosystem Strategy. Developed under the auspices of America's Longleaf, this strategy represents a shared vision of partners and stakeholders (state, federal, and non-governmental) in identifying threats and opportunities, while developing priorities and support for increasing longleaf pine conservation delivery for economic and ecological sustainability. Our strategic priorities can stimulate more effective conservation in our state while maintaining a growing network of land managers dedicated to longleaf pine sustainability. After all, longleaf is a labor of love.

Accomplishments:

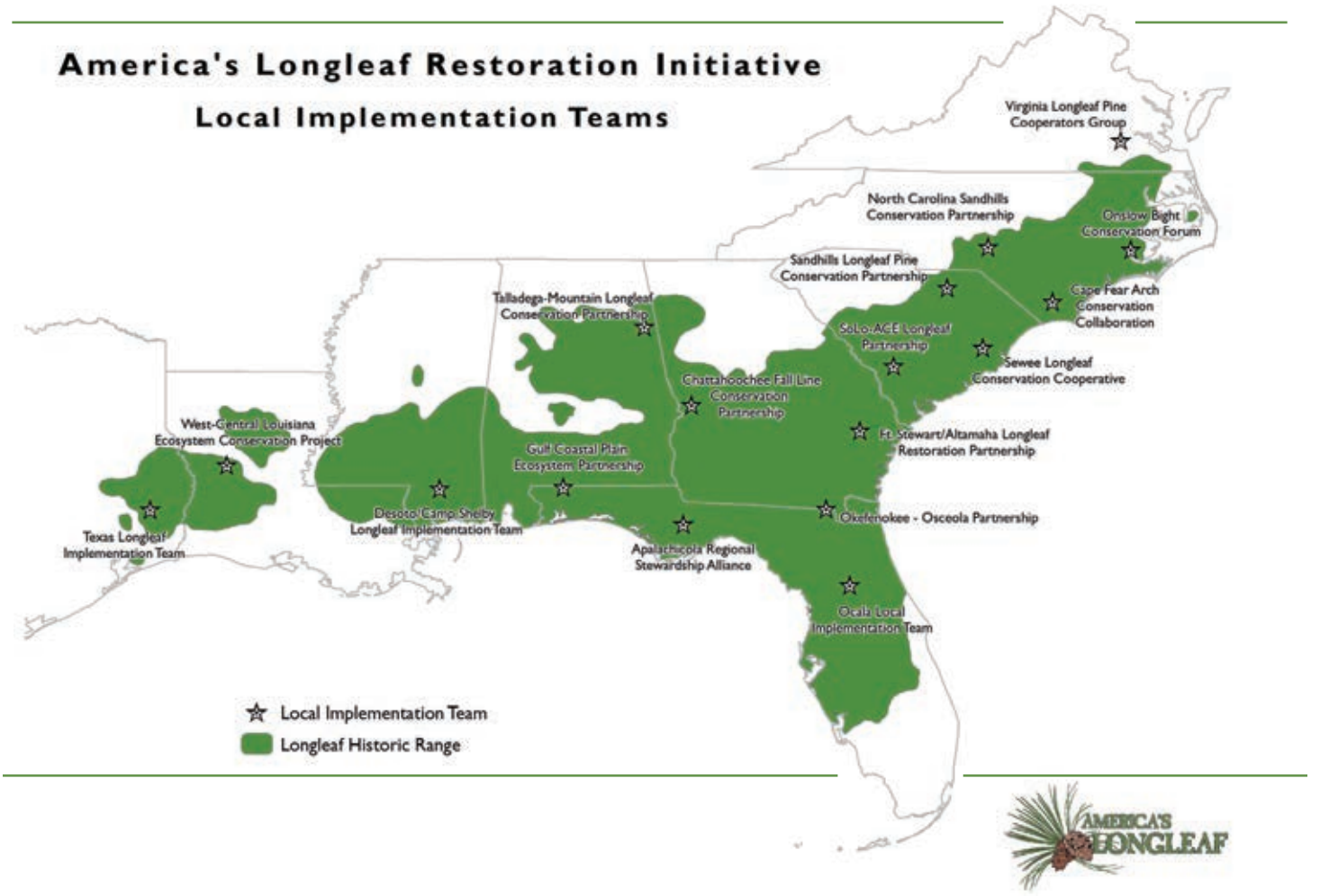
The Mississippi Institute for Forest Inventory reported 574,904 acres of longleaf pine out of a historical 2.1 million acres (1935, 2013) in Southeast Mississippi. Since 2013, entities have reported establishing an average of 5,322 acres of longleaf pine annually, while also reporting a positive increase in prescribed fire in this landscape, particularly on private lands. Based on trends from the past six years, the state plans to establish roughly 22,000 acres of longleaf pine on public and private land by 2022.

Targeted localized initiatives promote longleaf pine restoration and provide technical guidance for restoration and prescribed fire on private land, including the Partners for Fish and Wildlife Program, the Department of Wildlife Private Lands Program, USDA Farm Bill Programs, Fire on the Forty, Mississippi State University Extension Program, Forest Resource Development Program, and National Fish and Wildlife Foundation funds. Since 2007, more than 150,000 acres have been restored and enhanced on private lands through these programs. Moreover, collaborative partnerships with specialized conservation outreach organizations such as National Wild Turkey Federation and Mississippi Forestry Association have amplified program reach by broadening the target audience (i.e., County Forestry Associations, NWTF members).

Although a large portion of establishment occurs on private land (roughly 80%), the US Forest Service in Mississippi has also committed to an impressive rate of establishment on National Forests. These protected areas are critical for the conservation of imperiled species, such as the black pinesnake, gopher tortoise, and red-cockaded woodpecker. Several National Forests, particularly the DeSoto NF, are poised to make significant contributions to longleaf pine conservation (more than 300,000 acres, Southern Region National Forest System Longleaf Pine Restoration Strategy). Other public lands provide important longleaf restoration opportunities in the Piney Woods Subprovince including Wildlife Management Areas, National Wildlife Refuges, State Forests, Department of Defense, and 16th Section lands. In fact, the last of the large remnants of wet pine savannas/flatwoods are those of the Sandhill Crane National Wildlife Refuge in south Mississippi.

Final Thoughts:

The MS LIT serves as a valuable asset and leader in longleaf pine conservation delivery that is compatible with region-wide goals. Our team engaged strategic partnerships to overcome barriers and challenges since its inception in 2010 and has regained momentum in advancing the mission of increasing and conserving the longleaf pine ecosystem. We acknowledge and appreciate our partners' dedication and work, including our local partners in Mississippi, Alabama, and Louisiana, as well as our regional partners such as The Longleaf Alliance, National Fish & Wildlife Foundation, Florida Natural Areas Inventory, and others. We hope our experiences will inspire perseverance.



High-Level Support for Rx Fire Arises from Council Meeting

By Brian Pelc, Restoration Project Manager/ARSA Coordinator, The Nature Conservancy

Interagency partners secure a holding line during Florida Forest Service drone ignition demonstration. Photo by Cliff Leonard.

The Wildland Fire Leadership Council met on January 9th and 10th in the Apalachicola Regional Stewardship Alliance (ARSA) LIT region. The first day was dedicated to field trips, including a prescribed fire demonstration with drone ignition led by Florida Forest Service at The Nature Conservancy's Apalachicola Bluffs and Ravines Preserve (how's that for partnerships in action?). Numerous VIPs were in attendance, including Jim Hubbard, Under Secretary for Natural Resources and Environment, Vicki Christiansen, USDA Forest Service Chief, and Ken Arney, Regional Forester for the Southern Region. Secretary of Agriculture Sonny Purdue attended the business meeting at Tall Timbers on the 10th to deliver one message - prescribed fire can and will increase. Discussion at this meeting suggests the "controlled burn" message has reached the top, and LITs across the longleaf range should consider how they will implement more acres of fire when resources become available. ARSA members completed the 10-year Longleaf Pine Conservation Plan in 2017 with several action items relying on a strong commitment by agency leadership to fund and implement more prescribed fire.

Private Lands in Alabama Host Successful RCW Population

By LuAnn Craighton, The Nature Conservancy, and Mark Bailey, Conservation Southeast Inc.

In partnership with the US Forest Service, artificial cavities are installed in preparation for the upcoming breeding season. Photo by L. Craighton.

