

Great Smoky Mountains NATIONAL PARK

Deep within almost every American is an urge to explore the great out-of-doors. To gratify this urge, millions of people come to the Great Smoky Mountains National Park each year. They hike along its winding mountain trails, pitch their camps in its forests, and view some of the most luxuriant plantlife in eastern North America.

The National Park Service welcomes you to the Great Smokies. Here, as in all National Parks, the superintendent and his staff want you to experience the satisfaction and inspiration that may be gained from exploring these splendid forests and ancient mountains. Your special care in observing a few simple rules will help us to protect the park for you and for future generations.

A HIGHLAND WILDERNESS

The Great Smoky Mountains, which lie along the common border of Tennessee and North Carolina, form a majestic climax to the Appalachian Highlands. With outlines softened by a forest mantle, the mountains stretch away to remote horizons in sweeping troughs and mighty billows that recede to evenness in the distance. And shrouding the mountains is a smoke-like mist that rises from the dense plant growth. The mountains get their name from this deep-blue haze.

Arnold Guyot, the naturalist and geographer, in describing these mountains after exploring the Appalachians more than a century ago, said: "By their number, their magnitude, the continuity and general elevation of the chains, and of the base upon which they repose, they are like a massive and high citadel which is really the culminating region of all the Appalachian System."

The park's boundary wraps around 800 square miles of mountain wilderness: much of it is virtually unspoiled. Many peaks rise above 6,000 feet, but this is not high enough to escape the enveloping forests. A great variety of trees, shrubs, herbs, and other plants are fed by the fertile land and nourished by the heavy rainfalls and rushing streams.

GET ACQUAINTED FIRST

We suggest that after you have registered and are settled in camp, or in a hotel or motel, you first take a motor trip to some of the points of interest close to your accommodations. If you are staying on the Tennessee side of the park, you will want to drive to the visitor center in the headquarters area, where exhibits offer a sample of what to expect later on when you really explore the mountains. And you will surely want to take the delightful drive to Cades Cove. There you will follow an 11-mile loop road past open fields, homesteads, and little frame churches where pioneer people lived and worshiped almost unnoticed for a century. From May through October, you will see the miller grinding corn at Cable Mill. If you wish, you may take home a bag of the fresh water-ground meal from Becky Cable's store.

Choose the walk that best suits your interests and your schedule by consulting a copy of the *Naturalist Program*. This is an informative folder of naturalist activities covering the summer season. You can get a copy at the Oconaluftee and Sugarlands Visitor Centers and at all ranger stations. Copies are also posted in hotels and other gathering places around the park.

These are short trails designed especially for the "do-it-yourself" naturalist. At the start of the trail a booklet is provided which contains explanatory nature notes keyed to markers along the way. The markers point out a variety of trees and call attention to the relationships of the plants to their woodland habitats.

The self-guided nature trails are designated by symbols on the map. They are also listed and described on the back of the *Naturalist Program*.

Appalachian Challenge
The famed Appalachian Trail, which stretches from Maine to Georgia, enters the park at Davenport Gap near the eastern boundary. Straddling the boundary line of two states, it zigzags a course for 71 miles along the crest of some of the highest peaks in the Smokies and leaves the park again at its southwest terminus, Fontana Dam. Many visitors enjoy hiking short distances from Davenport Gap or Fontana Dam. Other trail points accessible by car are Newfound Gap and Clingmans Dome.

But if you wish to accept the challenge to hike the full distance, you can cover the 71 miles in 6 to 8 days. Trailside shelters and campsites, which are marked by symbols on the map, are spaced about a day's journey apart. Each shelter, closed on 3 sides, provides bunks for at least 6 persons. There's a fireplace in front and water is available nearby. Since fuel is scarce, you are advised to carry kerosene-type stoves. Each shelter is normally restricted to 1 night's use. If you camp along the trail, you must obtain a fire permit. If you hike at any time from November through March, for your own safety a park ranger must check your gear and clothing before setting out.

Fish and Fishing
The variety in the native fish life of park waters ranges from the small colorful darters to the gamy brook trout. More than 70 forms of fishes are found here. Approximately 800 miles of streams add to the beauty of the park, and many of the streams offer opportunities for recreational angling for rainbow and brook trout. The native brook trout inhabits only the cooler waters at higher elevations. In certain streams that are managed on a "Fishing for Fun" plan, park visitors may fish the year around but are required to release all fish they catch which measure less than 16 inches. The regular season extends from April 15 through September 15. State licenses, but not trout stamps, are required and may be secured for periods of 1 to 10 days at reduced rates. Angling regulations are posted on streams and may be obtained at park ranger stations.

