

# Big Thicket

## SUNDEW TRAIL



**FOR TRAIL USE ONLY**  
**Please Return To Box**

**HICKORY CREEK  
SAVANNAH UNIT**

**Big Thicket  
National Preserve**

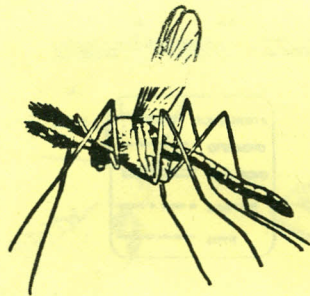
**National Preserve  
National Park Service  
U.S. Department of the Interior**



Welcome to the SUNDEW TRAIL in the HICKORY CREEK SAVANNAH UNIT  
of BIG THICKET NATIONAL PRESERVE

\* Please register at the trailhead and take a map.

\* Do not leave valuables in your car.



\* Use insect repellent.

\* Watch out for bees, wasps, and fire ant nests.

\* Wear a hat on hot days.

\* Stay on the boardwalks.

\* All plants and animals in the Preserve are protected.

\* Please do not cut or collect specimens.



NOT ALLOWED IN THIS AREA



Camping



Pets or Horses



Fires



Motorized  
Vehicles

MAP







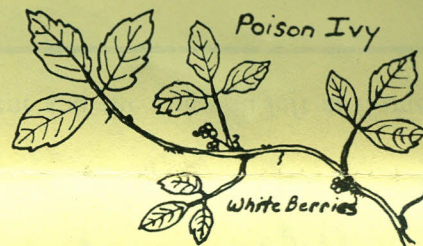
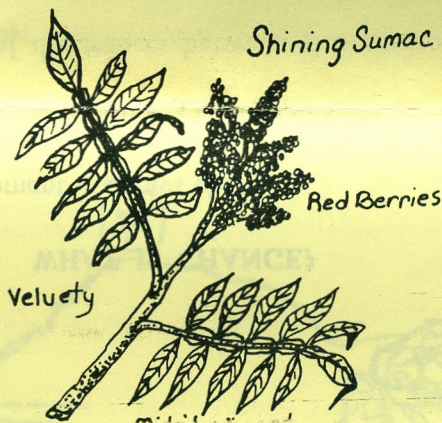




## FLAME OR SHINING SUMAC — *Rhus copallina*

The presence of sumac says "Change," as it is one of the first shrubs to grow in an area that has been logged.

Although it is called the "weed tree" by foresters, the shining sumac is loved by many birds and small mammals for its fruit. Not only is the tree's wood used by hobbyists but its fall berries are used to make a juice tasting like lemonade.



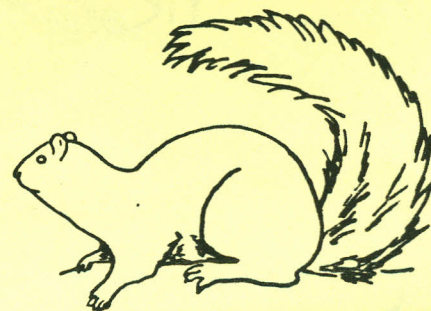
The shining sumac isn't poisonous, but it is in the same family as poison sumac. Poison ivy (*Rhus toxicodendron*), another relative, may be found along the trail. Look for a vine or small plant with shiny leaves in groups of three.



## OAKS — *Quercus*

Standing at this spot you can see at least four different types of oak trees.

