Texas Forest Service

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FOREST STEWARDSHIP BRIEFINGS

Timber ◊ Wildlife ◊ Water Quality ◊ Soil Conservation ◊ Best Management Practices ◊ Recreation ◊ Aesthetics

THE TRINITY RIVER IN REHAB

by Mike Jackson

from A&M Systemwide - newsletter for A&M System Employees and Retirees; May/ June 2007 edition

For more information:

- http://www.tamus.edu/systemwide/07/05/features/trinity-river.html
- http://twri.tamu.edu/news/2007/04/27/restoring-the-trinity/
- http://trinityriverbasin.tamu.edu/

Jim Cathey dipped a bottle into the Trinity River and held it up to the sun. The water was as murky as chocolate milk. A few minutes later and a few miles away, he dipped another container into water from the Trinity that flowed through a manufactured wetland. "It's like bottled water that you'd find in a convenience store."

Though the water wasn't ready to drink, its clarity helped Cathey prove a point to a visiting team of ecologists and researchers from Texas Cooperative Extension. Wetlands naturally filter sediment and chemicals from the water, he said.

Cathey, an Extension wildlife specialist, and the team visited the Richland-Chambers wetlands this spring on a tour of the Trinity. They set out on the three-day journey to examine rural landowners' efforts to improve the river.

Cathey is also leading educational efforts for a state project to rehabilitate the river. "You don't hear as much about the Trinity as you do about other rivers in the state," he said. "But it flows from the Dallas area all the way to Houston, and a lot of people rely on it."

At Richland-Chambers, about 80 miles southeast of Dallas, two agencies have teamed up to rebuild more than 200 acres of wetlands to be used as a natural filter. The agencies—Tarrant Regional Water District and Texas Parks and Wildlife Department—intend to eventually restore wetlands on 2,000 acres in the Richland Creek Wildlife Management area. There, water from the Trinity is pumped into the restored wetlands. The water will eventually be piped into the Richland-Chambers Reservoir.

The river suffers from decades of poor land management along its banks, Cathey said. Ranchers and farmers cleared the land for cattle grazing and cotton long ago. With few trees and other vegetation to slow storm water drainage, runoff flows too quickly over the land and into the creek, eroding the banks along the way. Conditions are similar all along the Trinity. The river has also been degraded by sewage and treated effluent from the Dallas-Fort Worth area.

Communities and hundreds of other property owners along the river are counting on the state's effort to improve the Trinity's ecosystem and water quality. The plan, the Trinity River Basin Environmental Restoration Initiative, was announced by Gov. Rick Perry in Sept. 2005.

Two Texas A&M University System agencies are leading the river's restoration initiative. The Texas Water Resources Institute will coordinate urban projects; the Institute for Renewable Natural Resources will manage rural efforts. Both agencies are units of the Texas Agricultural Experiment Station and Extension.

The state is also counting on help from the property owners, Cathey said. They are able to do things that the state cannot, such as reintroduce native plants and wildlife on private land along the river. They can also restore wetlands, which would help clean the river, he said.

INSIDE THIS ISSUE:

Longleaf for Wildlife and Profit

by Rusty Wood, Forest Stewardship Biologist, Texas Parks & Wildlife Dept., Nacogdoches, TX

For more information:

- http://www.fws.gov/southeast/partners/pfwpine.html
- http://edis.ifas.ufl.edu/FR064
- http://plants.usda.gov/factsheet/doc/fs_pipa2.doc
- http://www.longleafalliance.org/landowners/whylongleaf.htm
- http://tfsweb.tamu.edu/uploadedFiles/FRD/Stewardship/does_longleaf_make_dollars_and_sense(1).pdf

The longleaf pine was once the dominant conifer throughout the southeast, covering nine states from Texas east to Florida and north to Virginia. Fire determined where longleaf pines were found. Other southern pine species such as loblolly and slash were relegated to the wetter areas that burned less frequently such as creek bottoms and around ponds and streams. By the mid twentieth century, 95% of the longleaf stands had been cut and converted to other species or other uses.

Longleaf pines have an undeserved reputation of being hard to establish and slow growing. The fact is, with today's improved containerized nursery stock and new planting techniques, many landowners are experiencing 90% survival rates. New advances in herbicide applications are helping to shorten or bypass the grass stage altogether. Longleaf growth rates actually compare well to that of other southern pine species. When planting longleaf for wildlife, the recommended stocking is 450 trees/acre.

Prescribed fire can be introduced into the stand as early as two years after establishment. Prescribed burning serves many purposes in a longleaf stand including reduced competition from other woody vegetation, the consumption of leaf litter, and return of nutrients into the soil. Prescribed burning keeps browse plants typically used by deer "knocked back" and within reach from the ground as well as being more tender and palatable.
Longleaf pines produce high quality wood products. Longleaf stands produce more utility pole classed logs per acre than the average loblolly pine stand. Longleaf also has a denser specific gravity than other southern pine species. This equates to more money in your pocket when selling a product based on weight. Longleaf are the most drought resistant, insect and disease resistant, and fire resistant species of all southern pines.

Properly managed stands of longleaf often take on a park like appearance with a grassy understory filled with native grasses, clovers, legumes, wildflowers, and forbs. Many of the native plants and associated animals can only thrive in this type of environment with ample sunlight and prescribed burning. There are a multitude of songbird species that are associated with this open pine/grassland habitat including Bachman's sparrow (*Aimophila aestevalis*); a species in decline and has been noted as a conservation priority in the state of Texas. Two game animals, the Bobwhite quail and Eastern Turkey use this habitat for nesting and brood rearing. Many reptiles and amphibians including the Louisiana Pine Snake (*Pituophis ruthveni*), also considered a conservation priority, make their home in these forests. Whitetail deer can readily be seen feeding in the understory of the forests browsing on the early successional plants kept young and tender by frequent fires.

