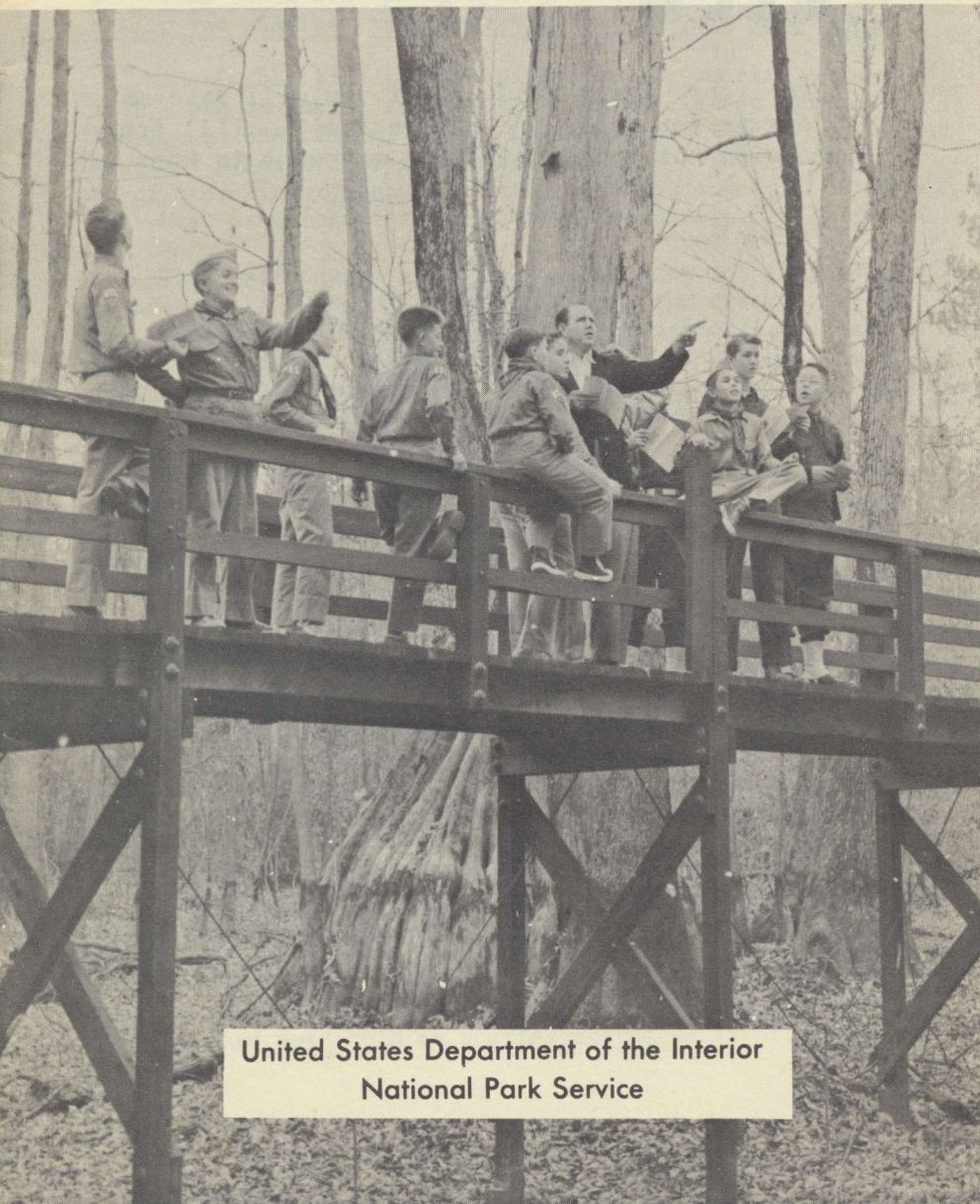


TUPELO-BALDCYPRESS SWAMP NATCHEZ TRACE PARKWAY



United States Department of the Interior
National Park Service

HELLO

I am your trail guide. If you will take me along as you walk the nature trail, I'll try to point out some things you may want to know.



