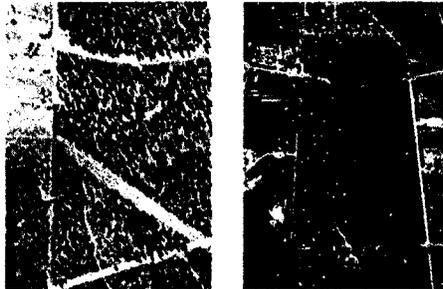


Flomaton Natural Area: A Living Museum for Longleaf Pine

By JOHN S. KUSH, Senior Research Associate,
Longleaf Pine Stand Dynamics Laboratory, School of Forestry, Auburn University

Roland Harper, Alabama state geographer in the first half of this century, wrote in his *Economic Botany of Alabama* (1928), "Longleaf pine might have once been the most abundant tree in the United States and was certainly the most abundant tree in Alabama." He went on to say, "longleaf had more uses than any other tree in North America, if not the whole world."

Longleaf pine stands once covered an estimated 80-90 million acres of the Southeastern U.S. and today occupies less than 3 million acres. As other articles in this issue discuss, there is renewed interest in longleaf pine, both within the state and across the Southeast. As part of this renewed interest, there is a need for the conservation and preservation of all remaining old-growth longleaf pine stands. A 1996 survey of the Southeast found only 14 existing old-growth longleaf pine stands totaling 9,755 acres. Of these, only four might be considered virgin, stands never having been logged. Alabama has one of these remaining stands, the Flomaton Natural Area, a 65-acre tract owned by



Aerial views of the Flomaton stand taken in the mid-1950s and in 1993.

Champion International Corporation. The stand is located on U.S. Highway 29/31 just east of the intersection between U.S. Highway 29/31 and Alabama Highway 113 in Flomaton, AL.

Flomaton's Stately Status

The significance of the stand was already recognized by the Society of American Foresters (SAF) in 1963 when they designated what was then the St. Regis Tract as the E.A. Hauss Old Growth Longleaf Natural Area. The SAF's definition of a natural area is "a tract of land set aside to preserve permanently in unmodified condition a representative unit of vir-

gin growth of a major forest type, with the preservation primarily for scientific and educational purposes."

In 1966, the U.S. Department of the Interior made inquiries into the stand for inclusion in the National Registry of Natural Landmarks. Due to a moratorium placed on additions to the register, the stand was not included.

Champion International Corporation has included the stand in their "Special Places in the Forest" program. The program recognizes unique sites situated within their working forests and sets them aside from their normal forest management operations to protect, maintain, or restore their uniqueness.

Forest History and Threats to Existence

The Flomaton Natural Area is a microcosm of the recent history for longleaf pine and the many threats it faces. The entire history of the Flomaton Natural Area is unknown. Undoubtedly, it survived severe droughts, wildfires, windstorms, and by whatever means, its cutting at the hand of man. It is known that the Alger-Sullivan Lumber Company, one-time owner, dedicated the stand to preservation some time after the turn of the century. As part of the preservation effort, the stand was regularly control burned. When Alger-Sullivan sold the stand in the 1950s, the regular control burns ceased and its survival faced new threats.

Threat #1: Cessation of fire—With the cessation of fire came the cessation of longleaf pine regeneration, as happened over so much of the Southeast after the original forest was cut.

Threat #2: Reintroduction of fire—With no regular burning in longleaf pine stands comes a second threat, and this happens when fire is brought back into a system. "Let it burn, it won't hurt anything." These were the words used to describe a small fire that occurred on a 7-acre patch of the Flomaton Natural



The Flomaton stand as it looked in 1958.

Area in May 1993. That fire in an area that had not seen fire in more than 40 years killed 91 percent of the old-growth longleaf pine greater than 15 inches in diameter. One of those trees killed had a diameter of 36 inches and was 340 years old. The fire had little impact on the hardwoods.

Threat #3—Conversion of longleaf pine stands to other species—About 30 years ago, 7 acres on the north side of the stand was cleared and planted to slash pine.

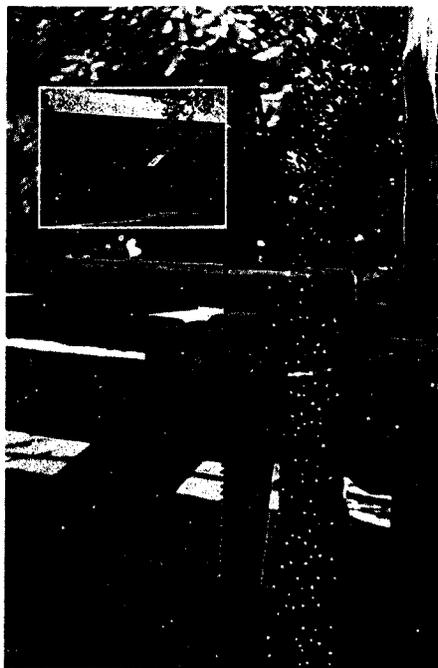
Threat #4—Sitting idly by and doing nothing—A patch of approximately 1.5 acres has been left to show what 40 years of no management does to a stand. A 40 plus year absence of fire had permitted shortleaf, loblolly, and slash pine to grow into the overstory. A substantial shrub layer and hardwood mid-story dominated by oak species developed. Longleaf pine regeneration and the herbaceous vegetation component became non-existent due to an accumulation of a thick pine straw layer.