When added together, the benefits of longleaf including the ecological, economical, aesthetic, and wildlife value make planting longleaf a smart investment for enhancing your property's value.

Cost Share Programs for Longleaf

For more information:

- http://www.tpwd.state.tx.us/landwater/land/private/lip/
- http://www.tx.nrcs.usda.gov/programs/EQIP/index.html
- http://ecos.fws.gov/partners/viewContent.do?viewPage=home

There are many cost shares available for landowners wishing to restore longleaf to their land. The Landowner Incentive Program (LIP) is a Texas Parks and Wildlife program that will pay 75% of the cost for stand establishment and maintenance.

EQIP and Partners for Fish and Wildlife are cost share programs available from the NRCS and U. S. Fish and Wildlife Service respectively that will provide financial and technical assistance for longleaf pine stand establishment and maintenance.

BMP 15-YEAR REPORT CARD

A report released by the Texas Forest Service titled "A History of Forestry BMP Implementation Monitoring in Texas" documents the tremendous gains that have been made in Best Management Practices (BMP) implementation over the years. "The results show that the forestry community has truly embraced the importance of using BMPs to protect water quality," said Hughes Simpson, Texas BMP coordinator.

The report covers results from the past 15 years of BMP implementation monitoring in which a total of 904 sites in East Texas were evaluated on public, industrial, Timber Investment Management Organization (TIMO), and private lands. By measuring the progress that has been made since the initial survey, strengths and weaknesses have been determined, so that future educational efforts can be focused on those areas needing the most improvement.

Since the monitoring program began in the early 1990s, overall BMP implementation rates have increased by over 20% to an all time high of 91.7%. Even greater strides have been made in traditional problem areas – temporary roads (+56%), stream crossings (+43%), and streamside management zones or SMZ's (+28%).

Family forest landowners, long considered the critical link to protecting water quality, have led most of the recent advancement. Tremendous gains have been made on private land, most notably on temporary roads (+68%), site preparation (+59%), stream crossings (+58%), and SMZs (+42%). Their overall BMP implementation rate also increased significantly (+29%) to an all time high of 88.6%.

"The dramatic improvements shown by this report really demonstrate the effectiveness of the Texas Forest Service BMP program as well as the forestry community's commitment to environmental stewardship," said Simpson.

by Hughes Simpson, BMP Coordinator, Texas Forest Service, Lufkin, TX

For more information:

- http://texasforestservice.tamu.edu/uploadedFiles/Sustainable/bmp/TFS%20BMP%20Trend%20Analysis%20(1990-2005).pdf
- http://texasforestservice.tamu.edu/main/article.aspx?id=71

FREE PELLETIZED FERTILIZER?

The orange-striped oakworm is a fall defoliator that feeds on oak trees in the southern United States. This caterpillar was locally common in East Texas this fall.

Mature orange-striped oakworms are charcoal black with orange-yellow stripes and a jet black head. Young caterpillars will have more of a yellow-brown color. The second thoracic segment (right behind the head) has a pair of long, black spines with shorter spines on the abdominal segments along the back. The long thoracic spines or "horns" make the caterpillars appear intimidating, but the larvae are harmless and do not have the capacity to "sting" or bite. Sometimes they will "spit" or regurgitate "juice" when they are picked up. They may be present in East Texas forests from August to October.

Young caterpillars feed by skeletonizing the leaf surface. Older caterpillars are defoliators and may consume all but the leaf midrib. Tree health is rarely affected by oakworm defoliation. Because the caterpillars feed during late summer and into the fall, most photosynthesis and tree growth are complete and foliage loss has little impact on the tree's health. Native predators and parasites usually help keep the insect from being a problem every year. Usually the caterpillars are more of a nuisance than a pest because their droppings can be an annoyance in areas frequented by people. When caterpillar numbers are high, their droppings sound like a soft rain.

Control is not recommended except for severe defoliation of high value trees. Think of the caterpillars as beneficial; they convert oak leaves to pelletized fertilizer for free, resulting in fewer leaves to rake!

by Dr. James Robinson, Professor and Extension Entomologist (retired), TAMU, Overton, TX, and H. A. (Joe) Pase III, Entomologist, Texas Forest Service, Lufkin, TX

For more information:

- http://insects.tamu.edu/fromthefield/orangestriped_oakworm.html
- http://bugguide.net/node/view/6469

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PUBLICATIONS OF INTEREST

"TERMINOLOGY FOR FOREST LANDOWNERS" - This publication is a glossary of timber terms, many with original illustrations, from "abiotic" to "yield table;" "section" measurements to "taxes."

Authors: Donald P. Hanley, David M. Baumgartner, and Leila Charbonneau

Publisher: Washing State University Extension Publications

Published: April 1987. Revised: February 2006. 40 pages.

To download: http://smallwoodnews.com/Docs/PDF/Landowner/TimberTerminology.pdf

TEXAS COOPERATIVE EXTENSION PUBLICATIONS - Most of these research-based publications are available as pdf documents and can be viewed online. Printed copies of many publications can be ordered online and are also available from county Extension offices. Some of the publications are available in both English and Spanish.

Go to: http://tcebookstore.org/

Under the "Animals" category, you can find wildlife, fish and pond articles. Forestry, fisheries and pesticide publications are under "Agriculture." Land, air and water topics are covered under "Environment."

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