The National Park System, of which Natchez Trace Parkway is a unit, is dedicated to the conservation of America's scenic, scientific, and historic heritage for the benefit and enjoyment of the people.

IF YOU DO NOT WANT TO KEEP THIS BOOKLET,
PLEASE RETURN IT TO THE BOX AT THE START
OF THE TRAIL FOR OTHERS TO USE.

TUPELO-BALDCYPRESS SWAMP

This is your guidebook for using the trail which takes you through and around the swamp and brings you back to the parking area. Each spot of special interest is marked by a numbered stake or label. If you will read these six paragraphs before starting on the trail, you will get more enjoyment out of your walk.

Americans live in communities in the country or the city, big or small, industrial or commercial or agricultural, or one of many other kinds. Has it occurred to you that plants live in communities too? They also may be of many kinds: forest, field, desert, garden, and so on. Here is a chance to see a swamp community.

This particular swamp occupies part of a former channel of the Pearl River. Long ago, the river changed its course and the mouth of the old channel was blocked. After the winter and spring rains, the old channel has deep water which gradually evaporates during hot weather so that the swamp becomes almost dry in the fall.

This swamp is a "poor folks" community with which most plants do not associate. Survival is difficult, and many of the trees are crippled or diseased or just working hard to "make a living" under bad conditions.

Animals as well as plants live here, but we cannot guarantee that you will see them. Some of them are more active at night than during the day. Probably you will see or hear birds and perhaps a squirrel; occasionally a turtle crosses the trail; you might be lucky enough to see a little green lizard; and of course there are many insects. But animals don't stay put, so we will talk mainly about plants. Anyhow, the plants are numerous and will repay your undivided attention.

Whether seen or not, however, animals are important members of the community. In fact, it would be still harder for plants to live in this "poor folks" neighborhood if animals did not live here with them. Some animals, especially insects, are needed for pollinating flowers, and some help in scattering the seeds of plants.

Many plants, in turn, furnish food and shelter for animals.

Eventually, the swamp will fill with leaves, dirt, and branches until there is no more standing water. Then the tupelo and baldcypress will be replaced by the kinds of trees which are now crowding around the edge, and the swamp will change to another type of community.

A COUPLE OF HINTS

Scientists find many advantages in giving each plant a name consisting of two Latin words. They call water tupelo Nyssa aquatica, and baldcypress Taxodium distichum. We have included some of those names, underlined and in parentheses. If you want to, you can ignore them and enjoy the trail just as much.

The following numbers correspond to the numbered stakes along the trail.

You are still on "solid ground," and the plants here are not true swamp plants, though they can live in damp areas. On each side of the steps is a smooth sumac (1) (Rhus glabra), which has for a leaf a long stalk with 11 to 31 leaflets attached to its sides. It is especially noticeable in its red autumn color. Just below is another shrub, the red buckeye (2), which has bright red flowers in spring and a handsome (but poisonous) shiny brown nut in fall.

In summer, the leaves of these shrubs make an interesting contrast. Each is compound with many leaflets. Buckeye is palmately compound -- round like the palm of your hand. Sumac is pinnately compound -- long like a feather.



One leaf of buckeye
with 5 leaflets



One leaf of sumac
with 15 leaflets

At the edge of the swamp is some giant cane (3) (Arundinaria gigantea), our largest member of the grass family, sometimes 30 feet tall. A characteristic shallow-water plant, it once grew abundantly in bottom lands, forming dense canebrakes which provided winter forage for cattle of the pioneers. Overgrazing and fires destroyed most of the extensive canebrakes and left small colonies with plants seldom exceeding 15 feet in height. The Indians used cane for pipestems, baskets, thatched roofs, and many other purposes.

Those peculiar, round-pointed knobs sticking up from the water are called baldcypress knees (4). More about them farther along the trail.

Buttonbush (5) (Cephalanthus occidentalis) is closely related to bluets, partridgeberry, and others of the madder family. The flowers (and later the fruits) are crowded in large numbers on one receptacle to form the "buttons" that are visible from July through October.

The leaves of plants may be alternate (one at each level on the stem), opposite (two at each level), or whorled (three or more at each level). The leaves of the buttonbush vary: sometimes opposite, sometimes whorled.