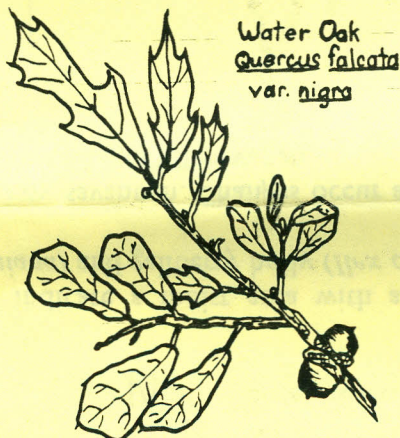
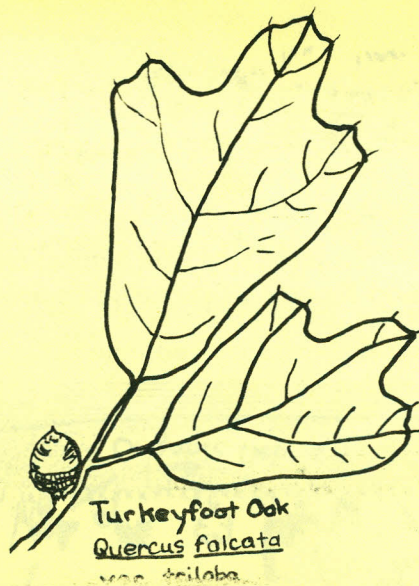
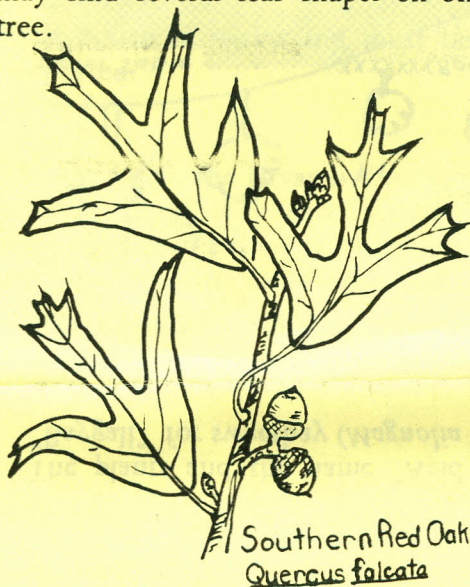
Species of oaks are abundant in southern forests. In fact, of the 41 species growing in North America, almost half are present in the Big Thicket National Preserve. Oaks furnish more timber than any other group of broad leaved trees and are used to make furniture. Acorns are eaten in great quantities by squirrels and hogs.



### Southern Red Oak *Quercus falcata*

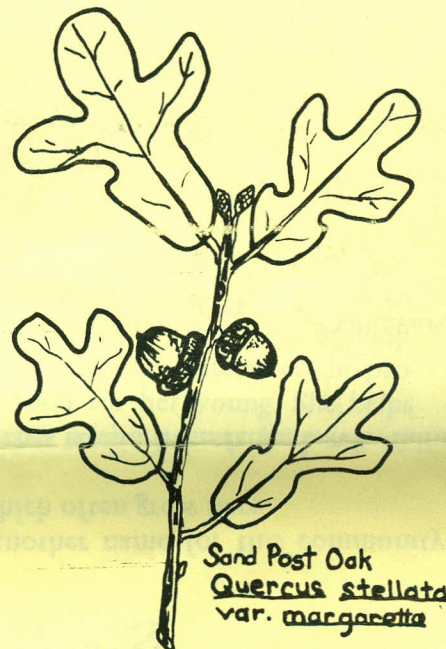
The members of this group are identified by the bristle tips on the leaves. The bark is usually blackish and furrowed.

The Red Oak Group is widely varied. The trees tend to mix forms and you may find several leaf shapes on one tree.



### White Oak Group *Quercus stellata*

The White Oak Group has leaves that are rounded and do not have bristle tips. The Sand Post Oak is present in the Hickory Creek Unit.

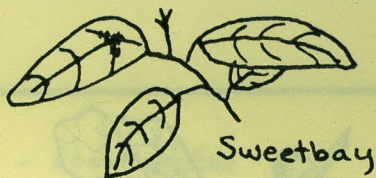






## BAYGALL - ACID BOG

Have you noticed a change in your surroundings?