Private landowners in the Enon-Sehoy plantation complex near Hurtsboro recently hosted an expert team of artificial cavity installers from the National Forests in Alabama. The insert blitz brought together partners, including private landowners, US Fish and Wildlife Service, and the US Forest Service to install new cavities in preparation for the upcoming red-cockaded woodpecker (RCW) breeding season. This landscape hosts the largest RCW population on private lands in Alabama and has an interesting history. In 2002, initial surveys documented five active RCW clusters on the property, but not all had breeding pairs. At that time, the landowner, Cam Lanier lll, placed more than half the property under conservation easement and was the first enrollee in the Alabama Safe Harbor Program. By generously setting the baseline for the property at 10 groups, he secured the future of this remnant population. Next, artificial cavities were installed, and juvenile birds were translocated from Fort Benning and Fort Stewart. Today, incredible habitat resulting from decades of quail management through prescribed burning provides a stellar environment for this population. Last year, monitoring activities supported by the National Fish and Wildlife Foundation documented 37 RCW groups. Truly a conservation success story, the number of breeding groups has increased each year since 2006.

Burner Bob®, a Big Attraction at the Southeastern Wildlife Expo

By Randy Tate, The Longleaf Alliance

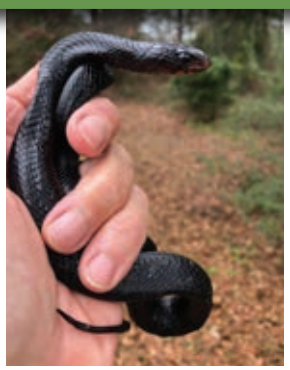
Burner Bob® makes new friends at the Southeastern Wildlife Expo. Photo by Randy Tate.

Burner Bob® attended the 37th annual Southeastern Wildlife Expo (SEWE) in February. SEWE is a three-day celebration held each year in Charleston, South Carolina, showcasing 'all things wild.' It is a huge event drawing thousands of people. This year two of our LIT partners exhibited with booths; The Orianne Society and The Longleaf Alliance both had scores of people dropping by to learn about all aspects of longleaf pine. Burner Bob® was a hit, taking photos with young and old alike. As 'A Cool Dude with a Hot Message!™,' he was there to educate folks about the beneficial qualities of prescribed burning. Burner Bob® gave away coloring books and bumper stickers for folks to take home and spread his message. This was one of the largest crowds for Bob as he continues to spread the word about good fire across the Southeast.

Conservation History Made in Alabama

By Traci Wood, Alabama Wildlife and Freshwater Fisheries

Traci Wood, Alabama Wildlife and Freshwater Fisheries, and Jim Godwin, Auburn University's Alabama Natural Heritage Program, holding the first wild eastern indigo snake found in Alabama in 60 years. Photo by Francesca Erickson.



Eastern indigo snake hatchling found at Conecuh National Forest. Photo by Francesca Erickson.

Conservation history was made this past January in Covington County, Alabama, at the Conecuh National Forest within the Gulf Coastal Plain Ecosystem Partnership (GCPEP). After almost 60 years, a wild eastern indigo snake hatchling was discovered. Biologists have been staunchly working on the recovery of this species since the mid-1980s. Beginning about a decade ago, Alabama Wildlife and Freshwater Fisheries partnered with US Forest Service and Auburn University to initiate an eastern indigo snake reintroduction project. Finding this wild snake is evidence that reintroduced indigos are behaving, breeding, and acting as wild snakes. The indigo snake plays a critical role in the longleaf pine ecosystem, providing a balance among the landscape as a predator to their favorite foods, including copperheads and rattlesnakes. Part of this conservation story is featured on the NatGeo show, 'Wild Secrets of the Zoo: Tampa.' You can also join us on Friday, May 1st for the third annual Eastern Indigo Snake and Wildlife Festival at Open Pond Recreational Area, Conecuh National Forest. School groups are welcome but must register. Check the *Outdoor Alabama* website for details https://www.outdooralabama.com/node/3678.

Southern Longleaf Gets a New Voice — Heartland Longleaf Local Implementation Team

By Rosalind Rowe, Florida Park Service

Aerial view of restoration work on a historic sandhill site at Lake Manatee State Park, FL. The contractor chipped the hardwoods and sold the mulch. Photo by Zach VanHook.

Last September, the Heartland Longleaf Local Implementation Team (HLIT) had its first meeting. Twenty-nine participants, including nine public agencies, two vendors, and a private landowner, gathered to discuss ways to increase healthy longleaf pine ecosystems in the south-central lands of Florida. Many were hearing about the America's Longleaf Restoration Initiative (ALRI) for the first time, and many were already restoring or enhancing acres of longleaf pine ecosystems, but all were fully engaged in the conversation. Topics ranged from offering programs that would engage more landowners, to learning about a Memorandum of Agreement in place for partnering on prescribed burning across land ownership boundaries. A discussion thread throughout was the need to balance science-based management, such as promoting increased acres with desired groundcover species and diversity, with the economics for the landowner. In the southern part of its range, the number of longleaf pines per acre was historically naturally lower than that found going north. This means private landowner conservation income must depend on more than timber.

Okefenokee/Osceola Longleaf Implementation Team (O2 LIT)

By Rebecca Shelton, The Nature Conservancy

Planting longleaf pine seedlings in coastal Georgia. Photo by LA Allen.

Longleaf pine planting and prescribed burn season is well underway in the O2 LIT! The Okefenokee National Wildlife Refuge is planting 269,000 containerized longleaf seedlings on 519 acres that were site-prepped in Fall 2019. The Osceola NF planted 120 acres using 59,000 containerized longleaf seedlings. Prescribed burns have been conducted on over 20,000 acres with another 20,000 acres possible if the weather cooperates.

The 2020 O2 Stewardship Training for Environmental Progress (STEP) crew is here for the program's fourth year and are making their presence known. The crew consists of three Student Conservation Association (SCA) interns, an SCA crew lead, and The Nature Conservancy crew supervisor, Zoe Hall. Starting in January, they conducted burns on over 1,700 acres at Osceola National Forest (NF) and Moody Forest in Georgia. They also assisted with a research burn facilitated by Tall Timbers at the Macon Study Plots at Osceola NF. Additionally, the crew has assisted Osceola NF with fire-related management needs, including preparing fire breaks and raking around structures and red-cockaded woodpecker cavity trees for prescribed burns. Upcoming activities for the crew include planting containerized longleaf pine, longleaf pine survival studies, and invasive species control.

The O2 LIT is participating in an extensive landowner outreach effort in north Florida with partners, including the Alachua Conservation Trust, Florida Forest Service, Florida Fish and Wildlife Conservation Commission, North Florida Prescribed Burn Association, and the NRCS. So far, two workshops have been conducted: Longleaf Pine Restoration/Management and Wildlife Management. Meetings have included private landowners, land managers, contractors, and partners managing over 25,000 acres of private land.

Building the Workforce for the Future: Stewardship Training for Environmental Progress

By Colette DeGarady, Longleaf Pine Whole System Director, The Nature Conservancy

STEP crew participants photographed after completing their pack test. Photo by Larissa Graham.

In 2014, The Nature Conservancy (TNC) developed a program in partnership with the Osceola National Forest and the Jacksonville Job Corps Center to provide diverse young people (18-25 years old) training and hands-on experience with controlled burns and other land management activities to prepare them for environmental careers. Since then, what became known as the Fire Mentoring Program grew to include work sites with TNC staff across the Southeast and was renamed Stewardship Training for Environmental Progress (STEP). More than 100 participants have completed work in this program. Currently, 14 crew members on three teams are working in three different areas, including Texas, Alabama, and northern Florida/southern Georgia. These STEP teams will be contributing to Local Implementation Team (LIT) goals for the Okefenokee and Osceola, Texas, and Alabama LITs by planting longleaf pine trees, assisting with prescribed burns, tackling invasive plants, monitoring species and more. This work is conducted in partnership with the Student Conservation Association. It is an important step to build the future workforce for environmental conservation in the Southeast with an emphasis on longleaf habitat restoration.

Red-cockaded Woodpecker Habitat Restoration Provides Educational Opportunity in South Carolina Sandhills *By Susan Griggs, NRCS*

RCW Install on private lands with youth educational opportunity. Photo by Susan Griggs.

After two years of understory restoration, the Sandhills Longleaf Pine Conservation Partnership (SLPCP) has taken another monumental step by placing the first red-cockaded woodpecker nest cavities on private property in this LIT.

According to Charles Babb, this has been a joint effort, spearheaded by the SLPCP and made possible through both the US Fish and Wildlife Service Partners for Wildlife Program and National Fish and Wildlife Foundation (NFWF) Longleaf Stewardship Fund. To date, three private landowners have committed to inviting RCWs onto their properties, while others are completing the necessary mid-story control to make their properties suitable. "This has been exciting," said Babb, "to see landowners go from contemplating clearcutting older stands and replanting to understanding the value of preserving mature stands of longleaf, managing them as a cherished asset, and taking pride in owning a locally rare ecosystem." Only about 4,000 acres of mature longleaf remain on private lands within the SLPCP focal area.

