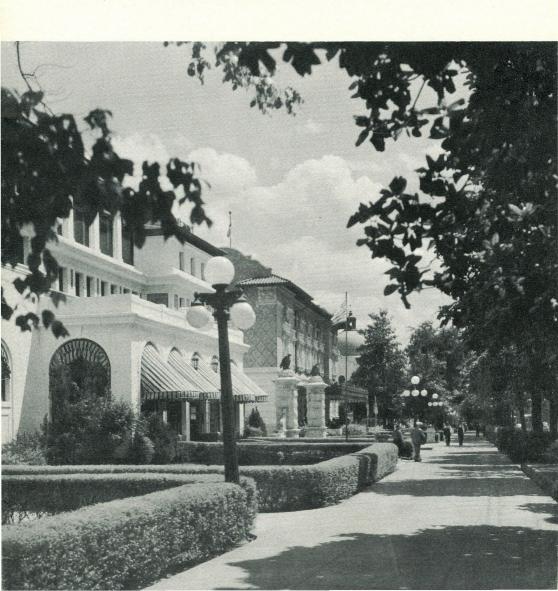
# Hot Springs

NATIONAL PARK • Arkansas



## UNITED STATES DEPARTMENT OF THE INTERIOR

Oscar L. Chapman, Secretary



NATIONAL PARK SERVICE Newton B. Drury, Director

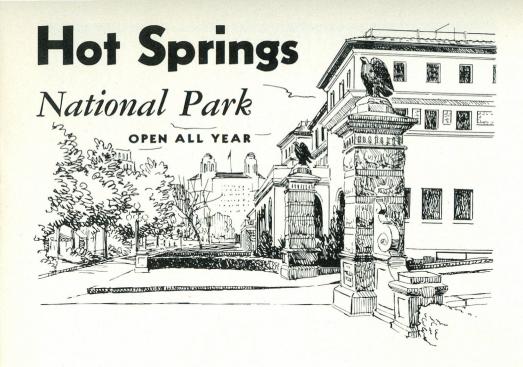
#### Contents

	Page
What Causes the Hot Springs	3
The Character and Action of the Waters	4
Medical Attention	6
Pay Bathhouses	6
Map	8
Government Free Baths	10
The Army and Navy General Hospital	10
Climate and Recreation	10
Plant and Animal Life	11
Park Interpretation Services	11
How To Reach Hot Springs	12
Hot Springs—The City	13
Public Campground	15
Administration	15

#### Historic Events

1541	Hot Springs area probably visited by Hernando de Soto and	
	party.	

- 1682 Area included in land claimed for France by La Salle.
- 1762 Included in area given to Spain by France.
- 1801 By secret treaty of Madrid, area returned to France by Spain.
- 1803 Included in Louisiana Purchase and became United States property.
- 1804 Visited by Dunbar and Hunter Expedition.
- 1807 Manuel Prudhomme established first permanent settlement.
- 1820 First inn erected.
- 1830 First bathhouse erected.
- 1832 Four square miles of land, including the hot springs, set aside by the Congress and Hot Springs Reservation established.
- 1874 First railroad line, the "Diamond Jo," reached Hot Springs.
- 1877 Hot Springs Reservation physically and administratively separated from city of Hot Springs, Ark., by Federal Survey and plotting of town site.
- 1884 Arch constructed over Hot Springs Creek where Bathhouse Row promenade walk now is located.
- 1903 Federal Registration Board established to regulate practice of physicians.
- 1921 Hot Springs Reservation made a national park by act of Congress.
- 1932 Centennial Anniversary.



HOT SPRINGS National Park, a unit of the National Park System, is situated in a picturesque wooded portion of the Ouachita (pronounced Wash-i-taw) Mountains. It is administered by the National Park Service of the Department of the Interior. The park and the adjoining city of Hot Springs are near the center of the State, about 50 miles southwest of Little Rock.

In 1832, the hot springs and the surrounding four sections of land were set aside by act of Congress for the future disposal of the United States to preserve the waters of the springs in perpetuity, free from monopoly and commercial exploitation. In 1921, by act of Congress, the name of the area was changed from Hot Springs Reservation to Hot Springs National Park.