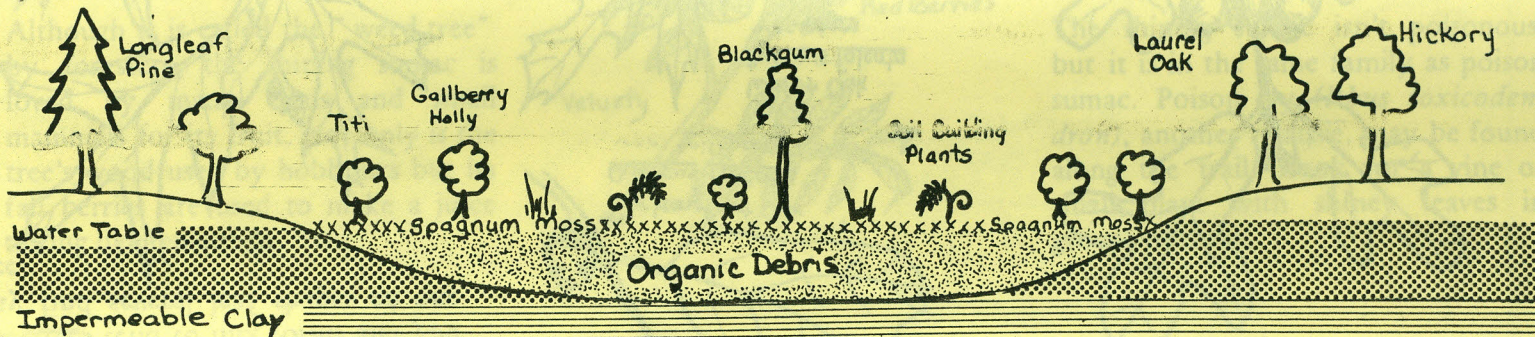
Sweetbay



Gallberry Holly

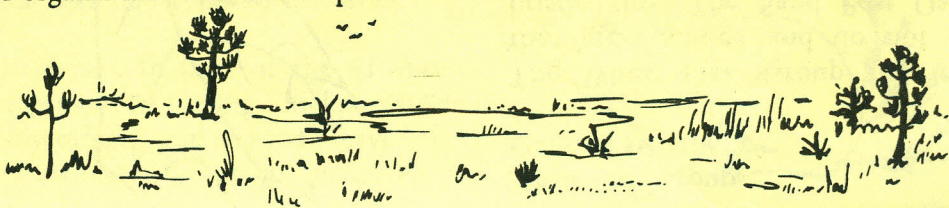
The plants and the name "Acid bog" indicate a moist area with acid soil. Another name for this community is "Baygall" for sweetbay (*Magnolia virginiana*) and gallberry holly (*Ilex coriacea*) which often grow here.

A baygall can develop from an open grassy savannah. Changes occur as water leaches tannin from fallen leaves, falling into the baygall causing it to become more acid and lose oxygen.



Shrubs shade and crowd light loving savannah plants while slowing down water flow. The change from savannah to baygall continues as leaves, twigs, and other organic materials build up.

Only if fire occasionally kills shrubs like bay, titi, and holly, will the grasses and sedges survive and remain a savannah.







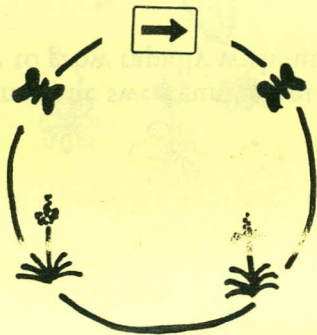
## YUCCA — *Yucca louisianensis*

The yucca are telling you that the soil has changed. You are now on a sandy knoll. There are not many places where you can experience as many changes in environment in such a small area.

If something suddenly altered this area and the yucca disappeared, we would also lose the yucca moth (*Pronuba yuccasella*). This creature depends upon the yucca and the yucca depends upon the moth.

Yucca pollen is sticky and must be transported.

The eggs hatch, the larvae live on the yucca seeds until they leave, finishing their life cycle. The rest of the yucca seeds, already pollinated by the moth, drop and grow more yuccas.



The moth flies from yucca to yucca gathering pollen.

The moth injects its egg in the ovary of the flower and spreads pollen around to make sure the seeds develop. The moth is only interested in providing food for her young. She helps the yucca without even knowing it!

For a change of pace — Take a break.

At the bench you may wish to relax a while to enjoy one of the most lovely of east Texas trees. The genus name, *Cornus*, is Latin for "tough wood". The dogwood has good wood for tool handles, pulleys, and even golf clubs.

