Southern Forests

Section 1:

Forest health

Section 2:

Longleaf Pine Forests

Section 3: Berry College's Longleaf Pine Project

Berry College Longleaf Pine Project

Section 1 Forest Health

What can you find in a forest?

- Trees
- Shrubs
- Flowers
- Animals
- Birds
- Grass
- Insects

What is a healthy forest?

- “Healthy” forests have…
  - open, sunny spaces and deep, dark places
  - lots of different trees, plants, and animals.
  - strong healthy trees of all ages
  - Many *native species* (the kinds of plants and animals that have lived together in the forest for thousands or even millions of years)
  - few large disease and pest outbreaks

What makes a forest unhealthy?

- “Unhealthy” forests…
  - are crowded and very shady
  - have only a few different kinds of plants, animals, and other living things
  - have some plants, animals, pests and diseases that are not supposed to be there; these are called *alien invasive species*
  - have lots of leaves, sticks and logs on the forest floor, making them dangerous if wildfires happen

A Healthy Forest

An Unhealthy Forest – Why is this forest “unhealthy”?

Can people help a forest get “better”?

- Unhealthy forests may be improved by…
  - Removing some of the trees to allow the remaining trees to grow stronger. This is called forest thinning.

Can people help a forest get “better”?

Unhealthy forests may be improved by…

Planting trees in areas that have been logged.

Can people help a forest get “better”?

Unhealthy forests may be improved by…

Controlling or removing alien invasive species.

Can people help a forest get “better”?

Unhealthy forests may be improved by…

– “Prescribed” or “controlled” burning.

Section 2:
Longleaf Pine Forests

Are there different types of forests?

- YES there are and each one is different!
- One type is the Longleaf Pine forest

What is in a longleaf forest?

- *Longleaf Pine* (*Pinus palustris*) trees
- Some other trees, such as *Turkey Oak* and *Blackjack Oak*.
- Lots of different grasses, ferns, and flowering plants.
- Mammals, such as *Red Fox*, *Bobcats*, and *Fox Squirrels*
- Different birds like *Woodpeckers, Turkeys, Cuckoos* and *Warblers*


Collage of photos

Why are Longleaf Pine forests special?

- Longleaf Pine forests are special because…
  - Believe it or not, they depend on FIRE to stay healthy!
  - More different kinds of plants and animals live there than in any other forest in North America.
  - Longleaf Pine trees can resist diseases and pests such as the Southern Pine Beetle.

What is the Southern Pine Beetle?

- Southern Pine Beetles are tiny insects that can kill pines
- The red trees in the picture have been killed by them
- Longleaf Pines are not affected by the beetle, meaning they are *resistant* to the insect.

How is fire good for Longleaf Pines?

Forest fires were originally started by lightning or by Native Americans to keep the forest clear. Longleaf Pines and other organisms adapted to tolerate fire.

How is fire good for Longleaf Pines?

Fires happen often in healthy Longleaf Pine forests, but when they don't get big and hot enough to hurt the trees.

Fires can clear dead branches and litter from the forest floor giving seeds a place to grow.

Fires also hold back other kinds of trees that may overshadow and kill off the Longleaf Pines.

You know that fire can be bad!!

It can burn down houses and trees

It can hurt people and animals

But Longleaf Pines need fire!

- After a long period without fire, dead leaves and sticks build up and become fuel for really big, bad wildfires
- S*mall fires* are good for the forest because they prevent this fuel buildup.
- It would be dangerous to just let wildfires burn out of control.
- So, foresters use *controlled or prescribed fires* to do what nature or Native American's once did.

The Life Cycle of Longleaf Pine

1. *Grass stage*; looks like a tuft of grass until about age 3 or 4.
2. *Rocket stage*; grows very quickly.
3. *Adult stage*; very thick bark and lots of long needles and big cones.

Longleaf Pines can take the heat!

- Longleaf Pines have *adaptations* to survive fire:
  - Grass stage
  - Fast growth during rocket stage
  - Thick *corky bark*
  - Lots of long protective needles

In fact, Longleaf Pines love fire!

- Seeds need bare soil to germinate
- Needles protect their buds
- Fire kills other trees, which makes room for Longleaf
- Fire protects seedlings from some diseases

Where did the Longleaf Pines go?

