

Longleaf Pine Restoration

An Interview with Becky Stowe, Jennie Vrbicky and Liz Hanson
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Meeting the Restorationists

I met with Becky Stowe, Director of Forest Programs, and Jennie Vrbicky and Liz Hanson, Stewardship Technicians at The Nature Conservancy's (TNC) Van Cleave, MS office. We discussed TNC's longleaf pine savanna restoration in Mississippi and their experiences in ecological restoration on the 12,000 acres of longleaf pine savanna that the TNC manages.

A Family Legacy

One hundred years ago, Becky Stowe's ancestors cleared longleaf pine from Mississippi. Now, she's bringing it back. She is an 8th generation Mississippian. Her ancestors were "saw people" who cut longleaf down for timber. An interest in preservation led her to TNC where she now works to restore the savannas. "It's a legacy thing...for me", she says. "I like the idea of protecting land".



Fig. 1. A young longleaf pine
(K. Bascom).



Fig. 2. A sample of native longleaf vegetation
(Amazon/Roundstone Native Seed).

Longleaf in the Region

Longleaf pine (*Pinus palustris*; Fig. 1) is native to the southeastern US. It grows in savannas, grassy areas with wide-spaced trees. They are adapted to fire, as are many of the associated plants. The trees affect fire qualities that help maintain the highest fine-scale plant diversity in the US (Fig. 2). Through timber extraction, **longleaf was removed from 97% of its range**, reducing habitat for endemic species. The TNC restores timber plantations and fields back to longleaf savanna.

A Brief History of longleaf in Mississippi

Pre-Settlement: Pine savannas dominate southern MS

1880-1920s: Longleaf cut and harvested for timber

1940-1950s: Savannas replanted with loblolly pine

1970s: TNC begins land acquisition in MS

1980s: TNC-MS chapter formed, longleaf preserves acquired

Present: Longleaf savanna restoration continues, more than 12000 acres managed by TNC



Fig. 3. A prescribed burn at Mike's Pond restoration site.



Fig. 4. A crown fire during a burn.

grasses and other plants in the future. This fall, they received a barrel of mixed seed from another savanna. They hope to scatter it and see what grows. Many longleaf savanna plants are endemic-species, meaning that they are found only in particular region.

Challenges

Stowe's ancestors and other settlers used fire to manage lands.

They did not perceive it as dangerous, nor do many of their descendants who continue to burn. But there are challenges to burning in some areas. Sites near Interstate 10 must minimize haze. Some newer residents are opposed to controlled burns. "We need to educate", says Stowe.

Restoration Methods

- Prescribed burning - Lightning-induced fires used to burn large areas of savanna. The TNC uses controlled burns during cooler months (Figs. 3 and 4).

- Invasive species control - Cogongrass is the primary target. TNC herbicides to remove it during summer months.

- Planting - TNC has planted >270,000 longleaf to re-grow the savannas.

Current Goals

- Reach biodiversity quotas set by the US Army Corps of Engineers;
- Restore natural environmental processes including fire
- Control invasive species;
- Removing shrubby groundcover to make habitat for native plants;
- Balance the restoration requirements of native plants and animals (Fig. 5).

Future Plans

The TNC aims to re-grow native



Fig. 5. Native wildlife: gopher frog (*Rana capito*).



Fig. 6. Vegetation monitoring at the Old Fort Bay Preserve.

Another consideration is to restore other native species besides pine which requires regular monitoring of changes (Fig. 6). One of the TNC's longleaf sites borders the Sandhill Crane National Wildlife Refuge, where there are active efforts to breed endangered cranes. If a crane nests on TNC's preserves, then they cannot burn the immediate area due to Endangered Species Act regulations. Stowe stresses that the TNC wants to see cranes return, but that the restrictions can cause short-term changes to restoration efforts for longleaf savannas.

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For additional information:

<http://longleafalliance.org/>

and

<http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/mississippi/index.htm>



Fig. 7. Technician Liz Hanson drives by a burn site.