Alternate



Opposite



Whorled

The larger of these two trees is a baldcypress (6) and the smaller is a water tupelo (7). These are the trees which give this area the name "Tupelo-Baldcypress Swamp."

The baldcypress belongs to the pine family and produces cones about an inch in diameter. Unlike most other cone-bearing trees, however, it sheds its needles in winter to become "bald." The seeds can germinate in mud, and seedlings can live completely under water for several

weeks. Baldcypress gets along well in this "poor folks" neighborhood, growing tall, straight, and healthy.

Water tupelo, on the other hand, is just "common folks," more numerous than the baldcypress and harder pressed to stay alive. Along the trail, you can see many instances of tupelo tough luck: trees with broken tops or hollow bases or split trunks that still manage to survive and produce fruit. The fruit looks like a narrow plum about an inch long.

Look again at the base of the baldcypress. Two small trees -- water oak (8) on the left and sweetgum (9) on the right -- are growing in a precarious situation. It is doubtful that they will survive very long.

Here (10) you can get a good look at a tupelo branch. The leaves are alternate (you know what that means), simple (with a single blade instead of many leaflets like a compound leaf), and entire (with a smooth edge), though sometimes there are a few teeth near the tip.

A little farther along you can see a baldcypress branch (11). Its leaves are needles. However, as we have pointed out, the baldcypress sheds both needles and twigs each autumn.

The plant-covered logs show one step in soil formation. The wetness encourages the growth of plants and tends to hasten decay. Perhaps the first plants to work on the log were mushrooms. Soon mosses appeared to make the wood and bark softer until seed plants could take root. Seed plants do not actually cause the logs to decay. After many years, the logs will disintegrate completely to become part of the soil.

You might wet your feet trying to count the plants on the log, so we'll tell you 14 different kinds have been counted recently.

Vines are important in this area. Two kinds, green-brier (12) and buckwheatvine (13), are in plain sight from

here. They can be told apart by their tendrils -- the wire-like growths that grip the tree. Tendrils of green-brier branch from the bases of the leaf stalks; those of buckwheatvine are at the ends of branches.

One of the several kinds of hickory to be found on the Parkway is mockernut (14) (Carya tomentosa). It has large buds, hairy twigs, and usually seven leaflets on each compound leaf. The nuts have thick shells and small kernels, but the meat is good. Squirrels think so too.

This water oak (15) (Quercus nigra) is the same kind that was growing on the base of the large baldcypress. The acorns are small and the leaves are wedge shaped.

Sweetgum (16) (Liquidambar styraciflua) is one of the commonest trees on moist land. A thousand years from now, the swamp will probably be filled and the last baldcypress and tupelo may be gone, but it's a good bet that sweetgum will be among the trees growing here. Its star-like leaf is one of the prettiest, especially in the fall.

(17) One of the main reasons for tree trunks is to raise the leaves high up into the light. A lot of food and energy goes into building a trunk. Vines avoid much of that work by climbing trunks that trees have already built. The disadvantage is that the collapse of the supporting tree causes the vine to collapse too. When the sleet storm of 1951 bent these trees, it put the vines that were growing on them into quite a tangle. The tightly twining vine is rattanvine (18), sometimes called supplejack. Its oblong leaves have prominent veins.

You are following the edge of the swamp. The higher, dryer ground to the left is where the shoreline was at some time in the past. Think back for a minute. Do you remember the mockernut hickory and the water oak and the sweetgum? Although they like soil that is quite moist, none of them is a true swamp tree. Leaves and branches, fallen from the trees, have combined with wind-blown dust and water-borne mud to advance the shore. In time, the entire swamp will be filled, the tupelo and baldcypress will disappear, and the area will be occupied by water oak, sweetgum, and other trees of a bottom-land forest.

Siamese twins (19). The original tupelo was broken, and the two present trunks grew from buds on either side of the old stump. Thus, the two trees have a common base.