Taking advantage of the opportunity, the SLPCP is turning these restoration activities into an educational opportunity for future generations. Babb and the SLPCP partners have been working with local youth groups such as the Boy Scouts, 4H, and middle schoolers to teach them about the longleaf ecosystem. Groups were invited to attend and learn about prescribed fire, understory restoration, and protecting threatened and endangered (T&E) species while Larry Woods performed cavity inserts. "This has been great," said Aleisha Ainsworth, Scout Leader in Cheraw, South Carolina. "The kids have been so excited about the chance to get a hands-on education about longleaf, and what they can do to have an impact on the future of our environment."

South Lowcountry – ACE Basin (SoLoACE) Longleaf Partnership

By Bobby Franklin & Lisa Lord, The Longleaf Alliance

South Carolina Forestry Commission Tree Improvement Technician Chris King discussing the Commission's longleaf pine seed orchard during the Longleaf 101 Academy tour. Photo by Bobby Franklin.

The new year started with a Longleaf 101 Academy held in Ridgeland, South Carolina. Thirty-one landowners and natural resource professionals attended the class. A special thanks to the Jasper County Soil and Water Conservation District for hosting the event at their facility, Blue Heron Nature Center.

Last November, partners translocated 21 red-cockaded woodpeckers from the Francis Marion National Forest through a National Fish and Wildlife Foundation Longleaf Stewardship Fund grant to private and state lands in South Carolina. Eleven of the 21 birds were translocated to properties within the SoLoACE landscape.

Also, The Longleaf Alliance, the Savannah River Clean Water Fund, University of Georgia's Warnell School of Forestry and Natural Resources, International Paper, and The Nature Conservancy are working together on a collaborative mapping initiative that will conclude in a strategic conservation plan to conserve both forests and source water for the Savannah River watershed. This project will help determine where the priorities of drinking water utilities and other conservation efforts, such as longleaf ecosystem restoration, overlap to leverage each other's investments and achieve more conservation on the ground. Funding for this effort is provided through funds awarded to the Georgia and South Carolina Forestry Commission through a US Forest Service Landscape Scale Restoration grant and International Paper. We are grateful to our partners for their continued support of this project.

Calcasieu Area Council Boy Scouts of America Restore Longleaf Forest

By Dan Weber, North Louisiana Program Manager, The Nature Conservancy

Scouts Camp Edgewood before (left) and after (right) mulching. Photos by Louisiana Department Wildlife Fisheries.

The Boy Scout's Camp Edgewood was established almost 65 years ago in southern Beauregard Parish. The ability to produce revenue through the management of its timber resources was a featured part of the original plan for the 200-acre camp. Planted in the 1960s with loblolly pine, areas recently harvested were replanted with longleaf (2011). Due to frequent changes in administration and the camp ranger, only one burn has been implemented on these young longleaf.

In order to alleviate wildfire risk and assist the Boy Scouts in implementing a long-term prescribed burn plan, the Longleaf Implementation Team, known locally as the West-Central Louisiana Ecosystem Partnership (WLEP) is partnering with the Scouts to reduce the existing fuel load within the camp using mulching and prescribed fire. Removing the dense shrubby areas of pyrogenic species is the first step toward wildfire safety and restoring the historic longleaf ecosystem. With support from the Forest Service and in partnership with The Nature Conservancy, funding was provided to the Scouts to mechanically remove brush and woody vegetation, which will pave the way for a growing season burn in the near future.

The WLEP is a coalition of stakeholders including the US Forest Service and US Department of Defense, Natural Resource Conservation Service, state and federal wildlife agencies, conservation NGOs and others, overseeing longleaf and other ecosystem restoration efforts within the Fort Polk/Kisatchie National Forest Significant Geographic Area (SGA). The WLEP congratulates the Scouts for their desire to return native longleaf forest to their property and for incorporating fire management and longleaf ecosystem maintenance into their learning curriculum.

WHILE YOU'RE IN THE GRASS STAGE

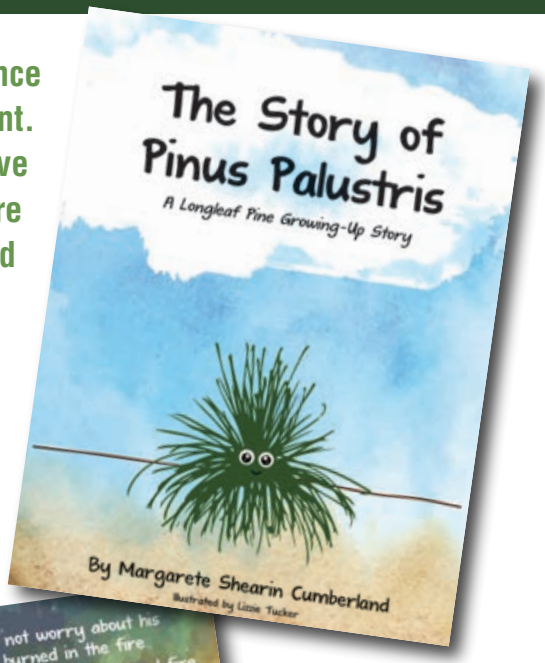
By Sarah Crate, The Longleaf Alliance

Many longleaf and prescribed fire advocates understand the importance of increasing public understanding of conservation and management. Still, we often lack the tools to engage one of our most captive audiences — KIDS! "While you're in the grass stage" aims to inspire your inner educator by highlighting unique educational resources and activities from educators across the longleaf range.

The Story of Pinus Palustris: A Longleaf Pine Growing-up Story

Summary: Pal (*Pinus palustris*) is best buds with Ari (*Aristida stricta*). Neighborhood bullies Lobby and Turk steal sunlight from Pal and Ari until a fire scares the bullies away. After the fire gives them both a "haircut," Pal and Ari grow new leaves. At first, Pal stays small like Ari, but he is growing strong belowground so he can later grow tall very quickly, helping him survive more fires. Once a big tree, Pal always stays best friends with Ari.

About the book: Margarete Shearin Cumberland was inspired to create the children's book, *The Story of Pinus palustris: A Longleaf Pine Growing-up Story,* for a graduate assignment. Later she shared it with the staff at Carvers Creek State Park during her time as a seasonal technician. Colleen Bowers, Superintendent at Carvers Creek State Park, has been using this book in preschool programming for more than five years. It was recently printed by North Carolina State Parks to support educational programs for the 2020 statewide theme, "Burning to Conserve." For more information, please contact Colleen Bowers at colleen.bowers@ncparks.gov.



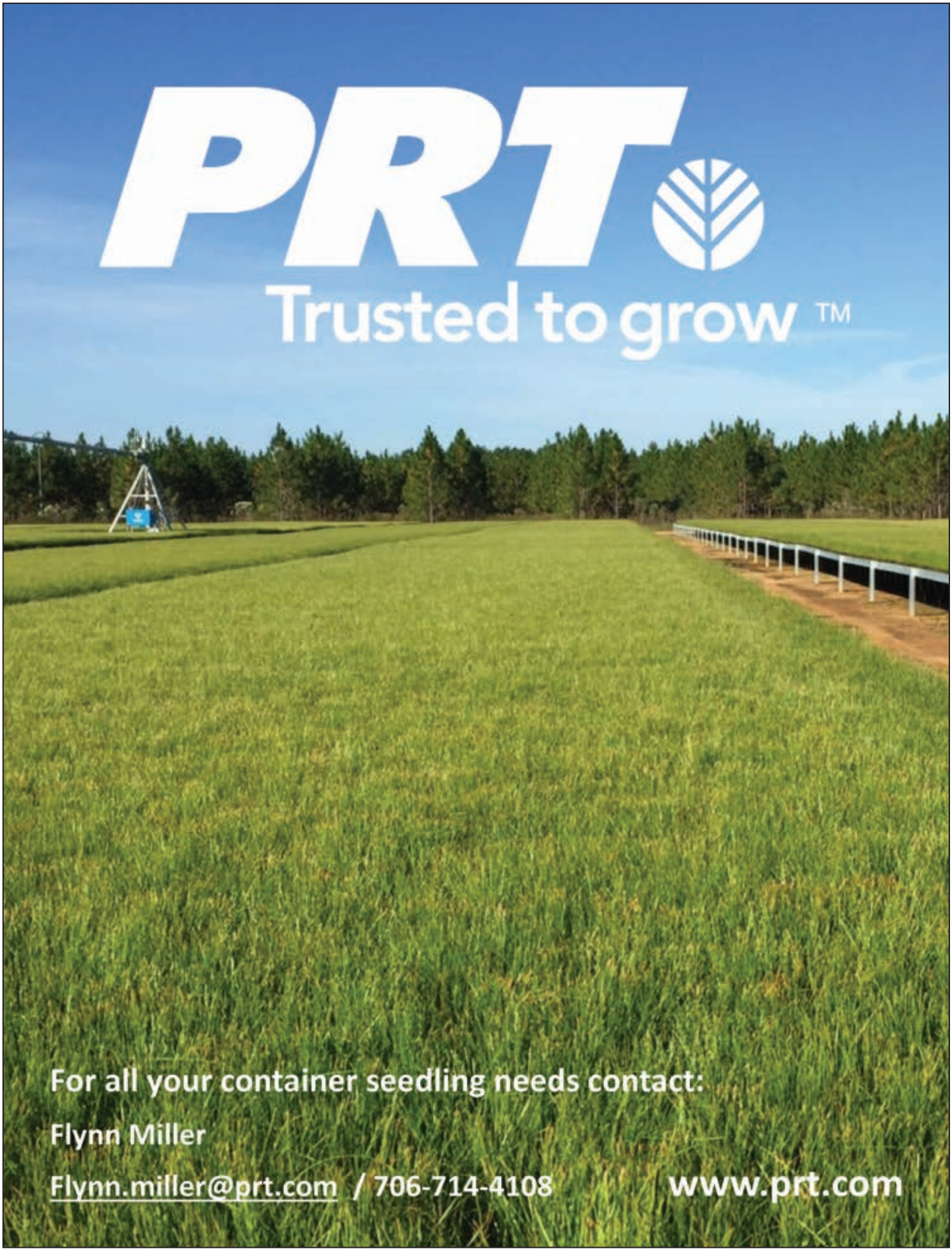
Simple language and images illustrate longleaf pine fire adaptations.

