

## **At One Time, the Longleaf Pine Ecosystem Stretched Nearly Continuous from Eastern Texas to Southern Virginia**

(bolded words in text indicate key words and concepts)

### **Student Information:**

When early Europeans first explored the southeastern United States, they found a forest of longleaf pine trees covering about 90 million acres (about the area that 90 million football fields would cover). These forests were seen in nine states, with Georgia, Alabama, and Florida having had the most longleaf pine. With the exception of occasional rivers, swamps and Indian farms, this forest stretched as far the eye could see. Today about 97% of this forest has been destroyed.

### **Teacher Information:**

At one time, longleaf pine forests were perhaps the largest forest type in North America dominated by a single species of tree. Prior to the settlement of the south by Europeans, forests comprised predominantly of longleaf pine trees **ranged** over about 90 million **acres** of the southeastern United States. This **ecosystem** could be found in a variety of **habitats** from rolling sandhills in North Carolina and South Carolina to 3000 ft tall mountains in North Georgia and Alabama to the flatwoods in Mississippi, Texas and Florida. Where there was fire, there was longleaf pine. In general longleaf pine were found in the drier sites because they burned more frequently. In wetter sites longleaf pine forests would subtly grade in other habitat types like cypress ponds or hardwood river corridors (because fire would not travel into these areas very often).

These frequent fires created an ecosystem that is as rich in biological diversity (**biodiversity**) as some tropical rainforests. However, unlike the rainforest, most of the diversity was not found by looking up, but instead by looking at down at the ground. In an area no bigger than the size of a hula-hoop, up to 40 different types of plants could be found in the **groundcover**.

Because the longleaf pine ecosystem covered such a large area and frequent fires were requisite to its existence, one can easily imagine how fire behaved across the landscape up until the last 150 years or so (prior to significant Euro-American settlement). Without the presence of roads, urban areas, open fields, etc. fire would have moved freely across the terrain, fingering its way across enormous areas. When the fire ran into rivers, streams, or the occasional Indian village or when weather conditions changed such that combustion could no longer be sustained the fire would stop and either extinguish or smolder and (later) ignite again.

Today, longleaf pine forests can still be found in every state of its original range except Virginia (where there are only a few dozen trees remaining). However, only around 3 million acres of this (once immense) longleaf pine forests remains today. A **species decline** has closely followed the loss of this forest type. Today many species of plants, animals and even insects that require longleaf pine forests are either **threatened** or **endangered** with global **extinction**. If more is not done to help protect and restore the longleaf pine forests, we can expect its demise in the next few generations.

**Key Words and Concepts:** acre, biodiversity, ecosystem, endangered, extinction, groundcover, habitat, range, species decline, threatened.