Alabama Supports a Large and Diverse Range of Trees, Plants and Wildlife

From the flat coastal plains in the south to the peaks of the valley and ridge region in the northeast, Alabama is the 4th most biodiverse state in the U.S.

ALABAMA FORESTS

by Autumn Watrous

The foresters and wildlife biologists of the Alabama Forestry Foundation's Conservation Team are strategically located throughout the state to focus on specific projects and better address conservation challenges for each unique region. In each project focus area, the Alabama Forestry Foundation's staff identify conservation concerns and work with partners and private landowners to improve native forests and wildlife habitat throughout the state.

NORTH ALABAMA

Prized for the ecologically rich Cumberland Plateau, north Alabama claims a spot as one of the most diverse regions in the nation. Rolling mountains and valleys composed of native shortleaf pine and hardwood forests provide homes for a staggering number of wildlife and plant species that are at risk, endangered, or endemic (over 100 species are found nowhere else in the world!) These native forests have begun to decline due to numerous threats, such as nonnative invasive species and changes in land management. The Foundation's conservation team works on two unique projects in this region to protect the native ecosystems.

SHORTLEAF PINE INITIATIVE

The historical significance of shortleaf pine in Alabama dates back centuries, shaping both the state's economy and ecological landscape. This native southern yellow pine species played a pivotal role in the early development of Alabama's timber industry, fueling economic growth and providing numerous job opportunities for local communities.

Shortleaf pine trees (Pinus echinata) holds immense ecological significance. This native tree species plays a vital role in supporting Alabama's diverse ecosystems. The slow closing canopy allows sunlight to spot the forest floor and encourages the growth of native grasses and wildflowers that supports habitat for a wide range of wildlife, including birds, mammals, and insects. **With the ability to grow well in poor soil, the shortleaf pine also helps prevent soil erosion and aids in water conservation by regulating the hydrological cycle.** From an economic perspective, the shortleaf pine is valued for its role in timber and pulp production, supporting numerous jobs in the forestry industry and contributing to Alabama's economy.

Once encompassing 280,000 acres of the Cumberland Plateau, shortleaf pine now only occupies around 10% of its native range. Planting rates have declined dramatically. **The removal of fire from the ecosystem negatively affected the success of shortleaf. Fire was a natural cycle that helped to remove other plants that compete for resources.** The Alabama Forestry Foundation, along with partners, is working to protect and restore shortleaf forests. With the vast majority of Alabama's forests being privately owned, our staff is working with landowners to encourage good forestry management practices that conserve existing stands, and planting to restore historical stands where appropriate. Our foresters and biologists host events and workshops such as Learn and Burns to educate landowners and resource professionals in the importance of shortleaf and how to utilize fire as a management tool.

WHITE OAK INITIATIVE

The magnificent white oak plays a vital role in the state's ecosystem, economy, and cultural heritage. From an ecological perspective, white oak provides valuable habitat for numerous wildlife species. **Its large branches and hollow trunks offer shelter and nesting sites for birds such as woodpeckers, owls, and warblers.** Deer, squirrels, and other mammals rely on its acorns as a primary food source during the fall and winter months. Additionally, the complex root system of white oak helps prevent soil erosion by stabilizing slopes and retaining moisture. White oak trees are highly valued for their strong and durable wood, which is utilized in the construction of furniture, flooring, whiskey barrels, and even ships.

However, white oak forests are facing a threat. Due to urbanization and changes in landscape use, these trees occupy less acreage than they once did. White oaks are slow growing, and existing stands are primarily composed of mature trees with few young trees and seedlings surviving. **Sunlight is needed for white oak forests to regenerate and grow, and lack of active forest management has led to shaded, dense, low-quality stands.**

The Alabama Forestry Foundation's Conservation Team is working to promote long-term sustainable conservation of white oak forests through the White Oak Initiative, a collaborative effort of agencies, non-profits organizations, associations, and universities. Our staff works with landowners to provide management recommendations, as well as hosting events to spread awareness of the importance of this species.