The swollen bases of baldcypress and water tupelo are called "buttresses." When the trees grow in swamps, they have buttresses; when they grow in dry places, they have none. The low supply of oxygen in the water, the abundance of oxygen above water, and the changing water level seem to be the causes, but we don't know what the advantage is, if any. Some people have suggested that, since the tree is not firmly fastened to solid ground, the buttress helps prevent its being blown over. All we can say is, "Maybe."

The tupelo lacks resin and other decay-resisting substances that occur in baldcypress wood. Decay organisms can enter the stub of a broken branch and work through to the heartwood in the center of the tree. The fact that the base is almost always wet helps hasten decay, especially in hot weather. So, most tupelos have hollow buttresses and sometimes hollow trunks all the way to the lower branches.

This is another indication that this is a "poor folks" neighborhood. See how many trees you can count that have holes in them. And you think you are having a tough time living!:

The trees between which the trail passes are water oak (20) on the left and American elm (21) on the right. Animals along a nature trail are hard to include in a booklet because they don't stand still. But oaks offer acorns for food, and tupelos offer hollows for nests; so, you can expect squirrels in this community.

The tangle of vines (22) on the baldcypress at the right consists mostly of muscadine grape. The fruit, produced high on the vine, is fairly safe from man but available to birds who help to scatter the seeds.

(23) Do you recognize the large tree? Sweetgum again. It must be meek because, as the swamp fills, the sweetgum seems about to "inherit the earth."

A wild grapevine (24). Wild grapes, like domestic grapes, climb by means of tendrils. In time, the tendrils on the older part of the stem weaken and break away, leaving the stem to hang free.

This bridge has five kinds of vines growing near it. It is hard to identify them in winter, but easy in summer when the leaves are out.



Poison-ivy
(25)



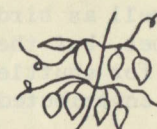
Greenbrier
(26)



Muscadine grape
(27)



Trumpet creeper
(28)



Crossvine
(29)

We'll tell you more about the crossvine later.

The trunks of these two large overcup oaks (30) are nearly covered with poison-ivy; in the summer you can see more poison-ivy leaves than oak leaves. If you can find an acorn on the ground, you will see the reason for the name "overcup" -- the cup nearly encloses the acorn.

Baldcypress "knees" are as hard to explain as the buttresses. Actually, they are swellings due to abnormal thickening on the upper sides of horizontal roots in the upper layer of the soil. Probably, like buttresses, they are caused by the changing level of stagnant water. But what "good" are they? Once people thought they were "breathing" organs by which oxygen could get to the roots. They do absorb oxygen but there is no evidence

that any of it gets into the root proper. Probably the "knees" are of no more use than a man's appendix.

American beautyberry (31) (Callicarpa americana) has an attractive blossom in May or June, but it is most striking in the fall, with its clusters of fruits which vary from pink to violet. It belongs to the verbenaceae family.



Crossvine (32) (Bignonia capreolata). This drawing of a section through a mature stem shows how the shape of the pith suggested the name "crossvine." The leaves are unusual since they are opposite (you remember that), and each leaf has two leaflets and a tendril.