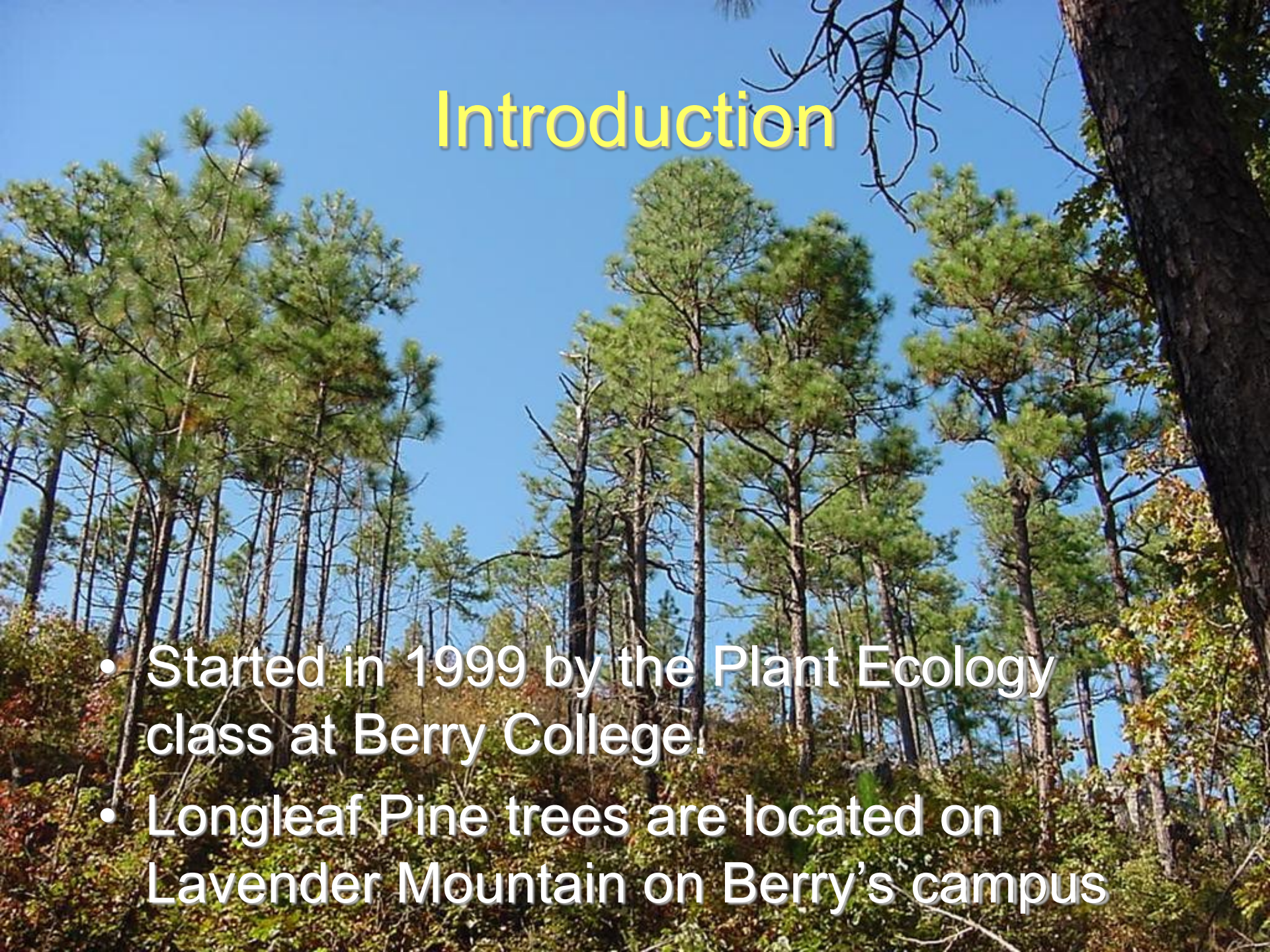
- Longleaf pine once thrived in an area equal to about 70 million football fields.
- Now the longleaf pine trees are almost gone.
- This was caused by people turning the land over to other uses and also putting out the fires that the forest needs.

What can be done to keep the Longleaf Pine forest healthy?

- Carefully return fire to the forest to help Longleaf Pine and other plants and animals.
- Thin out trees that compete with Longleaf Pine.
- Plant Longleaf Pine seedlings in areas that have been logged.

Section 3 The Berry College Longleaf Pine Project

Introduction



- Started in 1999 by the Plant Ecology class at Berry College.
- Longleaf Pine trees are located on Lavender Mountain on Berry's campus

Berry College's trees are called "Mountain" Longleaf Pines

Most longleaf is in Georgia's Coastal Plain

Longleaf Pine on Berry's Lavender Mountain

Berry's Mountain Longleaf Pines

- Some trees are nearly 300 years old!
- There may still be native plant seeds in the soil under the Longleaf Pines. This means that some of the other native plants may someday return.
- Like most other areas, Berry's Longleaf Pines were in danger of going extinct.
- With prescribed burning, planting, and control of other trees, Berry's Longleaf Pine population is now growing!