Competition from undesirable plants is explained as neighboring "bullies" hogging the sunlight from Pal and Ari. This is a great example of how to make an abstract concept relatable to kids.

Story time is a wonderful way to engage young longleaf fans both indoors and outdoors. Consider making story time INTERACTIVE by:

Taking the story for a walk: Set up stations for each page of the story along a short trail. This can motivate small children to complete the hike and provide opportunities to connect the story elements to real-world observations.

Acting out the story: Assign characters and suggest movements for different parts. For example, a child can illustrate a bolting longleaf pine by quickly standing up from a squatting "grass stage" position.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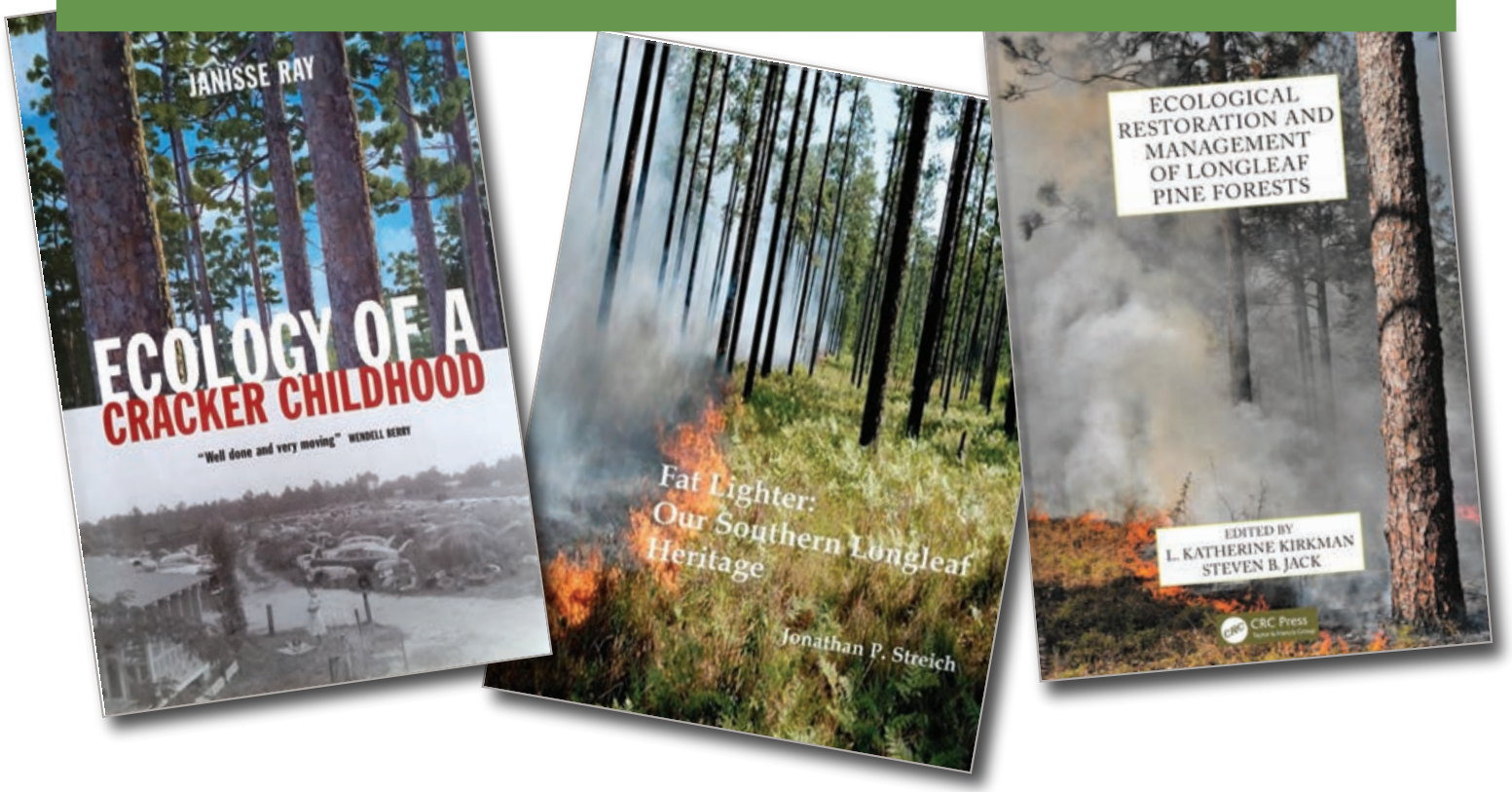
LONGLEAF LITERATURE

During this 25th anniversary year of The Longleaf Alliance, *The Longleaf Leader* is suggesting relevant and applicable books for you to either establish, organize, or update your longleaf reference bookshelf.



The 'communities of longleaf' include the diverse plant and wildlife communities found within these dynamic ecosystems, but also the human communities working within and toward their restoration. This selection of books digs deep into the science of longleaf pine forest ecology and management as well as the historical and modern take on how longleaf pines shape Southern cultural heritage.

Ecology of a Cracker Childhood

Janisse Ray, Milkweed Editions, 1995, 15th Anniversary Edition, 2015

In *Ecology of a Cracker Childhood*, Ray weaves together an intricate story of her life growing up in a junkyard in Baxley, Georgia, with the story of the longleaf forest. Both aspects left a lasting impact on her as a person. Throughout the book, she explores the full spectrum of growing up in the rural South as well as the history, beauty, and threats to the once-dominant longleaf pine ecosystem. Janisse Ray is an incredible storyteller, and the language that she uses throughout the book will leave you laughing one moment and crying the next. Fans of moving fictional works or descriptive environmental texts alike will enjoy this read.

Ecological Restoration and Management of Longleaf Pine Forests

Edited by L Katherine Kirkman and Steven B. Jack, CRC Press; 1st edition, 2017

"Ecological Restoration and Management of Longleaf Pine Forests is a timely synthesis of the current understanding of the natural dynamics and processes in longleaf pine

ecosystems. This book beautifully illustrates how the incorporation of basic ecosystem knowledge and an understanding of socio-economic realities shed new light on established paradigms and their application for restoration and management. Unique for its holistic ecological focus, rather than a more traditional silvicultural approach, the book highlights the importance of multi-faceted actions that robustly integrate forest and wildlife conservation at landscape scales, and merge ecological with socio-economic objectives for effective conservation of the longleaf pine ecosystem." At 451 pages, this hardcover book is also available in eBook versions and rental options.

Fat Lighter: Our Southern Longleaf Heritage

Jonathan Streich, CreateSpace Independent Publishing Platform, 2012

"Those who remember what the longleaf pine woodland looked like are passing with each tree that is cut. Perhaps it takes age, and an outsider who became a fire ecologist, to appreciate what once was. This pictorial gift (you will want a color app) of the longleaf pine story will be appreciated if you liked: Ray's *Ecology of a Cracker Childhood*, Neel's *The Art of Managing Longleaf*, or Earley's *Looking for Longleaf*. If you love the South, then this book is for you! It speaks about one of North America's premier forests: the longleaf pine ecosystem. This coastal plain forest once dominated the landscape that greeted the settlers from southern Virginia to the Piney Woods of eastern Texas. Its sap was used to seal ships and make specialty chemicals; its timber was used to build schools, factories, churches, houses, and the great American railroads. Today it helps to deliver electric power to millions of homes. What happened to this woodland? Will we bring this treasured forest back?"