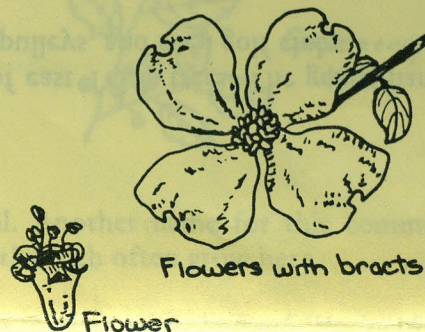
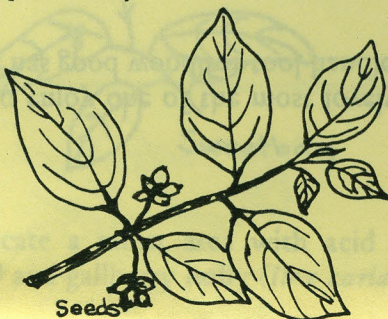




## DOGWOOD — *Cornus florida*

The dogwood gives a show in March and April. Many towns celebrate the changing of the seasons with a Dogwood Festival.

The beautiful "flowers" are not flowers at all, but large bracts, or leaflets, colored white, rose, or pink. The true flowers are very small and clustered at the center of the bracts.



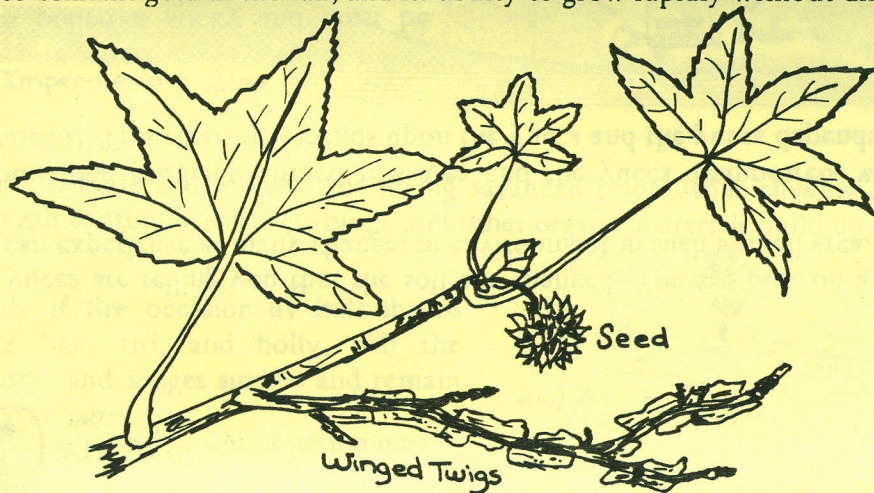
Flowers with bracts



## SWEETGUM — *Liquidambar styraciflua*

Sweetgum is not a fire resistant plant. Its presence indicates the changes resulting from putting out natural fires in this area over the past few decades.

Although this area may be flooded at times, the sweetgum is water tolerant. Its beautiful star-shaped leaves that change to brilliant gold in the fall, and its ability to grow rapidly without diseases, make this a popular backyard tree.



Have you ever chewed the sap of a sweetgum? It was named for the thick, sweet chewing gum-like sap that pioneer children loved. The sap is said to be useful for treatment of dysentery and diarrhea and excellent for healing wounds. If you want to try the gum, please wait until you get home.





## HUMAN IMPACT — *Homo sapien*

Land is worth more if it has easy access. Before this was a National Preserve, an enterprising land owner made this road hoping to increase the value of his property.

The National Park Service uses the road for patrols and as a fire break when prescribed burns are set in this area.

Disturbed areas such as this road are excellent places to find sundew plants during wet times of the year.



**Sundew** — *Drosera annua*

You are going to have to work for this one, but it's worth it!

The sundew is a tiny carnivorous plant and is often smaller than a dime. Take a dime, close your eyes, and pitch it in a sunny spot near the trail. Now if you get on your hands and knees and look for the dime you may notice some tiny red rosettes down among the grass. If it is summer you may even be lucky enough to see the small white or pink flowers.

As you inspect these marvelous plants you might find one that has trapped an insect. The sparkling droplets that give the sundew its name are very sticky and can hold small insects. The plant then gives off digestive juice and dissolves its prey. The sundew is found in soil with low mineral content. It gets nitrogen from the insects that it captures.

Don't forget your dime!







## LONGLEAF PINE — *Pinus palustris*

Change sometimes happens very slowly.