Guided Nature Walks
For the visitor who is keen to learn about nature as well as to commune with it, the park offers guided nature walks along some of the park trails. You are invited to join a group, under the guidance of a park naturalist, and come along. Groups depart from several points throughout the park at regularly scheduled intervals.

The Trails
The most rewarding experiences in the Great Smoky Mountains are found along the trails. Therefore, we urge you to deny yourself the comforts of your automobile and trade the paved highway for a woodland trail, where rhododendron and mountain-laurel garland the way.

More than 650 miles of horse and foot trails wind along crystal-clear streams and waterfalls, past forest giants that were living before the white man came to this area, through the wild beauty of spring flowers or autumn colors, and into high mountain meadows. In many places trails lead unexpectedly from the dimly lighted undergrowth to bright vistas that open on mile after mile of rolling mountain slopes. The suddenness of the views and the slowness of their coming into focus seem to add to their splendor. A seasoned hiker has said, "If nature is loved by what is best in us, then it is here where mankind has the opportunity for a mental and spiritual revival in boundless measure."

For your experience on the trail, pick a destination and hike into the hushed wilderness of the Great Smokies. For years to come, it will probably provide you with the fondest memory of your visit to the park.

Accidents spoil vacations — we are concerned for your safety. Please STAY ON THE TRAILS, KEEP OFF WATERFALLS AND CLIFF FACES, AND CLOSELY WATCH AND CONTROL CHILDREN. Hikers must be prepared to enjoy nature on her own terms. Be informed, and for your own safety don't travel alone; if you do, let someone know your schedule. Drive defensively, with caution, and be alert for hazards caused by changing natural conditions.

PLANTS
When To Expect Full Flowering
Dogwood Middle to late April
Spring flowers Late March to mid-May
Mountain-laurel May and June
Flame azalea May and June
Rose-purple rhododendron Mid-June
White rhododendron June and July

ANIMALS
On the transmountain road in summer, traffic is sometimes halted by park visitors who stop their cars to watch a big black bear, or perhaps a mother with cubs. The better informed visitor watches from a distance and, for his own safety, observes the rule not to feed him. Feeding the bears is not only dangerous, it's illegal. Aside from the primary concern for your safety, the Park Service would like to have him forage for himself. He knows how. He has done it for years — even before man came along.

Except for the black bear and the white-tailed deer of Cades Cove, you are not likely to see many animals larger than a woodchuck in the daytime. Most other large mammals are nocturnal. At night your headlights may reveal a gray or red fox, an opossum, or a raccoon, and on rare occasions a bobcat may appear on or near the road.

Nearly half of the 60-odd mammals native to these mountains belong to the rodent family. Of that group, the largest member is the woodchuck, sometimes called groundhog or whistlepig by the mountain people.

The clean frosty white of an occasional winter snow accents the deep-colored evergreens in the Great Smoky Mountains. Reluctantly, winter gives way to spring, and delicate greens herald the cautious awakening of wildflowers. Once firmly established, the plant world welcomes the booming thunder-showers of summer and sets the stage for autumn's thrillo-color spectacular.

Spring
Spring is on its way when violets, phacelia, and trillium peep from the sun-spotted valley floor, when the broadleaf trees begin to show their leaves, and the serviceberry of the lowlands appears to "migrate" up the mountain slopes. You may find some of these little trees still in bloom 8 to 10 weeks later along the crest of the range. Yet, the full progression of wild flowers does not start at the same time every year. Spring weather can begin as early as January or as late as March. Therefore, hikers and campers should bring warm clothing and be prepared for a variety of weather conditions during March, April, and May.

Summer
Days are warm and nights are usually cool during June, July, and August in the Great Smokies. Here in the mountain altitudes the temperatures range from 15 to 20 degrees below those in the valley areas. This is the season when thousands of visitors come to the park to escape the city's heat, to wander lazily along the trails, and to relax beside cool mountain streams. August usually brings the heaviest rainfall and thunderstorms sometimes come without warning. Don't let a summer shower cancel your scheduled hike; walking in the rain can be fun, too. If you remember to tuck a light-weight raincoat into your pocket, you will enjoy hiking back after the rain has freshened the scent of the hemlocks and pines and dropped a new sparkle on the deep-green foliage.