LONGLEAF *Art* SPOTLIGHT

RICH CURTIS

About the Art

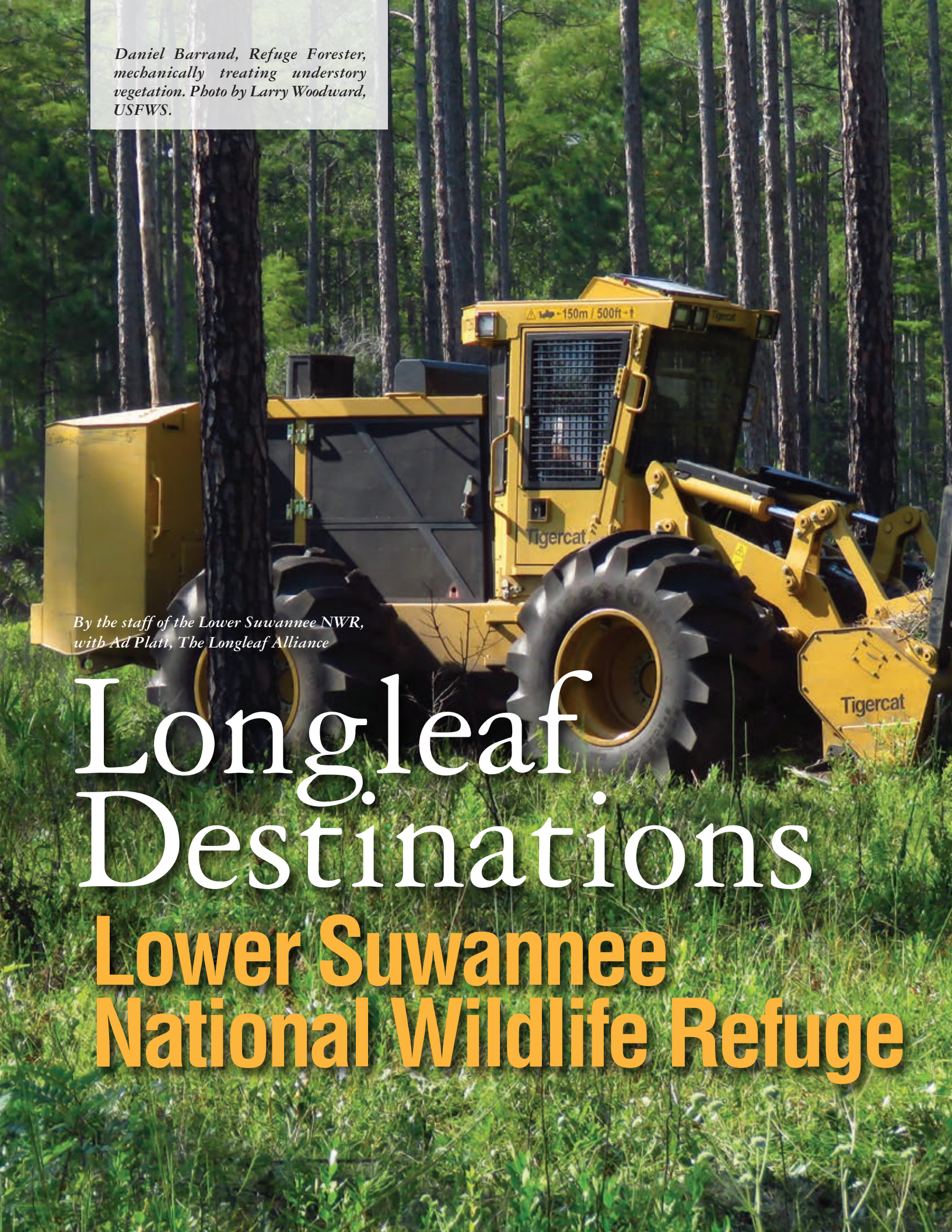
Visiting Fire Festival 1/25/20

Overlooking the lake at Tall Timbers — walking down the trail — drawing made with ashes from prescribed burn found on site.

About the Artist

Over the past six years, Rich Curtis has explored the natural and rural environments of South Georgia experimenting with creating artwork that uses materials from the land. In an ongoing series he calls *Return to the Source,* Curtis makes pigments and inks from natural materials such as charcoal, clay, ochres, walnuts, and berries. He then makes a drawing of the place from which he gathered those materials. He has also made paper from recycling materials such as waste paper, grasses, and even hair. In this way, Curtis combines his background in both painting and performance. The act of finding, gathering, and making ink from found materials is as much a part of the artwork as the finished painting and invites the artist into a conversation with his environment.

Rich Curtis was born and raised in North Alabama. He attended the University of North Alabama, where he received a BFA in painting in 2000. After working at the Birmingham Museum of Art, Curtis studied time-based and performance art at the School of the Art Institute of Chicago. He received an MFA from SAIC in 2004. Since then, Curtis has created various art projects nationally as well as internationally, including Germany, Canada, Kenya, and the Netherlands. In 2011, Rich accepted a position at Thomas University and is currently Associate Professor of Art at TU. A recent exhibition of his paintings was shown at Plough Gallery in Tifton; other exhibits in the region will be forthcoming. For more information about his art practice, Rich Curtis can be reached at rcurtis@thomasu.edu.



Daniel Barrand, Refuge Forester, mechanically treating understory vegetation. Photo by Larry Woodward, USFWS.

By the staff of the Lower Suwannee NWR, with Ad Platt, The Longleaf Alliance

Longleaf Destinations

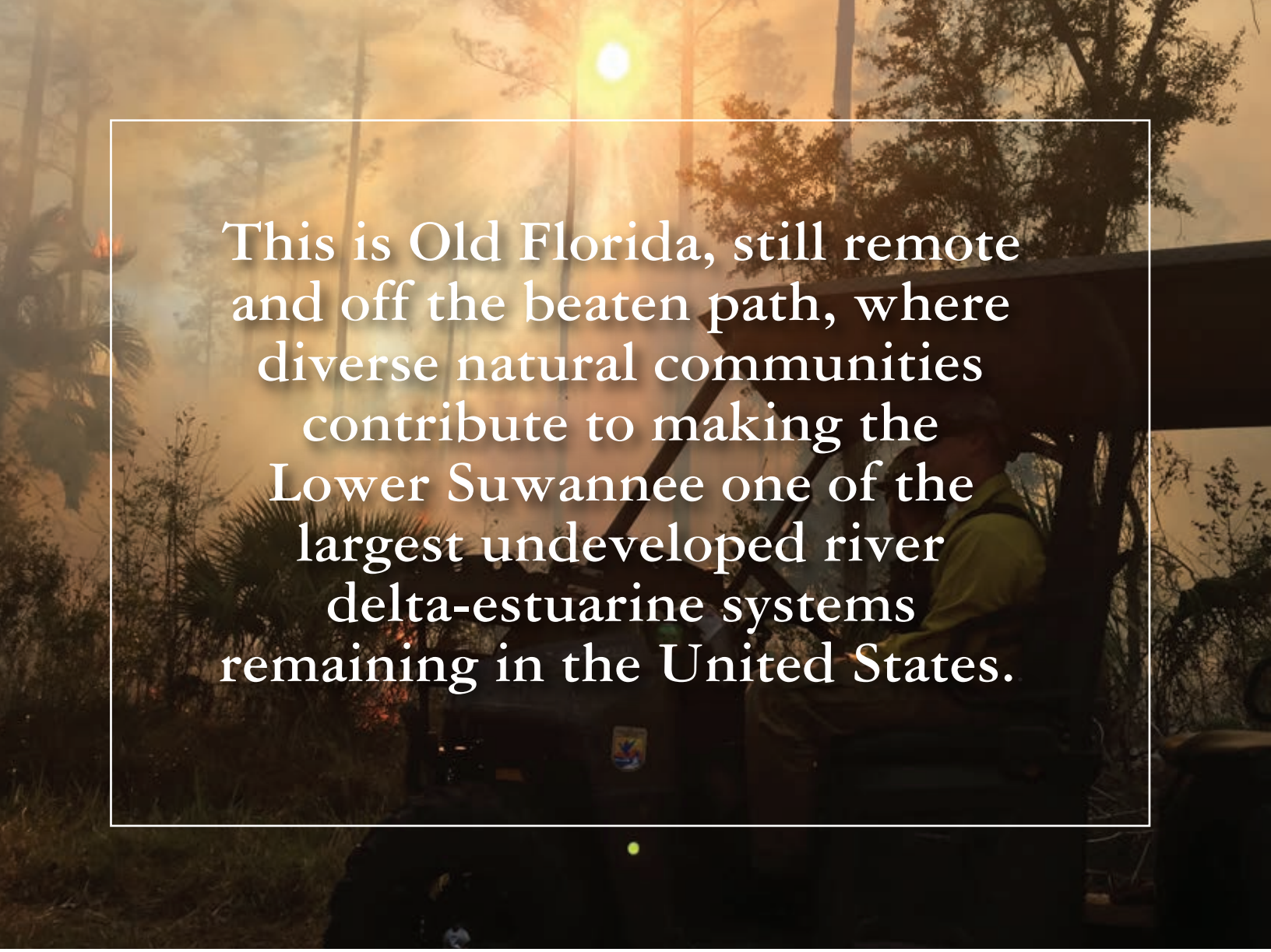
Lower Suwannee National Wildlife Refuge

Breaking dawn through the pines. Photo by Larry Woodward, USFWS.

