Restoring North Carolina's Longleaf Pine Ecosystems

The North Carolina Wildlife Resources Commission's (NCWRC) Private Lands Program targets restoration of fire-dependent longleaf pine ecosystems within the historic longleaf pine range. Only about 3% of the pre-European settlement native longleaf ecosystems remain today. Populations of many plant and animal species dependent upon longleaf pine ecosystems have also declined. The goal of NCWRC is to assist private landowners who are interested in restoring habitat for at-risk species and implement management plans with biodiversity and natural community restoration goals.

The NCWRC provides technical guidance to evaluate factors including the presence of priority species, existing habitat quality, the potential for habitat enhancement, tract size, and contribution to habitat and species conservation. By focusing on existing conditions and landowner objectives, Private Lands Program staff will develop a plan to reach habitat-oriented objectives.

Currently, many pine stands where remnant longleaf exist are dominated by other species such as loblolly and slash pine. These pines can aid in initial restoration efforts by providing fine fuels for burning, particularly when there is a lack of groundcover to carry fire. When stands are thinned by removing other pine species while retaining longleaf, increased light reaches the ground producing more beneficial wildlife-friendly groundcover and an opportunity for natural longleaf regeneration.

The results of open canopies and frequent fire promotes the growth of native herbaceous plants which serve as crucial cover and food for many species. In the absence of fire and sunlight, many native plants cease to thrive. As the native plants suffer, so does the longleaf ecosystem. Thus, in the absence of proper management, populations of bobwhite quail and fox squirrels, which rely upon the longleaf ecosystem, will decline.

Thinning and burning in longleaf forests also benefits generalist wildlife species. White-tailed deer, wild turkey, mourning dove, cottontail rabbit, and black bear as well a host of nongame species are attracted by more palatable new growth and increased production of seeds and soft mast.

Longleaf pine habitat restoration in progress

This series of photos is of a mixed pine stand managed by NCWRC Private Lands Biologists that is undergoing restoration.

1. A longleaf pine sapling trying to compete with other pine species without the presence of fire.

2. Application of prescribed fire to reduce competition from hardwoods and other pines.

3. Fire has controlled the regeneration of hardwoods and other pine species such as loblolly and slash pine while rejuvenating the sparse remnant herbaceous groundcover.

4. The goal is a longleaf pine stand with viable herbaceous groundcover resulting from frequent fire that can also support a larger and more diverse population of wildlife.

For more Information on managing the Longleaf Pine Ecosystem or to identify your local NCWRC Technical Assistance Biologist contact:

John Henry Harrelson
Technical Assistance Biologist
(910) 874-2725
John.Harrelson@ncwildlife.org

Or visit these web sites for more information about the longleaf pine ecosystem: http://www.ncwildlife.org

http://www.ncforestservice.gov http

://www.longleafalliance.org

http://www.jonesctr.org