The park contains approximately 1,000 acres and includes Hot Springs, North, West, and Sugar Loaf Mountains, portions of Indian Mountain, and Whittington Park.

#### What Causes the Hot Springs

THE 47 hot springs in the park are located along a "faultline" or break that developed in the geologic past as a result of internal earth strain. These springs are at the southwestern base of Hot Springs Mountain.

Although the exact mechanism of the hot springs is unknown, several theories have been advanced. The most favored is the meteoric theory which supposes that the rain water which sinks into the valley floor between Sugar Loaf and West Mountains finally emerges in the hot springs. The rain water follows the downward slope of the rocks under North and West Mountains to the southeast, being confined between impervious beds of shale. Somewhere in its underground path the water is believed to be heated by passing close to a mass of hot rock. Since the rocks overlying the water-bearing strata are quite impervious, the heated water reaches the sur-

Cover: Bathhouse Row

face along a line of weakness, presumably the fault.

According to another theory, the hot springs water has never before been at the surface of the earth, but comes from heated rocks of the earth's interior. Such magmatic or juvenile water escapes from molten rock that is cooling and rises to the surface. Other sources of heat have been suggested to explain the temperature of the water, among them the following: (1) Heat from chemical reactions taking place near the water; (2) heat of friction from rock masses sliding along each other; (3) heat of compression due to overlying rock burden; (4) heat from radioactive minerals.

Whatever the source of water and its heat, the springs continue to have a constant daily flow of almost a million gallons of water, with a constant average temperature of more than 140° F.

### The Character and Action of the Waters

ANALYSES of the 47 hot springs have shown the waters to be practically identical in chemical composition. The waters from all these springs are impounded in reservoirs, and all bathhouses receive exactly the same water.

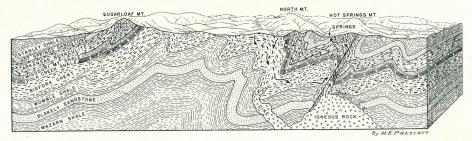
A central cooling system enables the National Park Service to supply cooled hot-spring water, as well as the hot water, to the bathhouses. In this way, all water in the properly tempered bath is that obtained from the springs.

The water from the hot springs is generally considered to have definite favorable therapeutic effects. It is used exclusively in the bathhouses at Hot Springs National Park, with satisfactory results in the approved methods of modern water treatment. This includes full and partial immersion baths of different types, and also baths in vapor cabinets. This form of treatment is of service where increased elimination is desired.

The full immersion warm-spring water bath is used in several forms. The customary or "standard" bath is a neutral bath for about 15 minutes. The bather is advised to drink freely of hot water during the bath, and a free perspiration results. While submerged, the bather is given a vigorous massage by the attendant. The attendant also rubs the bather down with a fiber mitt and concludes the bath with a short graduated shower. The bather, while reclining in a cooling room, then enjoys a rest period. This bath, in addition to the usual eliminative effect, is followed by a general feeling of relaxation. It is the form of bath customarily taken by visitors to the park who desire relaxation or seek recuperation and may be taken without a physician's direc-

Partial immersion baths at Hot Springs

Block diagram of the area about Hot Springs, Ark., showing the probable origin of the springs and the influence of the rocks and their structure on the underground route of the water.





Sun-bathing on bathhouse roof.

National Park are often prescribed. Various bathhouses are equipped for the sitz bath, leg bath, and hand-and-arm bath given by properly trained attendants.

In addition to the different forms of baths, modern apparatus is available to give showers, sprays, and douches in accordance with the directions of the bather's physician.

In conjunction with each of these types of treatment, drinking the hot water is considered a great aid. Several fountains at convenient locations in the park furnish free hot water direct from the springs.

Increase in bodily resistance in bathers availing themselves of the Hot Springs water has long been noted in the improved general health, strength, and vitality in persons in a run-down or debilitated condition. It has also been noted that chronic joint troubles (arthritis) so often seen in cases of slow absorption of poisons of

bacterial origin almost invariably improve.