The tufts of greenery close to the ground in this area are young longleaf pines. They look like clumps of grass and the growing stalk in the center is usually whitish. During the grass stage the young trees grow slowly forming deep roots. They remain in the grass stage for 5 to 7 years.

The candelabra stage represents the teenage years of the longleaf pine. The tree grows relatively fast for a few years and develops its spindly limbs.

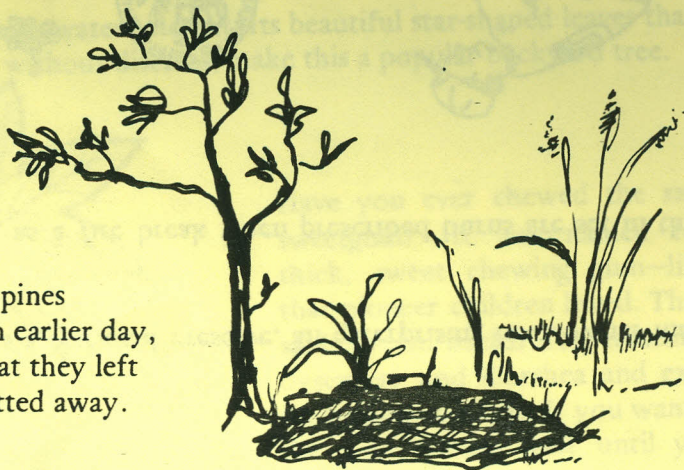


At maturity, longleaf pines can be 75–120 feet tall. These trees once covered much of the Big Thicket forming a mature forest thickly carpeted with pine needles. Human intervention and the desire for the strong durable wood have changed that. There are very few of the old trees left.

Along the trail  
Look for holes,  
Could be a home  
For snakes or moles.



In memory of pines  
From an earlier day,  
The stumps that they left  
Have rotted away.



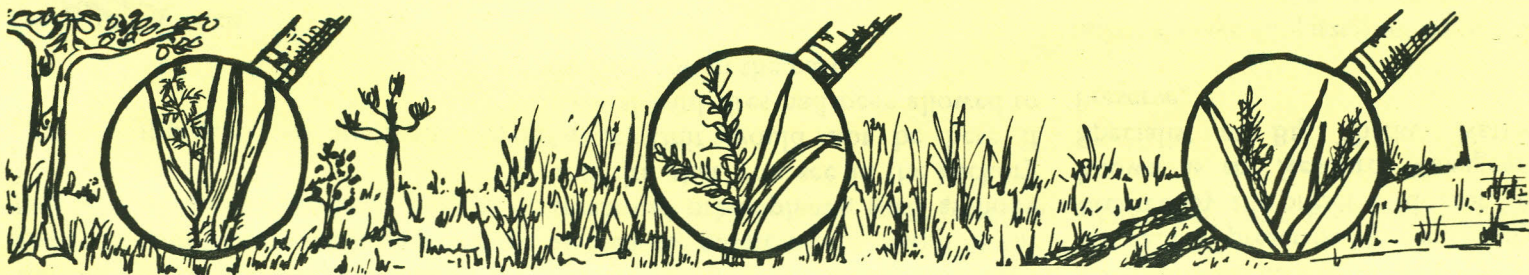




## GRASSES

There are at least 71 species of grass in the Hickory Creek Unit. Among the most common are the Bluestems.

Through the ages all living things are subjected to changes in environment to which the response can only be change. And so, slowly, in order to survive, modifications and adaptations emerge to create *genera* or new relationships in a family. One such genus is *Andropogon*, a large group of mainly tropical/subtropical grasses in the family *Andropogonae*. Can you spot these?



**Elliott's Bluestem**  
*Andropogon elliottii*

Adapted primarily to well drained soils on uplands, Elliott's Bluestem can grow in the partial shade of a forest.

**Big Bluestem**  
*Andropogon gerardii*

The most widespread and important grass of the North American Tall Grass Prairie, Big Bluestem grows to 6 feet tall.

**Broomsedge Bluestem**  
*Andropogon virginicus*

This grass grows well in disturbed areas, but does not tolerate shade.

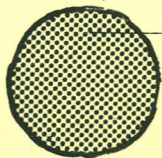
There are many other types of grass on this trail.  
Other plants that look like grass also grow here.

Can you tell them apart?