Located along the southern edge of the Big Bend Region on Florida's Gulf Coast, Lower Suwannee National Wildlife Refuge encompasses a vast landscape of some 52,935 acres of varied habitats in Dixie and Levy Counties. The historic Suwannee River, made famous by Stephen Foster (who wrote Florida's state song, though he never actually visited), bisects the Refuge. I recently visited to see the progress that staff are making in longleaf restoration and fire management. After seeing part of what this area offers, I will make sure to return to explore some of the recreational opportunities.

This is Old Florida, still remote and off the beaten path, where diverse natural communities contribute to making the Lower Suwannee one of the largest undeveloped river delta-estuarine systems remaining in the United States. At the mouth of the Suwannee River, the Refuge fronts 26 miles of the Gulf of Mexico. A constant influx of nutrients from the river system helps maintain excellent wildlife habitat, both terrestrial and aquatic. These habitats include river and tributary creeks with majestic cypress trees and floodplain hardwood forests, scrub oak communities, scenic tidal marshes dotted with coastal islands, and maturing pine plantations on uplands remaining from the previous timber company ownerships that are gradually being restored to longleaf. Any who are working to bring longleaf back into these kinds of habitats would benefit from a visit or talking with the Refuge staff, especially about their experience and approaches to moderating fire intensity in understory competition with a significant oak scrub and waxy shrub layers.

Established in 1979, The Lower Suwannee National Wildlife Refuge was made possible through the cooperative efforts of the U.S. Fish and Wildlife Service, The Nature Conservancy, and Florida's Suwannee River Water Management District. While the overall goal of the Refuge is to provide conditions desirable to wildlife through scientific management, the site also provides opportunities for environmental education and wildlife-oriented recreation, including observation, photography, fishing and hunting in season. Over 250 species of birds have been identified within the Refuge, with 90 species nesting in the area. The Refuge provides great opportunities to view these as well as many species of mammals, reptiles, amphibians, butterflies, and more. Marine mammals such as the bottlenose dolphin and the endangered West Indian Manatee,



This is Old Florida, still remote and off the beaten path, where diverse natural communities contribute to making the Lower Suwannee one of the largest undeveloped river delta-estuarine systems remaining in the United States.

Firefighters monitoring the burn at LSNWR. Photo by Larry Woodward, USFWS.

along with several species of marine turtles, utilize the coastal waters. The natural salt marshes and tidal flats attract thousands of shorebirds and diving ducks while acting as a valuable nursery area for fish, shrimp, and shellfish. Freshwater fish, including largemouth and Suwannee bass, bluegill, redear sunfish, and channel catfish are found in the Suwannee River and its creeks.

Visitor Tips:

The Refuge is open year-round, from sunrise to sunset, with no admission fee. Winter visitors will enjoy the mild weather, but sunscreen is suggested. Summer requires lots of water, bug repellent and sunscreen – maybe even a hat and sunglasses. This backcountry area has spotty cell phone reception, and Verizon seems to work best.

There are 40 miles of improved limerock roads that are open to motorized vehicles, providing visitors the opportunity to see the various forest and wetland habitats and ongoing longleaf restoration areas. An additional 50 miles of unimproved (secondary) roads are available for hiking and bicycling only. Walking trails access habitats loaded with migratory songbirds and wildflowers in the spring.

Coastal waters, tidal creeks, interior ponds, and the Suwannee River are open year-round for fishing, and public boat ramps and kayak launch sites provide access. Hunting is permitted on the Refuge in accordance with all state and federal regulations and with a $15 Refuge Hunt Permit from Florida Fish and Wildlife Commission's website.

No camping or overnight parking is allowed within the Refuge; however, there are adjacent campgrounds on both sides of the Suwannee River. Lodging is available nearby; listings can be found through the Chiefland, Cedar Key, and Suwannee Chambers of Commerce. Food, gas, and supplies are available year-round in the surrounding area.

Best Ways to Experience:

Levy County: 100 yards from the Refuge headquarters, sits the huge bat house built for 100,000 Brazilian free-tail bats. Just beyond it is a nature trail and boardwalk that takes you to the historic Suwannee River. One-half mile to the south,

Tyler Gilpert, firefighter, on the fireline at LSNWR. Photo by Larry Woodward, USFWS.

Map of Lower Suwannee NWR depicting visitor attractions and longleaf restoration sites (orange areas).

Prescribed fire sign with distant smoke. Photo by Larry Woodward, USFWS.

Directions to Refuge Headquarters:

From US 19 in Chiefland, FL, turn south onto CR 345, drive for approximately 6 miles, turn right onto County Road 347, and follow that road until the junction with CR 330. Turn left at the junction, drive 6 miles to the big brown information signs, and keep following the signs. You can also Google: Vista, Levy County, Florida. The street address is: 16450 NW 31 Pl, Chiefland, FL 32626. The Administration Office has a Visitor Contact Station that provides maps, brochures, information, and a warm welcome for visitors. Restroom facilities, a pollinator garden, and paddling information are also available. Much more information can be found on their website: *www.fws.gov/refuge/Lower_Suwannee/visit/plan_your_visit.html*

the 9-mile Nature Drive winds through several habitats and by an observation deck where a variety of birds and baby gators can be seen. Ten miles south, the Shell Mound trail explores a 6,000-year-old archaeological site reaching 28 feet in height, where a spectacular view of the coastal estuary and Gulf awaits you. This site also offers a fishing pier, kayak launch, and the Dennis Creek Trail featuring footbridges across a salt barren and an observation deck for bird lovers. Cedar Keys National Wildlife Refuge can be viewed and visited from the quaint village of Cedar Key only ten minutes away.

Dixie County: The Dixie Mainline is a refurbished logging-tram road. Its 9-miles takes visitors from one spectacular view to another. From the south, near Suwannee town, catch the Dixie Mainline to see Salt Creek observation deck, the beautiful and mysterious swamp, Sanders and Johnson Creeks. Upon reaching County Road 357, turn left to check out the topography of Fishbone Creek, then go to the beautiful Shired Island boat ramp and take the trail to the beach covered with driftwood. Remember your camera and fishing pole.

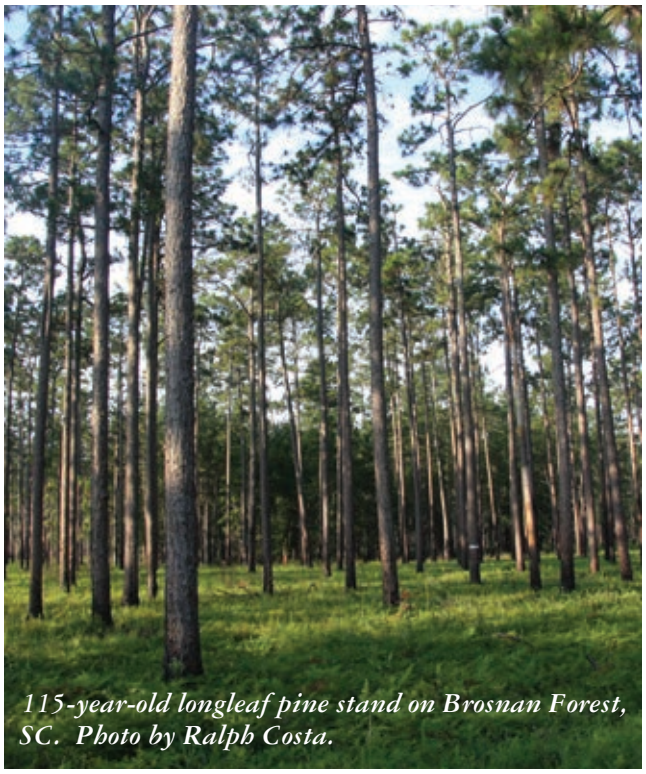
Norfolk Southern Railway's Brosnan Forest

A Training Ground for Wildlife Biologists

By Ralph Costa, RCWO LLC

The eastern morning sky turned a brighter pink as it anticipated the rising sun off the South Carolina coast. The smell and light mist of the salt marsh invigorated Felicia as she slid her SC Department of Natural Resources 17' Boston Whaler off its trailer and into the calm waters of Five Fathom Creek on her way to Raccoon Key, an island of the Cape Romain National Wildlife Refuge.