What is being done?

Prescribed Burning

Problems

- It can be dangerous
- It can cost a lot
- It can look bad for a while afterwards

Planting

Problems

- Seedlings must be grown or bought
- Seedlings can die

Controlling Other Trees

Options

- Cutting
- Fire
- "Weed killers" for trees
- Girdling

Problems

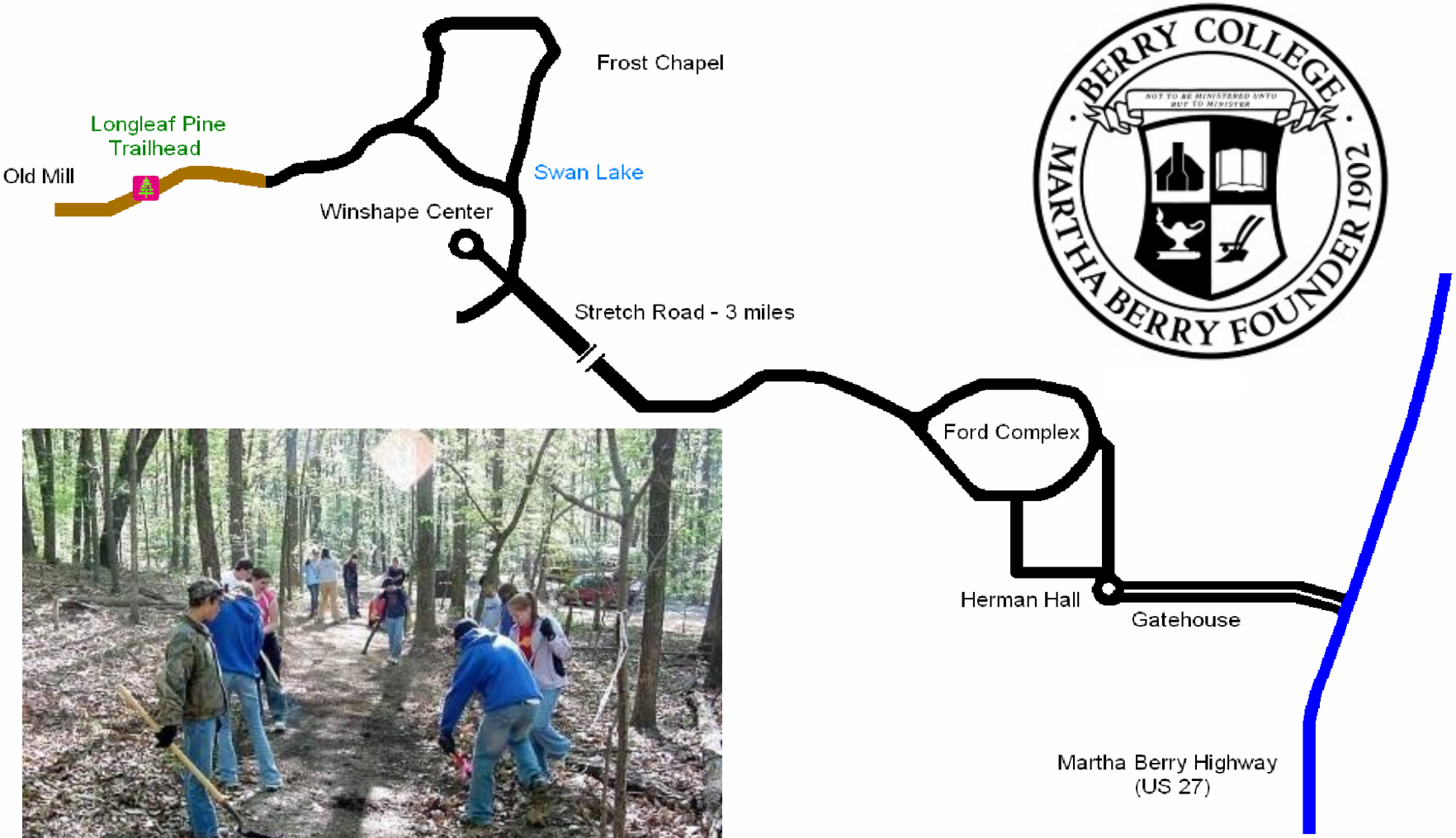
- It can cost a lot
- It can cause pollution
- Dead trees can look bad

How can someone get involved?