It's easy if you feel the shape of the stem near the ground.

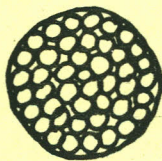
GRASS:

Round  
Solid



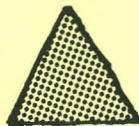
RUSH:

Round  
Hollow



SEDGE:

Triangular



How many different "grasslike" plants can you count on the Sundew Trail?







## OIL AND GAS

Big Thicket National Preserve was established by an Act of Congress in 1974. That act allows exploration, drilling, and pipeline right-of-ways within the preserve.



Here the trail crosses an oil pipeline which was built in 1929 to carry crude oil. Some of the environmental changes that occur from this type of use are obvious. Undoubtedly, the effect is more widespread than meets the eye.

The companies and individuals owning mineral rights in the preserve and preserve managers must work together to insure that the land is given proper respect and that these operations cause a minimum amount of impact to the preserve. Small planes are flown above the pipelines to check for damage; orange numbered signs serve as mile markers.

*"To move one grain of sand on a beach is to change the entire world."*

Richard J. Vogl



## FIRE

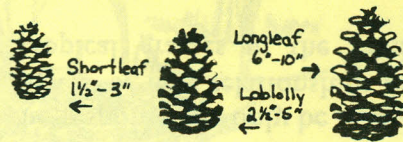
For centuries fire has played an important natural role in the Big Thicket. The changes caused by burning vegetation are immediate. It removes competition and speeds the recycling of soil nutrients.

In the past we interrupted natural cycles by putting out natural wild fires. In some cases this unnatural change has, over time, drastically altered the environment. Many of the trees and other plants, such as holly and titi, that you see in the Hickory Creek Unit would not be here if natural wild fires had been allowed to do their job in the past.

Now preserve personnel burn this area from time to time in an effort to restore and maintain the natural environment in this area. These fires are called "prescribed burns," and are ordered by the preserve "doctor," also known as the Resource Management Specialist at Big Thicket National Preserve.



Which plants are helped by fire?



Look for black fire marks on the bark of pine trees. Their thick bark helps them survive.





## ANIMALS



Birds are abundant in the Big Thicket year round, but are difficult to see when the plants have their leaves. Learning the songs and calls of birds is one way to enjoy them even when they can't be seen.



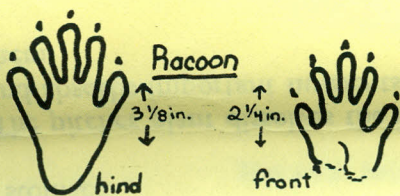
Insects are one form of wildlife you may wish to see less often. However, insects are important as food for other living things.

Reptiles and amphibians live in the Big Thicket, but you have to be in the right place at the right time to see them. Like all animals their daily routine reflects changes in their environment. On a cool day a snake will warm itself in the sun. Where might a snake cool itself on a hot day?

You probably won't see any mammals on the trail . . . .

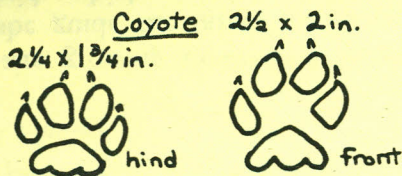
That doesn't mean that they don't exist. To prove it to yourself, look for animal signs as you hike. For further proof, change your habits to match those of the mammals. (You'll need a free night and a flashlight!)

If you look closely you may find clues to help you imagine the nightlife of the Big Thicket. The soil along the boardwalk is a good place to look for animal tracks.



### Raccoon (*Procyon lotor*)

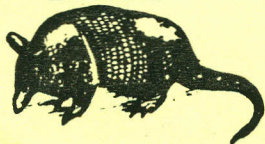
Raccoons are common in the preserve. Their natural predators, the wolf and panther, have become scarce. Most raccoons nest in hollow trees. Their diet is mainly insects, crawdads, fruits, and nuts. Because they are rather flatfooted, racoon tracks are easy to identify in soft soil.



### Coyote (*Canis latrans*)

Sometimes called a "red wolf" by mistake, the coyote is often harassed by hunting dogs and trapped by land owners. Although the coyote's reputation is questionable it still benefits us by helping keep rodent populations in check.

