The Revival of an Iconic Forest – Longleaf Pine Forest System Efforts in East Texas

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The Historical Perspective

The iconic Longleaf Pine (*Pinus palustris)* forest system of the southern United States occupied 90 million acres from Virginia to Florida to east Texas. A long-lived species (100-500 years), Longleaf pine was favored for it's qualities of straightness and strength. Following the Civil War and reconstruction of the south, longleaf filled the nation's need for lumber products and the world's need for naval stores. Resin of the tree was used to produce tar, pitch and turpentine. With the advent of railroad transportation and trams being constructed to access deep into forest stands, cutting accelerated and by the 1930's virgin pine stands were harvested.

During the past 75 years much of the second generation stands of longleaf have been removed with conversion to loblolly pine (*Pinus taeda*) monoculture plantations. Slash pine (Pinus elliottii), (not native to Texas), was introduced to Texas by the forest industry in the 1950's to increase fiber production, but performed marginally on some nutrient-poor sites.

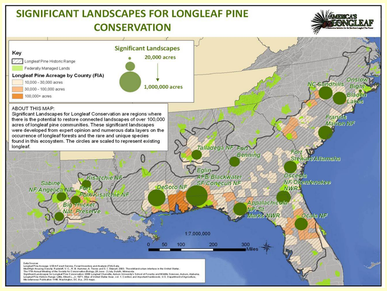
Human land development, conversion to agriculture, and fire suppression contributed to the further decline of the longleaf forest. Less than 3% of longleaf forests remains in North America. Today 65,500 acres remain in east Texas.

Values of the Longleaf Forest

Longleaf pine forests harbor a diverse wealth of species and communities, second only to the tropical rainforests of South America.. Most notable in Texas is the federally endangered Red-cockaded Woodpecker. Northern Bobwhite Quail, Eastern Turkey and the Louisiana Pine Snake which utilize open forest conditions dominated by Little Bluestem (*Schizachyrium scoparium*), forbs and wildflowers. Embedded plant associations such as hillside seepage (pitcher plant) bogs and limestone glade barrens exist as well. Over 700 plant species occur on The Nature Conservancy's Roy E. Larsen Sandyland Sanctuary.

America's Longleaf Conservation Plan

America's Longleaf Conservation Plan was developed in 2011. The plan identified strategies with an overall goal to increase longleaf pine acreage from 3.4M acres to 8M acres in 15 years. Range-wide historic occurrence and existing stands areas were identified as Significant Geographic Areas (SGAs). Teams of public and private partners were formed to work across the entire range. A core group of members comprises the Longleaf Implementation Team (LIT) of Texas. The team consists of many including the USFWS, NRCS, The Nature Conservancy, Texas A&M Forest Service, the National Park Service, the National Forests & Grasslands of Texas, Texas Parks & Wildlife Department, National Wild Turkey Federation, and Campbell Global, a forest investment management organization. The LIT effort's are focused on the SGA's centered around the Big Thicket National Preserve and Sabine and Angelina National Forests (known as the Longleaf Ridge SGA). The Texas LIT has received three awards from the National Fish & Wildlife Foundation to supplement the contributions of the Technical Team. A portion of the funds supports the Team Leader position, but the majority of funding is used to assist landowners through a cost share program with establishment of and manage longleaf forests on their property. The Technical Team provides consults with landowners as requested and ranks applications for requested funds. The LIT members are a subset of the larger membership of private and public interests that forms the Texas Longleaf Task Force. The 188-member Taskforce is committed to the establishment of longleaf pine forests in the historic range of counties in the state. The Taskforce serves as the clearinghouse for providing information to landowners on funding opportunities, resource availability, technical advice, vendor sources, and offer field days to demonstration sites.

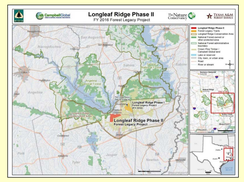


Moving the (Pine) Needle

As of 2013 for the first time in 30 years the national acreage of longleaf forests has increased from 2.87M acres to 3.33M acres and the acreage of longleaf/oak forests and woodlands has increased from 3.96M acres to 4.28M acres.

Texas Contributions to the Longleaf Pine Forest Conservation Effort

The Texas Chapter has worked to increase the acreage under protection by acquisition and conservation easements. U.S. Forest Service Forest Legacy funds have assisted in protecting 4,785 acres on Longleaf Ridge and a second phase project recently funded with 2M federal dollars will protect an additional 5,000 acres. These lands will be held by industrial forest interests and be managed as working forests. An additional 2,125 acres is currently under option with a private non-industrial landowner for a conservation easement on the historic Scrappin' Valley tract. Another benefit of these lands will be to close the gap of connectivity between two national forests.



The Nature Conservancy manages appx. 6,106 acres on four preserves for longleaf-dominated habitat. Prescribed burning, including growing season burns, are being used on an 18 month to 3 year basis. Burns suppress and control dense hardwood shrub invasion and create a bare mineral soil substrate for longleaf regeneration. In areas of low natural regeneration, hand plantings of containerized seedlings using contract crews, staff, and volunteers have supplemented existing stands. Planting has targeted forest gaps and damaged areas from hurricanes Rita (2005) and Ike (2008). Chinese Tallow (*Triadica sebifera*) and Japanese Climbing Fern (*Lygodium japonicum*), invasive, non-native species are treated with herbicide. Timber harvests, mechanical treatments, chainsaw operations, and chemical treatments are utilized to favor open forest floor conditions and a diverse herbaceous understory.

Other associated aquatic and terrestrial communities that benefit from the protection and conservation efforts of longleaf forests include hillside seepage bogs, herbaceous bogs, baygalls, Weches glade outcrops, American Beech-Southern Magnolia forests, bottomland hardwood forests and bald cypress-tupelo swamps.

The Nature Conservancy provides the public and resource professionals an opportunity to learn more about conservation of the native heritage of Texas by having the Roy E. Larsen Sandyland Sanctuary open for visitation. Field tours, hiking, nature study, photography, and birdwatching are favorite activities. An 8.5 –mile stretch of Village Creek, a major tributary of the Neches River, flows through the preserve. The Preserve is designated as a site on the Pineywoods Loop of the Great Texas Coastal Birding Trail and is listed in the top 500 Most Important Birding sites by the American Bird Conservancy.

Noted flora includes the endangered Texas Trailing Phlox (*Phlox nivalis* ssp. *texensis*), the state rare Scarlet catchfly (*Silene subciliata*), White firewheel *(Gaillardia aestivalis* var. *Winkleri*) and Chapman's Orchid (*Platanthera chapmanii*).

Chapman's Orchid

Texas Trailing Phlox

White Firewheel

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