Autumn
Autumn's pageantry of variegated leaf colors usually reaches its peak of breathtaking beauty during the latter half of October. To many visitors this is, by far, the finest time of the year. Clear days and cool nights favor the spectacle created by the sudden change in the leaves of hardwood trees from summer green to an almost endless variety of yellows, reds, browns, and purples.

Contrary to popular belief, the advent of frosty nights has little to do with this color change. Rather, it is the shortening days that set off the chemical reaction in the leaves which brings on this annual magnificence. Actually, the leaves are dying by degrees; if severe frosts should arrive at an early date, death comes suddenly, resulting in less vivid coloration.

Sourwood, blackgum, red maple, sumac, and flowering dogwood contribute much to the rich hues of autumn. Most striking of the yellows and golds are hickory, birch, sassafras, yellow-poplar, and magnolia. White ash, sweetgum, persimmon, and Hercules-clove become adorned in purplish shades. So characteristic are some of these colors that the trees can be identified at a considerable distance by the trained observer.

Autumn days, cool and invigorating, are ideal for hiking. And those end-of-the-season camping trips and picnics, which are often the most pleasant of all — get them in before winter comes.

Winter
Winter is the most unpredictable of the four seasons, and yet you shouldn't discount it as a time to visit the Smokies. Hibernating animals sleep through the occasional light snows and the freezing temperatures; a quiet peace pervades the crisp, clear atmosphere. At times, the fog, moving over the mountaintops, freezes and clings to the stately evergreens, blanketing them in frosty clusters. The sprinkling of winter visitors seem to appreciate their solitude, and the deciduous trees accommodate by dropping their leafy veils to open winter vistas to the privileged few.

No other area in Eastern United States can boast so large a variety of plants. Botanists have listed more than 1,300 kinds of flowering plants, about 2,000 species of fungi, nearly 350 mosses and liverworts, and 230 lichens. At higher elevations in the Great Smokies you'll find the most extensive stand of virgin red spruce in Eastern United States. The combined acreage of unspoiled hardwoods may be without equal.

The 30-minute trip from the lowlands to the higher mountain peaks is much like a journey from Tennessee to Canada. When you drive from Gatlinburg, Tenn., or Cherokee, N. C., to Newfound Gap, you'll experience an interesting transition both in climate and in variety of plants. As you gain altitude, the mountain begins to drop, rainfall increases, winds become stronger, and the growing season gets shorter.

The greatest number of plant species occurs at lower and middle altitudes — almost as many kinds of native trees as in all of Europe. The cove hardwoods include yellow buckeye, basswood, yellow-poplar, silverbell, eastern hemlock, white ash, sugar maple, yellow birch, American beech, black cherry, northern red oak, and the cucumber-tree, Fraser magnolia, yellow buckeye, silverbell, and eastern hemlock.

At times the forest is broken by scatterings of mountain-laurel, blueberry, smlax, and a sprinkling of sandmyrtle, all woven into a giant carpet by dense tangles of rhododendron. And when the predominant rhododendron blooms in June, these carpeted areas begin to drop, rainfall increases, winds become stronger, and the growing season gets shorter.

Viewed from a distant opening along one of the trails, heath balds, or "slicks," appear to be smooth, but actually they are almost impenetrable tangles of vegetation. In contrast are the grass balds, or high meadowlands, where you may wander with ease among grasses, sedges, and other herbs. For a rewarding experience, hike to Gregory's Bald in late June, when spectacular concentrations of wild azaleas bloom along the edges of this hillside meadow and frame it in many shades of yellow, buff, shellpink, salmon, and orange.

Higher up, between 5,000 and 6,000 feet, our New England visitors will recognize such trees as the red spruce, yellow birch, mountain ash, moosewood, red maple, Canada hemlock, and fire cherry.

Also at home in far-away New England, as well as in the high Smokies, are many of the herbaceous plants — Clintonia (the bluebead lily of the north, which southern highlanders call amber bell), Indian-pipe, lady'slipper, Canada mayflower, white baneberry, and twisted-stalk. Likewise, many of the shrubs are common to both areas — the hobblebush, witch-hazel, scarlet elder, withered, chokeberry, trailing-arbutus, and wintergreen. The native shrubs include catabwa and Carolina rhododendrons, southern bush-honeysuckle, Alleghany menziesia, dingleberry, and Blueridge blueberry.