Rebirth of the Flomaton Natural Area

Many of the remnant old-growth longleaf pine stands remaining have been reduced to isolated, often degraded patches in the contemporary southeastern landscape. The Flomaton Natural Area was one of these stands. In an effort to restore the Flomaton Natural Area, an agreement was signed in 1994 among The Nature Conservancy, the Alabama Natural Heritage Trust of the Alabama Department of Conservation and Natural Resources, Auburn University School of Forestry, Champion International Corporation, the USDA-Forest Service Southern Research Station, and the Alabama Forestry Commission to cooperate with respect to restoration, management, research, education and the transfer of information and technology involving the tract.

Partners in Restoration

The School of Forestry at Auburn University, the USDA-Forest Service, and the Alabama Forestry Commission, in agreement with Champion International Corporation, implemented a program for restoring the longleaf pine ecosystem. Fire was reintroduced to approximately half the stand in January 1995 and the other half in April. The



Logs from Flomaton were used for restoration purposes in Colonial Williamsburg. Here tree #281, determined to be 287 years old, is cut to be used in the Peyton Randolph home (Inset).

Photo of the Peyton Randolph home courtesy of the Colonial Williamsburg Foundation.

same burning regime was followed in 1996. In April-May 1996, a fuelwood operation was conducted by the Easterling Brothers of Brewton, AL. They removed 1,350 tons of hardwood chips and inflicted very little damage to the residual stand. In June 1997, a spring burn was used in an effort to reduce and eventually eliminate hardwood sprouting. The plan was to implement spring burns in 1998 and 1999 but dry weather conditions made this too dangerous. Plans are to burn the stand during the 1999 winter.

The Auburn University School of Forestry has been studying the dynamics of the Flomaton Natural Area as it undergoes restoration efforts. The stand is a good representation of virgin stands of longleaf pine described by early authors. Data collected from the stand suggest the conditions present at Flomaton today are not outside the historic range of variability for old-growth longleaf pine stand structure. Several trees approach the state champion longleaf pine, larger than 30 inches in diameter at breast height and nearly 120 feet tall. In addition to large size, the stand contains several trees more than 300 years old.

The cooperators and Champion International Corporation entered into a Memorandum of Understanding (MOU) to restore the original longleaf ecosystem. This MOU has resulted in implementation of a successful prescribed burning, hardwood removal, and research program that is already making significant progress towards restoring the forest ecosystem.

The U.S. Forest Service, with the assistance of the Alabama Forestry Commission, has been instrumental in conducting the prescribed burns. Given the difficulties presented in re-introducing fire to the stand, their expertise and the care taken with the first three burns has been invaluable.

Future Forest: A Living Museum or a Museum Piece?

The proposed widening of U.S. Highway 31 between Brewton and Flomaton involved the cutting of at least 6 acres of the stand. Through the efforts of the partners and the Alabama Department of Transportation (ADOT), the number was reduced to a little more than 1 acre. In addition, ADOT provided financial support to conduct studies on the trees removed and restoration efforts within the stand. In February 1998, nearly 300 trees were removed from the stand.

Through the efforts of the Longleaf Alliance and Champion International Corporation, arrangements were made with Colonial Williamsburg to receive the harvested trees. Logs, many of them pre-dating the American Revolution, were shipped to Colonial Williamsburg. There they will become floorboards, doors, and window frames in the home of Peyton Randolph, who died while serving in the Second Continental Congress, which adopted the Declaration of Independence in 1776. In exchange for the timber, Colonial Williamsburg is supposed to provide educational experiences for students in schools in Escambia County, AL and adjacent Escambia County, FL. Included in that experience should be lessons in conservation and preservation, especially for what little old-growth longleaf pine stands and trees remain.

If you have an opportunity to visit Colonial Williamsburg, stop by the

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Flomaton Natural Area

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Randolph home and behold what the Flomaton Natural Area provided. There you can get a sense for what and how the early settlers utilized longleaf pine. Better yet, visit the Flomaton Natural Area and experience what the Native Americans and early settlers saw, including some of the same trees they did. In front of you is a living museum of longleaf pine. We have the opportunity to see an example of a pre-settlement forest here in our great state when visiting the Flomaton Natural Area. We need to afford that opportunity to our children's children. We can ask: "How much old-growth is enough?" The answer has to be: "All that we can possibly have." It would be a social crime to have some construction piece in Colonial Williamsburg as the only place to view old-growth longleaf pine. The Flomaton Natural Area was, is, and should always be one of *Alabama's Treasured Forests*. ♣