### Armadillo



Also interesting is the fact that coyotes mate for life. Each spring the female gives birth to five to ten pups. A coyote's range or area it will travel for food often exceeds six square miles. Only when coyotes are in Big Thicket National Preserve are they protected.

Armadillos (*Dasypus novemcinctus*) are one of the most common mammals in the preserve. Look for soft soils or leaves that have been disturbed by a hungry armadillo looking for insects.







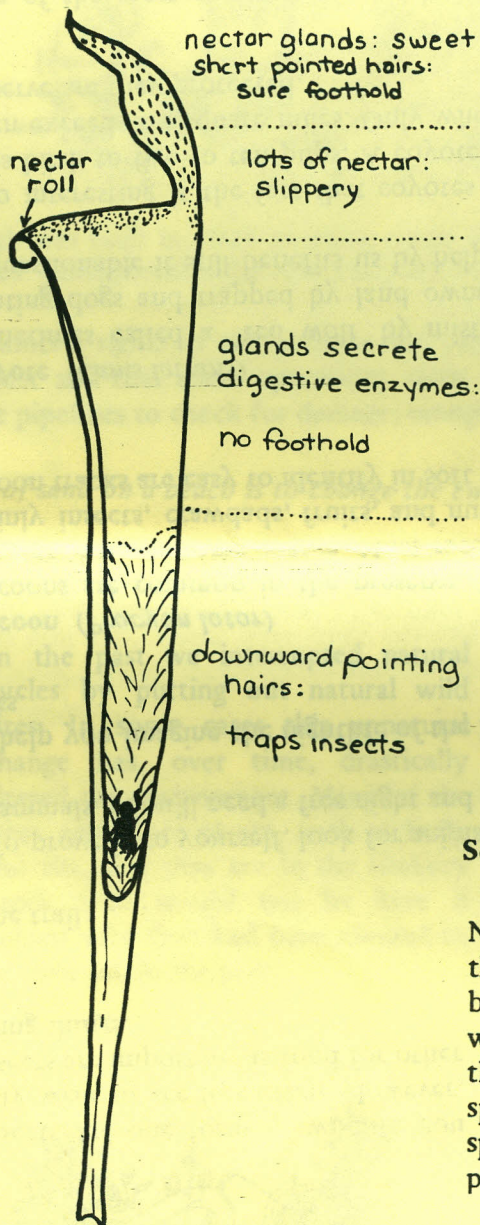
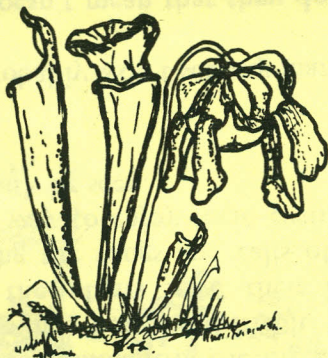
## PITCHER PLANT — *Sarracenia alata*

### INSECTS BEWARE !!!

Pitcher plants, growing in the savannah around you, give off an odor that lures insects into the plant's tube-like leaves.

Hairs growing downward inside the tube guide the insect into a pool of fluid which serves as the plant's "stomach".

The pitcher plant dissolves the insects and absorbs important nutrients from them.



Some call it home.

Not all insects are easily captured by the pitcher plant. Some actually benefit from it, for instance by waiting nearby and capturing insects that are attracted by the odor. Certain species of grasshoppers, moths, and spiders spend their whole life around pitcher plants and yet avoid capture.





On this trail you have seen changes happening —


Right before your very eyes!



You have seen the result of changes

That happened before your time.

If you pick a  ,

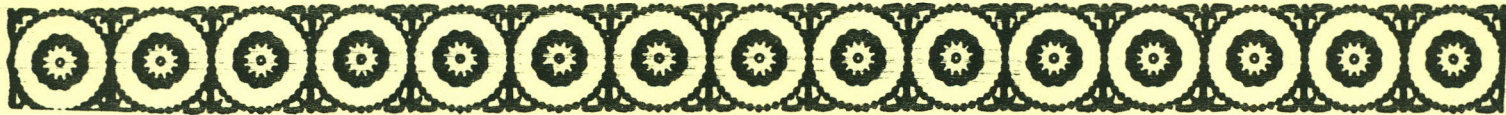
It could have been home for a  ,

Which was probably part of a  's dinner.