One hundred forty-eight miles northwest of the boat ramp, sunlight just began penetrating the expansive longleaf pine forest, highlighting the golden wiregrass of the Carolina Sandhills National Wildlife Refuge (NWR) in northern South Carolina. Nancy, sitting in the cab of her 4x4 refuge truck, was preparing for another day in the "woodpecker woods" of the U.S. Fish and Wildlife Service's (USFWS) largest red-cockaded woodpecker (RCW) population.



115-year-old longleaf pine stand on Brosnan Forest, SC. Photo by Ralph Costa.

Three hundred twenty miles south of the salt marsh in northern Florida, various species of the Osceola National Forest's diverse bird community inhabiting the longleaf pine flatwoods were gathering for their early morning foraging event. Sarah was climbing into her U.S. Forest Service (USFS) pickup with the oversized tires and heavy-duty winch in preparation for a day negotiating the deep-water holes of the Forest's road system while monitoring the resident RCW population.

Meanwhile, 78 miles west of the salt marsh in southcentral South Carolina, the morning sun's rays intermingled with the fog-shrouded longleaf piney woods of Brosnan Forest, creating magical, ghostly images among the tall pines. However, unlike his three long-time friends and colleagues who had gotten up well before first light, John was fast asleep in the "deer cooler," as he was awake till 2:15 am crunching cavity-nesting bird data. John is the latest occupant of the "deer cooler," long ago converted to the RCW research headquarters on Brosnan, that also served as graduate "student housing" for Felicia, Nancy, and Sarah.

Brosnan Forest, owned and managed by Norfolk Southern Railway as a conference center, client shooting preserve, and employee vacation facility, is located in Dorchester County, South Carolina, and contains 6,323 acres of longleaf pine within its total of 14,400 acres. Since 1981, forest management has been directed by Lamar Comalander, President of Milliken Forestry Company, Inc., with the longleaf pine being managed under the Stoddard-Neel Approach, focusing on a single tree selection system (Jack et al. 2006). Currently, there are 3-4 distinct age classes on many acres, with the oldest overstory trees being ~115 years old. Prescribed fire return intervals range from 2-3 years, resulting in a species-rich understory plant community (Mudder 2006). Brosnan hosts the largest known RCW population under one ownership on private land. They were one of the charter members of the South Carolina RCW Safe Harbor program, enrolling in 1998 with a baseline of 68 active clusters (Sanders 2000, Lauerman 2007); in 2019, the population harbored 90 active clusters and 86 potential breeding groups (Kappes 2019).

As Felicia Sanders eased her boat into the open waters of the Atlantic, she reflected on her varied job responsibilities. Not only does she conduct research and monitoring of shorebird species (e.g., oystercatcher, red knot, black skimmer) along the entire coast of South Carolina as the Coastal Bird Coordinator, Felicia also travels internationally for research on arctic nesting shorebirds with Canadian colleagues in Hudson and James Bay. Her tenure living in the deer cooler began in 1998 when she was the first Clemson University graduate student to study RCWs on Brosnan. She investigated brood reduction and the insurance hypothesis as explanations for asynchronous hatching (Sanders 2000). This spring day would be another productive and pleasure-filled one in the surf and sand of critically important nesting shorebird habitat, using research skills developed at Brosnan Forest 22 years ago.

Parking her 4x4 and hiking to a RCW cluster for a nest status check, Nancy Jordan, wildlife biologist for the Carolina Sandhills NWR, recalled how her time as a student researcher on


1.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1. Felicia Sanders banding a red knot on Seabrook Island, SC. Photo by SC Department of Natural Resources. 2. John Kappes with a yellow rat snake at Brosnan Forest, SC. Photo by Kerry Brust. 3. Nancy Jordan banding RCW nestlings on Carolina Sandhills National Wildlife Refuge. Photo by Don Crutchfield. 4. Sarah Lauerman banding RCW nestlings on Osceola National Forest. Photo by Jennifer Staiger.

Brosnan thoroughly prepared her for her current position. Nancy, also a Clemson graduate, followed Felicia at Brosnan and began her research in 2000 studying RCW hatching failure and embryonic mortality (Jordan 2002). Today would be another busy one in the Refuge's sandhills with at least 19 more clusters to check for nests in preparation for nestling banding season. Nancy is the biologist for the task, having honed her RCW monitoring skills and techniques at Brosnan 20 years ago.

With muddy water "washing" the hood of her rig, Sarah Lauerman, wildlife biologist and sole proprietor of AVES Consulting LLC, arrived at compartment 97 to continue her RCW breeding season monitoring. In 2008, Sarah began work on the Osceola National Forest as a contract translocation biologist; numerous partners have funded her over the years, including the Department of Defense, Florida Fish and Wildlife Conservation Commission, USFWS, and USFS. Her primary responsibility is to provide 20 RCWs annually to the Southern Range Translocation Cooperative. Following Felicia and Nancy, Sarah was the third Clemson graduate student to complete a M.S. degree on RCWs at Brosnan while also living in the now infamous deer cooler. She researched the effects of growing- season fire on RCW reproduction and the diverse breeding bird community of the mature longleaf pine forest (Lauerman 2007). Sarah's intensive RCW field experience on Brosnan 14 years ago, established her as the perfect biologist to successfully develop and implement Osceola National Forest's entry into the world of a donor RCW population. Later that day, leaving compartment 97 via the same woods road she arrived on, Sarah smiled, as she frequently does, because she was reminded how fortunate she was to work with RCWs in the premier longleaf pine flatwoods of northern Florida.

When the fresh morning air of this mid-morning spring day finally penetrated the deer cooler, and the fog had burned off with the rising sun, John Kappes rose from his slumber and brewed his first mug of gourmet coffee. Late-night data analyses and mid-morning rises outside the avian breeding season were nothing new to John. Since 1988, when he began his RCW "career" on the Apalachicola National Forest as a wildlife technician, he has pioneered research into the dynamics of the RCW cavity faunal community, particularly cavity-nesting birds. Having completed M.S. and Ph.D. degrees from the University of Florida and a postdoctoral position at Virginia Polytechnic Institute, he is currently the only scientist investigating the complex ecological relationships between and among the birds, reptiles (rat snakes) and mammals (primarily southern flying squirrels) using RCW cavities. Continuing its long tradition of supporting RCW research, Brosnan Forest is his study site, and the deer cooler his field "home." Eventually, after emerging from the comfort of the "cooler" into the fast-approaching heat of mid-day, he gathers his tools of the trade, i.e., peeper camera, trapping net, banding supplies, and telemetry equipment for another long but gratifying day in the longleaf pine forest.

Norfolk Southern Railway's Brosnan Forest and its longleaf pine ecosystem provide outstanding opportunities to conduct RCW research. The forest is mature, the RCW population is large and stable, and the property has efficient access to RCW territories. Additionally, Norfolk Southern Railway provides housing, a vehicle with fuel, and various supplies and equipment. Most importantly, the leadership of Josh Raglin, General Manager Facilities, Joel Wells, Manager-Brosnan Forest, and their staffs are committed and supportive of advancing our knowledge of RCW ecology, management, and conservation having hosted RCW researchers since 1998. It would be challenging to find a more engaged and committed private sector RCW research partner than Norfolk Southern Railway and Brosnan Forest.

Jackie Trickel, NC Longleaf Festival Coordinator, Retires

By Christina Sorensen Hester, Wake County Parks and Recreation

Friends, family, co-workers, and partners celebrated Jackie's retirement with a party in New Hill, NC where she was honored with donations to The Longleaf Alliance totaling over $500. Photo by Tony D'Amico.

Anyone who knows Jackie Trickel knows she is passionate about longleaf pines and even more passionate about sharing that love with others. While Jackie recently retired from her position as Assistant Park Manager at Harris Lake County Park, her dedication to longleaf stewardship and environmental initiatives will continue.

Jackie began her time with Wake County Parks and Recreation at Crowder County Park in 2004 as a part-time staff member, eventually becoming an Assistant Manager of Education. Following a few years at Historic Yates Mill County Park, Jackie transitioned to Harris Lake County Park and the American Tobacco Trail in 2011.

Harris Lake County Park is a 684-acre public park, owned by Duke Energy and leased to Wake County Parks and Recreation. This partnership was recently recognized as part of the North Carolina Longleaf Honor Roll for managing their 60-acre longleaf pine stand with prescribed fire. One of a few public longleaf sites in the area, Harris Lake County Park has become an education ambassador for longleaf in Wake County. Each year, over 150,000 visitors have the opportunity to hike to the longleaf pine stand or take part in an array of educational programs, the most notable being the annual Longleaf Festival. As the festival coordinator since 2012, Jackie provided thousands of visitors the opportunity to learn the significance of longleaf pine ecosystems and the historical contribution of these forests.

Jackie's dedication to environmental education and natural resource management spans outside the park boundaries and is enhanced with her connections to many organizational partners. Not only is Jackie a long-time member of The Longleaf Alliance, she is also an active participant in the NC Longleaf Coalition and the NC Native Plant Society.

