Restoring longleaf pines, keystone of once vast ecosystems
DeSoto National Forest, near Wiggins, Mississippi
When European settlers came to North America, fire-dependent savannas anchored by lofty pines with footlong needles grew across what is now the southern United States.

By the 1990s, logging and clear-cutting for development had all but eliminated longleaf pines and the grasslands beneath where 100s of plant and animal species flourished.

Landowners, government agencies and nonprofits are working in nine coastal states from Virginia to Texas to bring back pines named for the long needles prized by Native Americans for weaving baskets.

Longleaf pines now cover as much as 7,300 square miles (19,000 square kilometers) — and more than one-quarter of that has been planted since 2010.

“I like to say we rescued longleaf from the dustbin. I don’t think we had any idea how successful we’d be,” said Rhett Johnson, who co-founded The Longleaf Alliance in 1995.

Scientists estimate that longleaf savannas once covered up to 143,750 square miles (372,000 square kilometers), an area bigger than Germany. By the 1990s, less than 3% remained in scattered patches. Most were preserved in areas too wet or dry to farm.

Fire suppression played a critical role on the longleaf’s decline. Fires clear and fertilize ground that longleaf seeds must touch to sprout. Properly timed, they also spark seedlings’ first growth spurt.

And, crucially for the entire ecosystem, they kill shrubs and hardwood trees that would otherwise block the sun from seedlings, grasses and wildflowers.
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A fire-charred longleaf pine stands in the DeSoto National Forest in Miss. on Wednesday, Nov. 18, 2020. An intensive effort in nine coastal states from Virginia to Texas is working to bring back the pines named for the long needles prized by Native Americans for weaving baskets. (AP Photo/Janet McConnaughey)

Woven from the Landscape
https://www.fws.gov/southeast/articles/woven-from-the-landscape/
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Longleaf pines, about 80 to 85 years old, stand tall in the DeSoto National Forest in Miss., on Wednesday, Nov. 18, 2020. An intensive effort in nine coastal states from Virginia to Texas is working to bring back the pines named for the long needles prized by Native Americans for weaving baskets. (AP Photo/Janet McConnaughey)
Footlong needles that give longleaf pine its name are seen in the DeSoto National Forest on Wednesday, Nov. 18, 2020. An intensive effort in nine coastal states is bringing back longleaf pines -- armor-plated trees that bear footlong needles and need regular fires to spark their seedlings’ growth and to support wildly diverse grasslands that include carnivorous plants and harbor burrowing tortoises. (AP Photo/Janet McConnaughey)
A 2-year-old "grass stage" longleaf pine seedling stands in the DeSoto National Forest on Wednesday, Nov. 18, 2020, with U.S. Forest Service silviculturist Keith Coursey and some 80- to 85-year-old trees in the background. Longleaf forests once covered an estimated 92 million acres, a figure which had fallen to 3.4 million by 2010. Since then, people in nine coastal states from Texas to Virginia have added 1.3 million acres -- some by planting seedlings, others by taking out shrubs and other trees in mixed forests. (AP Photo/Janet McConnaughey)
A stand of 80- to 85-year-old longleaf pines and an open, grassy area where seedlings can grow unhampered -- including a few at the top of the shadow are seen in the DeSoto National Forest in Miss. Landowners and government agencies in nine states from Texas to Virginia are working to bring back longleaf pines, planting seedlings in some areas and managing others to remove shrubs and other kinds of trees. (AP Photo/Janet McConnaughey)
Silviculturist Keith Coursey stands in a thicket of gallberries -- one of the shrubs that would block the sun from grasses and wildflowers in longleaf pine forests without regular fires -- in front of a stand of 80- to 85-foot-tall longleaf pines in the DeSoto National Forest on Wednesday, Nov. 18, 2020. An intensive effort in nine coastal states from Virginia to Texas is bringing back longleaf pines -- armor-plated trees that bear footlong needles and need regular fires to spark their seedlings’ growth and to support wildly diverse grasslands that include carnivorous plants and harbor burrowing tortoises. (AP Photo/Janet McConnaughey)

These ecosystems are home to nearly 900 plant species found nowhere else in the SE USA.

More than 30 threatened and endangered species make the longleaf pine forest their home. https://mylandplan.org/content/plants-wildlife-and-longleaf-pine
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https://www.longleafalliance.org/
http://www.americaslongleaf.org/
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[Diagram showing life stages of longleaf pines: Grass Stage, Bottlebrush Stage, Sapling Stage, Mature Stage, Seed & Seedling Stages]

https://longleafalliance.org/what-is-longleaf/the-tree/life-stages