As a final touch to this great Appalachian centerpiece, the Master Florist has sprinkled the higher parts lightly with herbs and ferns. Among the most noticeable spring-blooming herbs in the higher elevations are the creeping bluelet, Virginia spring-beauty, American woodsores, pallid violet, yellow beedilly, and painted trillium. The herbs you'll see blooming in summer include acuminate aster, white wood aster, cluster goldenrod, pink turtlehead, Indian-pipe, and Ruggel's groundsel. High-altitude ferns include the toothed woodfern, hayscentedfern, ladyfern, and common polypody ferns.

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Nearly half of the 60-odd mammals native to these mountains belong to the rodent family. Of that group, the largest member is the woodchuck, sometimes called groundhog or whistlepig by the mountain people.

The muskrat makes his home almost exclusively in places along the park boundary, where the slower-moving streams are more to his liking. In the higher altitudes, you will probably hear, rather than see, the "boomer", or red squirrel; his voice is out of proportion to his size. At lower and middle altitudes, the opossum is often seen at the garbage cans, busily carrying out his self-assigned duties as inspector. The nocturnal habits of the flying squirrel will almost certainly prevent you from seeing either of the two species that live in the park. Actually, they are not capable of true flight and should be named "gliding squirrels".

Other mammals include the bat (the only mammals capable of true flight), mole, shrew, long-tailed weasel, mink, and the notorious skunk, of which there are two species.

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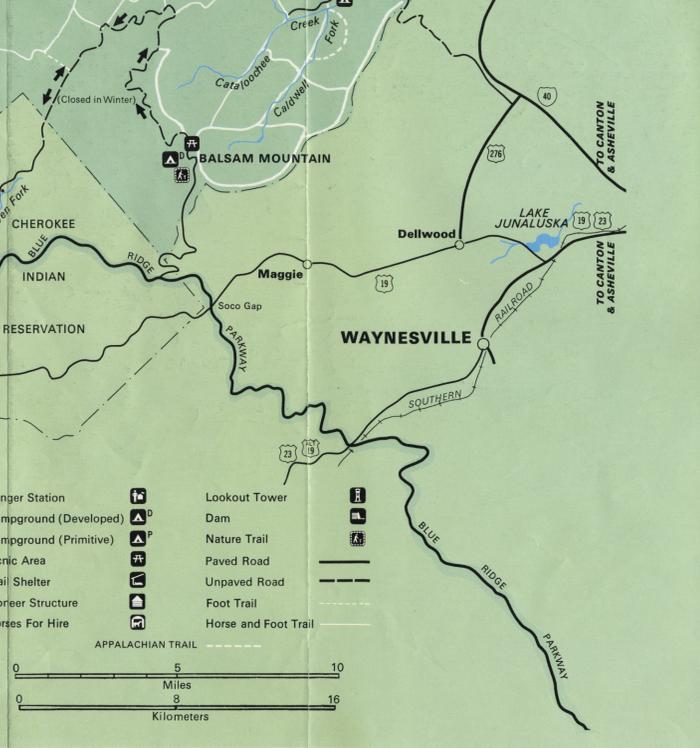
HOW THE MOUNTAINS WERE FORMED
So impressive is the unbroken forest cover of the Great Smoky Mountains that you are not immediately concerned with the rocks that make up this land of ridges and valleys; you may overlook the story of how it came to be. This beautiful landscape has evolved as a product of earth forces and erosion through countless ages. Under the blanket of trees and dense growth is a great mass of rock, called the Ocoee series, that makes up the body of ridges we see today.

These rocks were derived from a very ancient land mass and deposited as sediments of mud, sand, and fine gravel, probably on the floor of a shallow sea. The Ocoee series was laid down more than 500 million years ago — long before

the movement to establish a National Park here began in 1923. As a result of study and planning by those who saw the far-reaching benefits, Congress authorized the park in 1926. In 1927, the State Legislatures of North Carolina and Tennessee passed enabling acts. Through the Laura Spelman Rockefeller Memorial, John D. Rockefeller, Jr., matched State funds, and land acquisition began. Later, Federal funds were made available to complete the project.

These combined gifts — from the people of North Carolina and Tennessee, from private and public funds — enabled the Governors of the two states, on February 6, 1930, to present 158,876 acres of land to the Secretary of the Interior. On September 2, 1940, the park was formally dedicated to the mission of preserving and protecting its wild beauty and natural charm for all time.

THE FOUR SEASONS OF THE YEAR IN THE GREAT SMOKY MOUNTAINS NATIONAL PARK



life was abundant on earth. During the millions of years that followed, other rocks were introduced through the deposition of more sediments and the intrusion of molten materials.

