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FEATURED

From Heat, Health

Prescribed Burns Restore Longleaf Pine Forests

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Matt Garner, Brendan Bibey and Michael Frye from the The North Carolina Forest Service conducting a recent burn at Whitehall. Ted Fitzgerald/The Pilot

It's hard to miss a prescribed burn when one happens somewhere across Moore County. The air hangs a little heavier, and it smells like your neighbor started a campfire. But unlike a backyard bonfire, these burns are used to help the existing plant-life flourish.

Using fire as a method of maintaining the forest may seem like an oxymoron, but it has a long history in the Sandhills. Burning swathes of land, especially longleaf pine savannas, encourages natural biodiversity.

Jesse Wimberley lives on the old Speight family farm in West End. His family has been farming in the area for several generations. He took over the farm in the 1980s. He said burns were a very common process for previous generations. He said early families had to understand fire for survival — preventing wildfires — and protecting farm land.

At 66, he's continuing the tradition and teaching anyone wanting to learn how to burn. He is the coordinator of the Sandhills Prescribed Burn Association. Wimberley called SPBA a "very grassroots" organization, where "neighbors help neighbors" burn lands and restore the history of prescribed burns as forest maintenance.

"We have one of the most diverse ecosystems in the world because it's fire-maintained," he said.

Prescribed burns, also called controlled burns, vary from site to site. The general formula is the same: look at existing conditions and apply fire safely. But the conditions in which someone chooses to burn can yield dramatically different results.

Wimberley said the work is called "prescribed burning because every tract of land has a unique prescription," similar to humans needing to go to a pharmacy.

For a recent burn, Wimberley said the association wanted low wind but not low humidity. He said rain was forecasted for the following day as well, which would help put out anything still smoldering.

Deb Maurer, the Southern Coastal Plain Program Director for The Nature Conservancy, oversees a burn team stationed in Southern Pines and one on the coast.

She said TNC supports burning between 12,000 and 17,000 acres in the Sandhills annually. She said the Sandhills team works largely on the Sandhills Game Lands, TNC property and some public parks, like the Walthour-Moss Foundation preserve.

"The target is putting good fire on the ground that is helping restore or maintain healthy longleaf forests," Maurer said.

She later added it's not "all about the longleaf, but it's a major plant in the region." TNC tries to burn the same place every three to five years.

Maurer's been working with fire and restoration for 22 years now. She said her whole career has been focused on restoration, from an ecological perspective, and how to use fire to promote natural resources and communities.

"In this part of the world, fire has been on this landscape for as long as longleafs have been on this landscape. A healthy longleaf forest cannot persist without fire."

But she said 90 percent of the work happens before fire hits the ground. She said preparation and knowing the site is important for implementing fire control safely. Sometimes, the team doesn't make an official call on a burn until the morning of a planned burn in case weather shifts.

"Takes a lot of experience and training," Maurer said. "It takes a lot of time and attention. And when you actually do the burn, and put fire on the ground, you have done a lot to get there and get the right effects."

Wimberley added that the burns require a lot of "advanced planning," like making sure there are good fire breaks, no dead trees that could spread the fire, no holes someone could fall into and such.

Then the teams go out with safety gear, drip torches, blowers and water. Wimberley said "safety" is accomplished in advance, always having a "plan B" in case the wind shifts or a leaf escapes the contained area.

"We never lose a burn because we do so much planning," Wimberley said.

He said the "last catastrophic fire was in April 1963." He said low humidity, high wind and high fuel moisture create easy burn conditions.

Significance to Landscape

Maurer said burns are important for several reasons, including maintaining tree density, ensuring that sunlight reaches the forest floor and creating suitable habitat for various creatures, like the endangered red-cockaded woodpecker.

Maurer and Wimberley said several plants have adapted to fire maintenance over the last few centuries. Wiregrass, common in longleaf pine savannas, has a mutualistic relationship with the trees and actually needs fire to produce “viable” seeds.

“The two that must be together,” Wimberley said. “It will only produce viable seeds if it receives fire in the growing season.”

He said pyxie moss is another forest floor plant that requires fire. Wimberley said he often gets calls from people who recently burned, excited, because red cockaded woodpeckers came to their land or new wildflowers started blooming.

“Most people who have forest land see the effects of fire on it, everyone wants it, it’s beautiful,” Wimberley said. “We are lucky to have people see it.”

One concern burn teams consider is the impact to animals on the land. Maurer said her team tries to burn in a way that keeps “escape routes” open. But she added that these animals have adapted to burns and know when to flee or how to burrow under the ground.

“We try to burn in such a way that we maintain escape routes for animals to get out.”

She spoke of one burn in the Sandhills where she saw hundreds of insects fly out of an area and then fly back in. Some creatures, like snakes and rabbits, also retreat to wet areas and underground.

Fire Education

SPBA and TNC are partners of the Party for the Pine event, held at Weymouth Woods. There, community members can learn about the importance of burning and hug the world’s oldest-known living longleaf pine.

Kris Anne Bonifacio, public information officer for N.C. State Parks, said the event is essentially a “birthday party” for the centuries old tree.

The tree dates back to 1548. It’s part of an old-growth stand with other trees as old as 450 years on the Boyd tract, located behind the Weymouth Center.



“It’s very exciting for us to have such a very old tree, and I think that’s a testament to longleaf pines and what they symbolize for North Carolina, as the state pine tree, and just that that ecosystem is so important to the state historically and today,” Bonifacio said.

Bonifacio said it’s a great opportunity to inform people about restoration by fire and talk about the longleaf ecosystem.

The event, planned for April 20 from 10 a.m. to 3 p.m., will feature guided hikes to the tree, booths from local environmental organizations, food and, if conditions are right, a live burn demonstration.

File photo. Visitors gather in 2022 at the oldest known living longleaf pine at the Weymouth Center to celebrate the 474th birthday of the Old Tree. Ted Fitzgerald/The Pilot

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