Jackie has effortlessly given her time, experience, knowledge, and passion in the goal to further promote the Wake County park system, environmental stewardship, community awareness, longleaf conservation, and more. Thanks to Jackie for her many years of service. We look forward to the adventures she has planned next in her life journey!

Transitions within The Alliance

Sarah Crate, Outreach Communications Coordinator

Allison Frederick, Development & Media Manager

Robert Abernethy — After months of assisting The Longleaf Alliance part-time as the Director of Special Projects, Robert is officially retired from LLA. Thank you, Robert, for all that you have done (and will continue to do) for longleaf. We look forward to hearing about your retirement adventures!

Ryan Bollinger — was promoted to Regional Initiatives Director. Ryan will also continue his work as LIT Consul, a role he has served in since 2015.

Lynnsey Basala — was promoted to Vice President for Development. Lynnsey started with LLA as the Development Director in 2015.

Sarah Crate — joined The Longleaf Alliance in February as the Outreach Communications Coordinator where she will be working on a variety of projects including *The Longleaf Leader* and coordinating the 13th Biennial Longleaf Conference this October. Sarah grew up on a farm in Missouri, where her family instilled a "love for the land." From those early experiences, Sarah pursued a biology degree at William Jewell College and then worked in plant ecology and fire ecology research. Prior to joining LLA, Sarah served as the Longleaf Program Coordinator for the North Carolina Forest Service. Sarah is happy to work at a place that combines all her favorites: longleaf and its diverse plants species, prescribed fire, and outreach.

Lisa Lord — was promoted to Conservation Programs Director, a new role created to bring strategic alignment to LLA's conservation initiatives including wildlife species recovery initiatives and forest conservation and restoration.

Allison Frederick —started as The Longleaf Alliance's first Development & Media Manager in February. Allison recently moved from the Colorado mountains to North Carolina's Coastal Plains. She holds a bachelor's in community health sociology from Regis University and master's in environmental sustainability from Harvard University where she focused on environmental psychology. In addition to working with The Longleaf Alliance, Allison is on the faculty at Harvard University's sustainability graduate program for environmental management courses. She has a strong background in research and project management and has been responsible for several multi-million-dollar technology portfolios. She has written many patents, including for clean water technologies and drought-tolerant trees. Previously, Colorado Governor John Hickenlooper appointed Allison to an advisory board with the Environmental Protection Agency in recognition of her liaison skills. In her free time, Allison volunteers to rehabilitate and protect sea turtles and coordinates with prescribed fire managers at The Nature Conservancy to keep their contracts up to date.


APPALACHIAN MOUNTAIN BREWERY
PINTS FOR PINES
FOR EVERY CASE OF LONG LEAF IPA SOLD, APPALACHIAN MOUNTAIN BREWERY WILL PLANT A LONGLEAF PINE
PROUD PARTNER OF
THE LONGLEAF ALLIANCE
WE CAN SO YOU CAN FOUNDATION
LONG LEAF
INDIA PALE ALE
COMMUNITY • SUSTAINABILITY
APPALACHIAN MOUNTAIN BREWERY
AMB
BOONE, NC
WE CAN SO YOU CAN FOUNDATION | AMB PROUDLY SUPPORTS THE WE CAN SO YOU CAN FOUNDATION'S MISSION TO REVITALIZE OUR COMMUNITIES, MOUNTAINS & RIVERS.

Pictured: Ali Frederick (LLA), Nathan Cenis (Bartlett Tree Experts), Lynnsey Basala (LLA) & Jacob Lishen (Land Ltd). Photo by The Longleaf Alliance.

For the Love of Longleaf

Appalachian Mountain Brewery, Triangle Land Conservancy, and The Longleaf Alliance teamed up for the second annual tree planting event at the Bailey & Sarah Williamson Preserve in NC. Eighty volunteers planted approximately 3,000 longleaf seedlings. Want to participate in fun events such as this? Follow LLA's social media accounts for details.

By Lynnsey Basala, The Longleaf Alliance

Your Membership Strengthens our Mission

By choosing The Longleaf Alliance (LLA) as your charity of choice you are undoubtedly making a high-impact donation. It's because of loyal folks like you that LLA was able to allocate 89% of income to programs and services last year. We can't fulfill our mission without the generosity of the those with an affinity for the majestic longleaf pine ecosystem. Whether you're a landowner, forester, researcher, wildlife biologist, urban conservationist and the like, your membership has special meaning with the LLA. We strongly encourage you to not only renew your annual membership but consider gifting memberships to friends and family so they may benefit from *The Longleaf Leader* and stay connected to boots-on-the-ground work. Maintaining longleaf pine stands is crucial in supporting biologically diverse habitats throughout the Southeast, and LLA is a leader in this effort.

Donations of $50 or more include a one-year membership in The Longleaf Alliance, (4) issues of the quarterly magazine, a longleaf-themed gift, discount to the 13th Biennial Longleaf Conference in Wilmington, NC this fall, recognition in the winter issue, and an invitation to upcoming member-exclusive events across the range.

For more information about ways to contribute individually or conservation partnership incentives, please contact Vice President for Development, Lynnsey Basala, at (314) 288-5654 or Lynnsey@longleafalliance.org.

The Longleaf Alliance is a 501(c)(3) organization and contributions may be tax-deductible to the fullest extent permitted by law.

Red Hills Fire Festival at Tall Timbers in Tallahassee, FL on January 25, 2020. Photo by L. Basala.

LONG LIVE LONGLEAF!

How adorable are these longleaf conservationists? Thank you to our supporters and friends at ArborGen for donating thousands of longleaf seedlings for The Red Hills Fire Festival. It was a pleasure to visit with the general public about the LLA's restoration, stewardship, and conservation efforts which spans more than twenty-five years. What an honor it is to expose the next generation to the wonder, sights, and smells of the South's great forest; it all starts with a seedling.

You may consider a donation to The Longleaf Alliance in honor, memory, birth-of, celebration-of, etc. For more ideas regarding membership and third-party fundraisers to support the LLA, visit us online. Jackie Trickel's retirement party highlighted in this issue's People Section (page 46) is a great example of fun while FUNdraising for a cause.

SAVE THE DATE FOR THE LONGLEAF ALLIANCE'S

13th BIENNIAL LONGLEAF CONFERENCE

OCTOBER 20-23, 2020

WILMINGTON, NORTH CAROLINA

Conference Highlights

- Pre-conference ancillary meetings and socials
- Opening welcome reception
- Keynote addresses from leaders in the field of longleaf restoration, conservation, and management
- Concurrent and poster sessions that include presentations focusing on various aspects of the longleaf forest
- An all-day field trip that showcases local longleaf sites
- An evening "Longleaf Celebration"
- Longleaf Alliance Store and silent auction
- Exhibitor opportunities for non-profits, government, and commercial vendors

Interested in presenting?

Oral presentation and poster abstracts are being accepted until April 15th.
Visit www.longleafconference.com for information on the submission process.

Interested in attending?

Early registration will open in June. Members of The Longleaf Alliance are eligible for discounted registration.

Interested in sponsoring, exhibiting, or donating?

Please contact Lynnsey Basala at lynnsey@longleafalliance.org.

HEARTPINE

Expanding my Longleaf Community

By Sarah Crate, The Longleaf Alliance

On February 2, the Kansas City Chiefs won the Super Bowl for the first time in 50 years. I was raised a Chiefs fan, a Missouri farm girl by upbringing, and the Chiefs' victory will become a milestone event we will reminiscence with "where were you when…" conversations for years to come. I watched the game in North Carolina, luckily with college friends from Missouri who are also transplanted fans. On the one hand, being away from family and all the excitement in Kansas City was disappointing. On the other hand, I had the pleasure of unexpectantly expanding my "Chiefs community" over 1,000 miles away from home. From my local grocery store who sold my husband the Chiefs cupcakes to the Chiefs fan we encountered hiking on a local trail to my North Carolina friends sending congratulatory text messages after the big win, I felt my circle expand. All thanks to a football game played several states away.

The day after becoming Super Bowl Champs, I awoke to the start of another major life event, my first day on the job as the Outreach Communications Coordinator with The Longleaf Alliance. Once again, I found my community expanding—this time in the name of longleaf pine. For me, this connection is more meaningful than Chiefs football, having made my home and professional career in the Southeast. Before joining The Longleaf Alliance, I was the Longleaf Coordinator for the North Carolina Forest Service. Leaving that position was bittersweet, but knowing that I was not saying farewell to my longleaf community in North Carolina made it easier. Instead, I will have the chance to say hello to a bigger longleaf community as part of The Longleaf Alliance. One of my favorite things to do is share the longleaf story with others, and I look forward to being a part of this larger "team." Go Team Longleaf!