The thermic physiotherapy pool at Hot Springs is used primarily for muscle reeducation in cases of paralysis. The buoyant effect of the water enables the patient to exercise and hence develop muscles impossible to use when not submerged. This treatment is materially aided by the readily regulated temperature of the water of Hot Springs. Caution is taken to prevent overwork or fatigue, a result often following submerged exercises. Only qualified physical therapists give these treatments.

This form of therapy is particularly used in various paralyses following anterior poliomyelitis (infantile paralysis) and other nerve lesions leading to weakening and nonuse of muscles still capable of development

A second class successfully treated in the thermic hydrotherapeutic pool is that comprised under the term "arthritis of joints."

The stiffness, pain, and spasm common in these joints are reduced when the patient is submerged in the warm spring water of the pool. Motions of wide range, painful and often impossible when attempted under ordinary conditions, may be given by the physiotherapist in the pool.

#### Approximate chemical composition of the Hot Springs waters

[Parts per million]	
Silica (SiO <sub>2</sub> )	45
Iron (Fe)	.05
Manganese (Mn)	.26
Calcium (Ca)	46
Magnesium (Mg)	5.8
Sodium (Na)	5.1
Potassium (K)	1.6
Bicarbonate (HCO <sub>3</sub> )	165
Sulphate (SO <sub>4</sub> )	9.1
Chloride (Cl)	2.1
Fluoride (F)	0
Nitrate (NO <sub>3</sub> )	0

Gases in cubic centimeters per liter at 0° C. and 760 millimeters pressure: Nitrogen (N), 8.8; oxygen (O), 3.8; free carbon dioxide (CO<sub>2</sub>), 6.9; hydrogen sulphide (H<sub>2</sub>S), none Radioactivity, 0.45 millimicrocurie per liter.

#### Medical Attention

WHILE the baths may be taken without the advice of a physician by procuring a permit at any of the bathhouses receiving water from the hot springs in the park, this practice is not recommended. Patients who assume to determine the nature of their ailments and to prescribe for themselves often fail to obtain the desired relief. The waters are not beneficial in all diseases and are harmful in some, such as tuberculosis and cancer. In many ailments the baths will not afford material benefit unless taken in

connection with proper medicines prescribed by physicians.

The only physicians allowed to prescribe the waters of the hot springs are those licensed practitioners of the State of Arkansas who have been examined by a Federal board of medical examiners appointed by the Secretary of the Interior. Physicians who have not passed the Federal board and been registered in the office of the superintendent are not permitted to make use of the baths in the treatment of their patients. This rule is for the protection of visitors who, if they desire the baths, should secure a copy of the registered list of qualified practitioners at the information desk in the park administration building before employing a physician.

Physicians' fees for examination for the baths are generally from \$5 to \$10. These fees are not regulated by the Federal Government.

#### Pay Bathhouses

THERE are 16 pay bathhouses operated under rules and regulations approved by the Secretary of the Interior, 8 in the park and 8 at various points in the city. The water is the same in all, but prices charged for the baths vary according to equipment and accommodations furnished. Rates are fixed in each instance by the Secretary of the Interior. Charges for services of attendants are the same in all bathhouses. Towels, mitts, blankets, and bathrobes, laundering bathrobes and blankets, and services for handling helpless invalids are not included in rates quoted. Bath tickets are redeemable according to the redemption scale for baths fixed by the Department, a copy of which is posted in each bathhouse.

Any dissatisfaction relating to administration of the baths or treatment of patients should be brought to the attention of the park superintendent.

