



# THE LONGLEAF LEGACY PROJECT WITHIN SAM HOUSTON JONES STATE PARK

## Heritage. Restoration. Rebirth.



### LESSON 3

## Heritage: Biodiversity – Plants & Seeds in the Forest

Longleaf pine forests are home to many plants and animals that contribute to the forests' biodiversity. Biodiversity is a word that describes the number of different plant, animal and insect species found in a particular area. Most of the biodiversity of the longleaf pine forest is found at your feet, where you can find many different types of plants, grasses and seeds.

### Objectives:

- To define and understand key terms concerning ecosystems and biodiversity
- To identify the plants and seeds featured in the lesson and understand their role in forest biodiversity

**Longleaf Pine Forest Communities:** Longleaf pine trees dominate longleaf forests, but other types of pines are also often present, including shortleaf, slash or pond pine trees. The leaves and branches that stretch across the tree tops in a forest are called a canopy. Longleaf pine forests have an open canopy, so when you look up, you can see the sky through the spaces of the treetops. In longleaf pine forests, a healthy forest floor means that there are few sticks and branches on the ground among the trees. Tree trunks usually look blackened because of the frequent, planned fires conducted. Remember, longleaf pine trees thrive in environments that are regularly burned to keep the ground clear of debris, making it easy for light to reach growing grasses and plants.

Depending on where these forests are located geographically, lots of different plants and seeds can be found among the trees and forest floor. For example, pines found in rocky areas along the coast of the eastern United States may grow in clay-like soil, where wiregrass and pixie moss can be found. In Sam Houston Jones State Park, the land on which the longleaf pine forest sits is a savanna-like region, meaning the soil is wet, silt-like and full of grasses and plants.

**Longleaf Pine Ecosystem:** Often longleaf pine trees are not alone in a forest. Other trees, plants and animals keep them company. An ecosystem is a community of many species and the environment in which they live. In a longleaf pine forest, many different types of plants and animals work together to form the longleaf pine ecosystem.

The longleaf pine forests in Louisiana are home to many different types of plants and animals including treasured, rare and endangered birds like the red-cockaded woodpecker, the gopher tortoise, the Louisiana pine snake (learn more about these animals in Lesson 4) and plants like the endangered American chaffseed. Longleaf pines produce large and nutritious seed cones (pine cones) for birds and animals to eat.

**Species in the Longleaf Pine Forest:** A species is a group of similar organisms that are usually capable of reproducing. For example, blue stem, muhly and switchgrass are species of grass that can be found in the Louisiana longleaf pine forest. Specialists at the LSU AgCenter explain that roughly 300 different types of plants grow in Louisiana's savannas with as many as 30 species in an area the size of a hula hoop. Grasses and flowers, like daisies and sunflowers, are the most common plant families in fire-dependent longleaf pine habitats. Native plants and wildflowers like sunflowers, cone flowers and butterfly milkweed flourish in longleaf forests.

*continued*



American Chaffseed



Bluestem



Butterfly Milkweed

### Helpful Links:

History and current condition of longleaf pine in the southern United States:

[https://www.srs.fs.fed.us/pubs/gtr/gtr\\_srs166.pdf](https://www.srs.fs.fed.us/pubs/gtr/gtr_srs166.pdf)

Longleaf Pine information from the LSU AgCenter:

<http://www.lsuagcenter.com/portals/communications/publications/agmag/archive/2006/spring/longleaf-pine-forests-wildlife-of-louisianas-threatened-grasslands>

### Key Words & Concepts:

**Biodiversity:** The number of different plant, animal and insect species found within a particular area. Longleaf forests are high in biodiversity. Biodiversity is often found not by looking up to the tree canopy but by looking down at your feet at the forest floor.

**Canopy:** A general term used to describe the area at the tops of trees. The term can mean all the treetops in a forest area or parts of an individual, mature tree that are green.

**Ecosystem:** Plant and animal communities, their environments and the resulting interactions. An ecosystem can be as simple as a mud puddle or dead log or as complex as a forest containing thousands of acres.

**Endangered:** A plant, animal or insect that is in imminent danger of becoming extinct. Species can be federally endangered (in peril of global extinction) like the red-cockaded woodpecker or American chaffseed plant, or state endangered (in peril of extinction from a region) like the gopher tortoise in Mississippi.

**Flora:** The plants of a particular region, habitat or time period.

**Forest floor:** The ground of a forest. The forest floor mainly consists of leaves, branches, bark and stems.

**Groundcover:** A generic term used to describe the mat of plants found on the forest floor. In longleaf pine forests, this groundcover is usually dominated by a species of grass like wiregrass or split-beard bluestem.

**Habitat:** An animal's environment (where it lives). This area must supply all of the animal's life needs.

**Organism:** A name for any living creature, including plants, animals and all other forms of life.

**Species:** A species is a group of similar organisms that are usually capable of reproducing.

[LongleafLegacy.com](http://LongleafLegacy.com)



## LESSON 3

### Heritage: Biodiversity – Plants & Seeds in the Forest

#### SUGGESTED ACTIVITIES:

- Provide students with the coloring worksheet on the next page that highlights the plants found in longleaf pine ecosystems.
- As a class activity, research plants native to Louisiana's longleaf pine forests: blue stem, muhly, switchgrass and the endangered American chaffseed. To bring that research to life, here are some ideas for activities kids may enjoy:
  1. Count how many different types of pine cones and seeds can be found around school or home.
  2. Make leaf rubbings, drawings or tracings. For leaf rubbings, place leaves or pine needles under a piece of paper and use a pencil, crayons or oil pastels to rub the top of the paper. Example provided below.



PLANTS FOUND IN LONGLEAF PINE ECOSYSTEMS



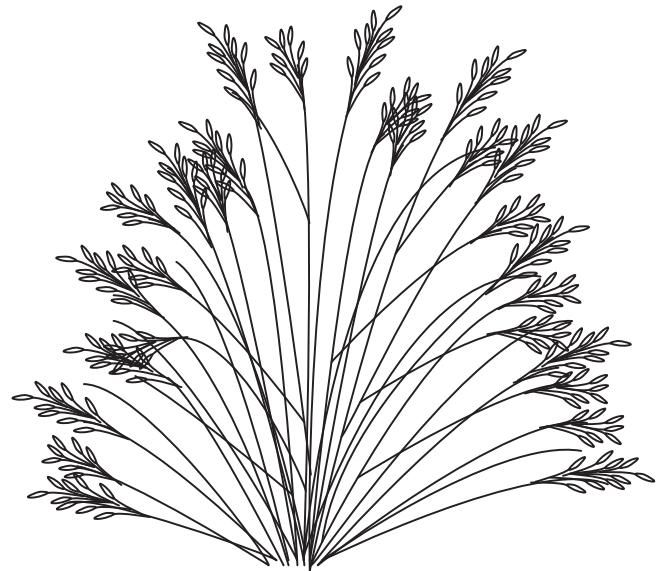
American chaffseed



Bluestem



Butterfly milkweed



Muhly grass