Then came the time of *mountain building*. Some 200 million years ago, a powerful disturbance known as the Appalachian revolution began to alter the earth's crust. This great earth disturbance compressed and upheaved the older rocks and changed the low country into lofty mountain ranges.

Evidences of earth movements that were involved at Mount LeConte show us that successive layers were tilted and sloped toward the south. At Newfound Gap the layers were turned on end, and at other places they were wrinkled into innumerable folds and contortions. This might give you the impression that the action occurred in a single abrupt catastrophe — which living things might have run for cover. On the contrary, the processes of folding and overthrusting were infinitely slow and intermittent, taking place over millions of years.

One of the most striking examples of these earth movements is exemplified in Cades Cove, where erosion has exposed the younger rocks over which the older ones were thrust. Cades Cove lies in limestone which contain fossils of primitive sea animals. In contrast, the older Ocoee formations which form the surrounding heights contain no fossils, an indication of their antiquity. This reversal of older rocks on top and younger ones underneath — occurs at a number of places in the Great Smokies area.

After the Appalachian revolution the crust of the earth became stable again. The forces that built the lofty ranges gradually subsided, and a new era of *mountain carving* began. Millions of years of weathering and erosion have cut away at the mountain mass, gradually wearing it down and shaping the mountains into the ridge-and-valley topography that you see today.

In comparatively recent times, about the last million years, the Great Smokies endured the latest chapter of their geologic history — the ice age. In that time a broad icecap buried the northern part of the continent just as icecaps now bury Greenland and Antarctica. Although the front of this continental ice sheet never quite reached the Great Smoky Mountains, the ridges above 4,000 or 5,000 feet must have been a land of snowfields and naked rocks, bare of forests. The many boulder fields found in the area probably resulted from the intense freezing-thawing action during this ice age.

As the ice sheet melted and receded northward, the forests grew higher on the mountains and eventually covered the summits. Many of the plant species migrated upward onto the higher slopes of the mountains instead of following the ice sheet northward. Today the blanket of forests and lush greenery clothes the mountain slopes and conceals from the visitor much of the geologic evidence. But the processes continue, and the geologic story is a never-ending one.

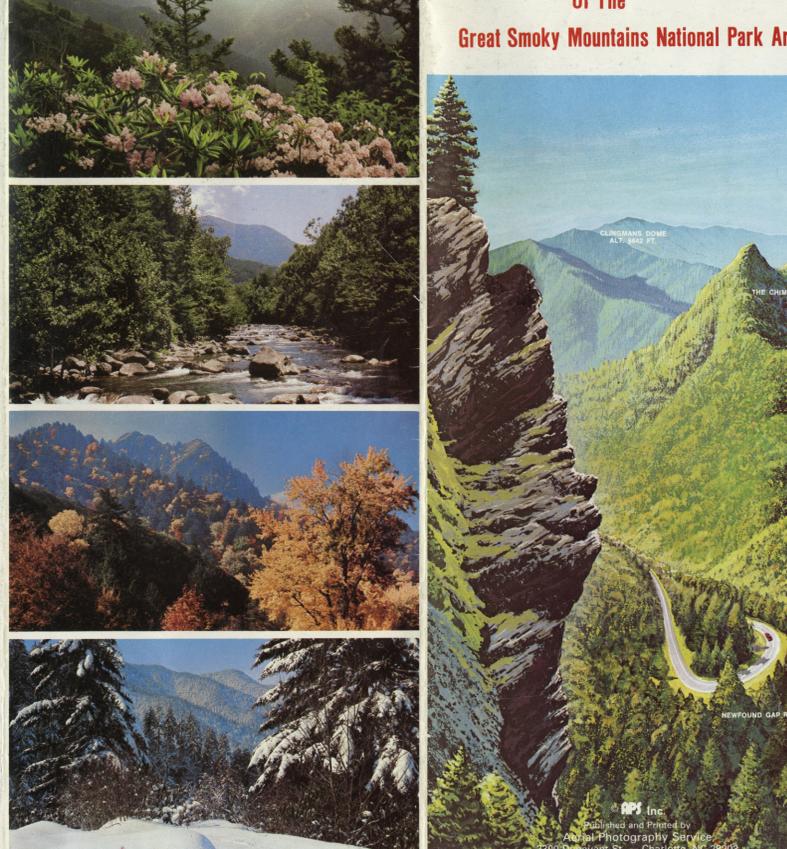
A National Park
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Pictorial Map

Of The Great Smoky Mountains National Park Area



Published and Printed by
The Park Photography Service
2300 Parkway S.E. — Charlotte, NC 28203