- Volunteer (e.g. trail work and tree planting)
- Become a member of our “Berry Longleaf Pine Network”
- Visit our “Longleaf Pine Trail”

Want to know more?

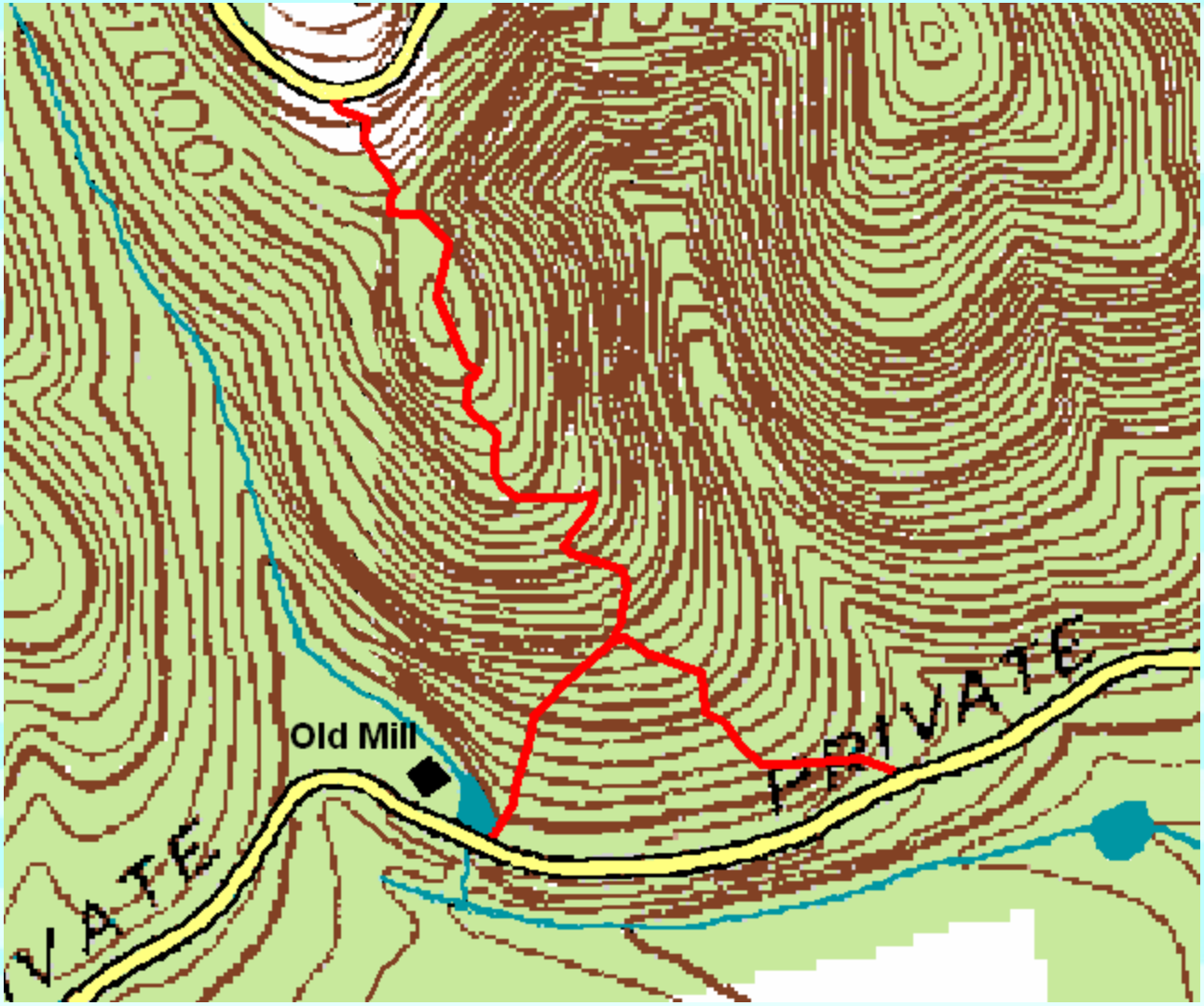
- Visit the Berry College Longleaf Pine Trail!



The Longleaf Pine Trail

- This ½ mile nature trail near Berry's Old Mill was built in 2003 by volunteers
- It goes up the slopes of Lavender Mountain through several stands of old-growth Longleaf Pine
- There are benches and educational signs along the way.
- Check out an MP3 player from the Berry gatehouse for a "self-guided" tour or pick up a brochure at the trailhead!

The Longleaf Pine Trail



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