Can the life of a  affect the life of a  ?

Or a  ?

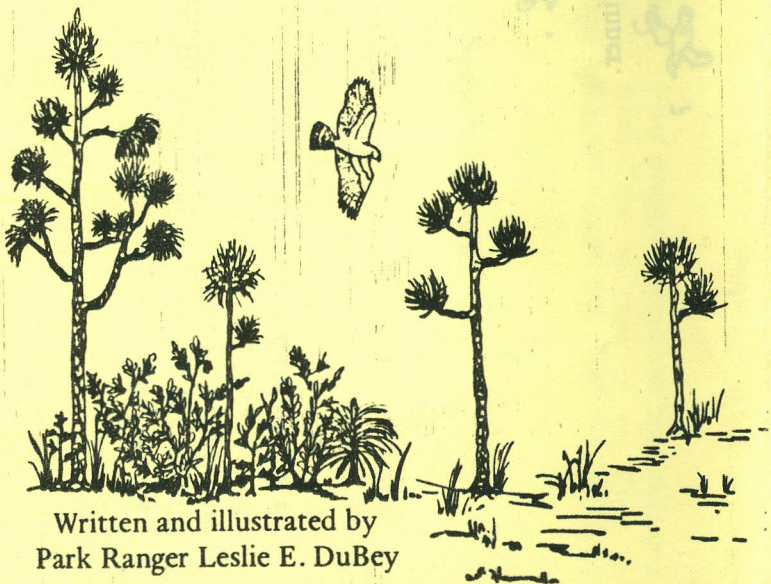
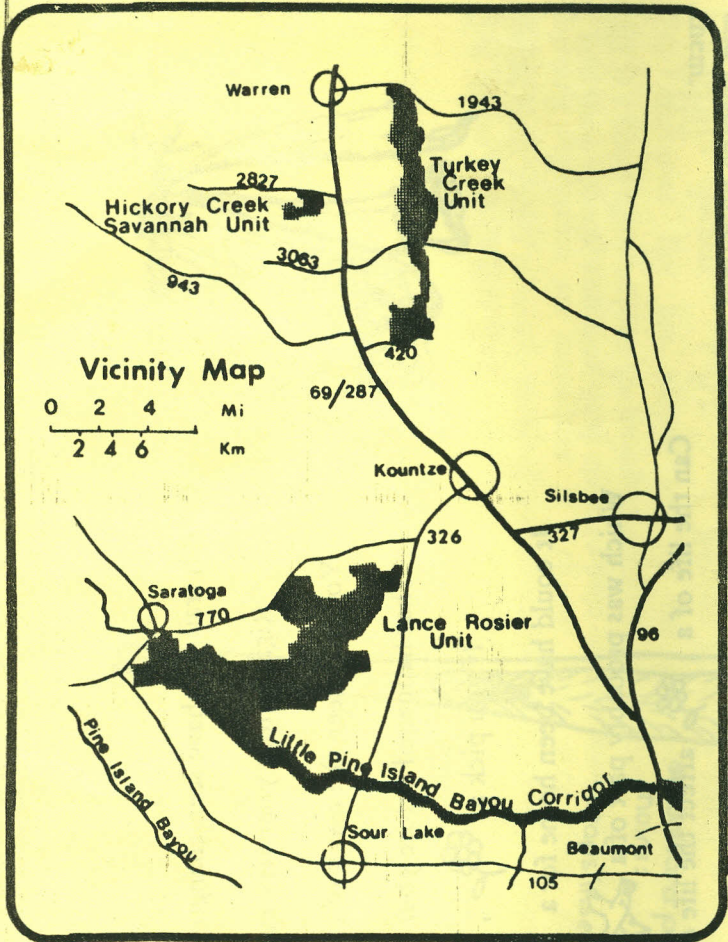
Has your being here today caused any change? In your environment? In you?



We must learn to share the earth with all other living things, and not dominate, kill, waste, and destroy.

*"Man must change his role as conqueror of the earth and all that it contains, to be a responsible citizen that takes his place among the order of all things."* Richard J. Vogl





Written and illustrated by  
Park Ranger Leslie E. DuBey