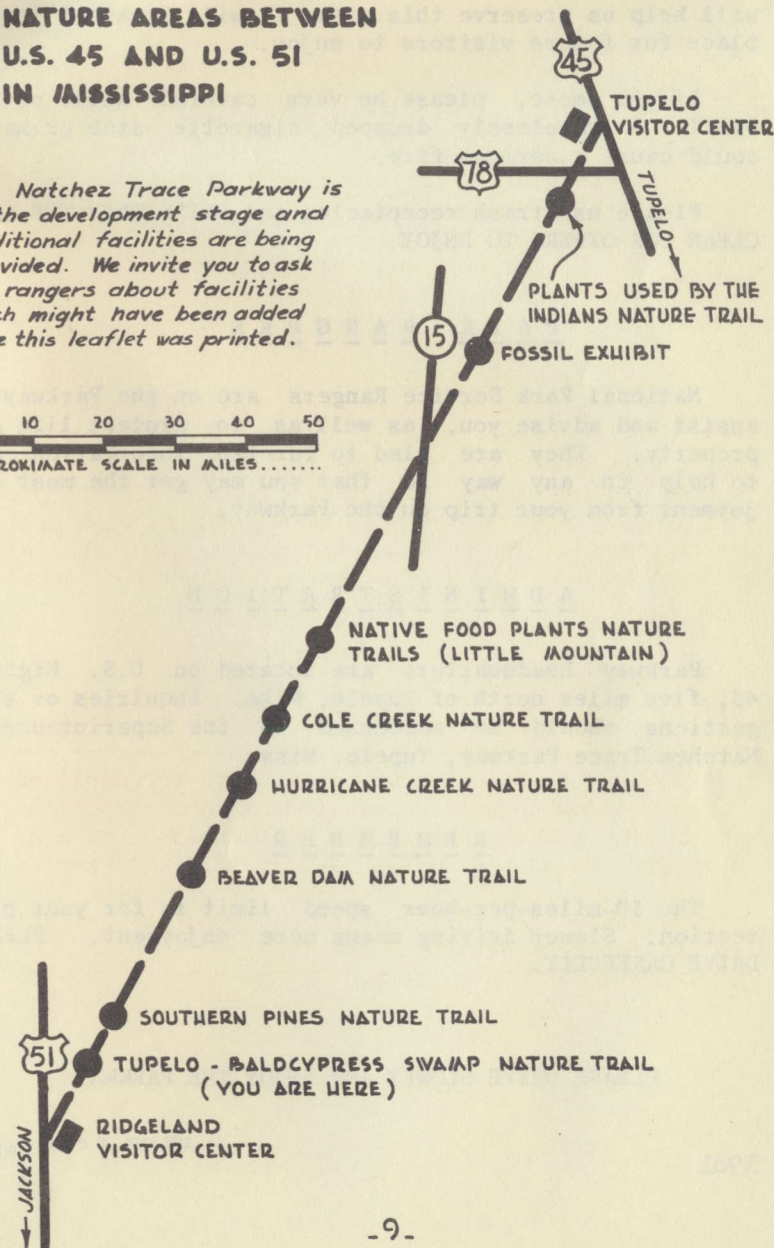
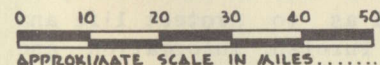
Almost everyone knows and admires the dogwood (33) when it is in blossom. But it's a handsome tree at all times of the year. In autumn, the red fruits provide a bright splash of color and are relished by squirrels and deer as well as birds. The tree is too small to produce much timber, but the strong, close-grained wood was very popular for shuttles in earlier days. So, the dogwood has even contributed to the weaving industry of America.

MISSION 66 is a program designed to be completed by 1966 which will assure the maximum protection of the scenic, scientific, wilderness, and historic resources of the National Park System in such ways and by such means as will make them available for the use and enjoyment of present and future generations.

NATCHEZ TRACE PARKWAY

NATURE AREAS BETWEEN U.S. 45 AND U.S. 51 IN MISSISSIPPI

The Natchez Trace Parkway is in the development stage and additional facilities are being provided. We invite you to ask the rangers about facilities which might have been added since this leaflet was printed.



A F I N A L W O R D

Many persons visit here every day. If each of you will help us preserve this area, it will remain a lovely place for future visitors to enjoy.

If you smoke, please be very careful while on the trail. A carelessly dropped cigarette stub or match could cause a serious fire.

Please use trash receptacles and LET'S KEEP THE AREA CLEAN FOR OTHERS TO ENJOY.

P A R K R A N G E R S

National Park Service Rangers are on the Parkway to assist and advise you, as well as to protect life and property. They are glad to furnish information and to help in any way so that you may get the most enjoyment from your trip on the Parkway.

A D M I N I S T R A T I O N

Parkway headquarters are located on U.S. Highway 45, five miles north of Tupelo, Miss. Inquiries or suggestions should be addressed to the Superintendent, Natchez Trace Parkway, Tupelo, Miss.

R E M E M B E R

The 50-miles-per-hour speed limit is for your protection. Slower driving means more enjoyment. PLEASE DRIVE CAREFULLY.

PLEASE DRIVE SLOWLY AND ENJOY THE PARKWAY