#### SCALE OF RATES

#### for bathhouses receiving water from Hot Springs National Park

(Including fee of bath attendent, \$0.33 for single bath and \$5.94 for a course of 18 baths)

(Including fee of bath attendent, \$0.33 f	SINGLE BATH	6 BATHS		18 BATHS
Alhambra		\$6.95	\$13.10	\$18.75
Methodist Hospital	1.30	7. 25	13.70	19.60
Rockafellow		7.25	13.70	19.60
Hale	1.35	7.55	14.30	20.45
Moody	1.35	7.55	14.30	20.45
Ozark	1.35	7.55	14.30	20.45
St. Joseph's Infirmary	1.35	7.55	14.30	20.45
Superior	1.35	7.55	14.30	20.45
Lamar	1.40	7.85	14.90	21.35
Majestic	1.40	7.85	14.90	21.35
Quapaw	1.40	7.85	14.90	21.35
Buckstaff	1.45	8.15	15.50	22. 20
Maurice	1.45	8.15	15.50	22.20
Fordyce	1.50	8.45	16.10	23.05
Arlington	1.60	9.05	17.30	24. 80
Pythian	1.20	6.65	12.50	17.90
Pool Rates				

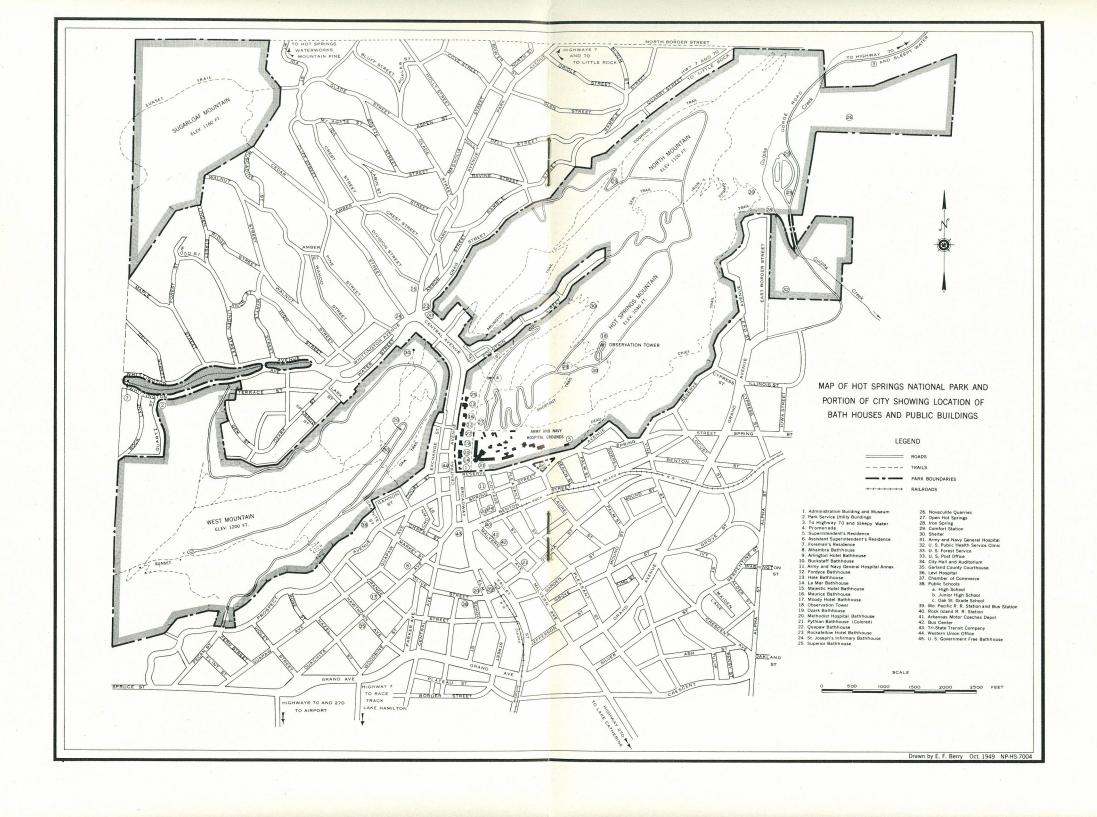
(All pool treatments require a physician's prescription)

Single treatment with services of physiotherapist	\$2.55	
Course of 6 treatments with services of physiotherapist	14.75	
Course of 12 treatments with services of physiotherapist	28. 20	
Course of 18 treatments with services of physiotherapist	38.40	

#### Rates for massage

(The maximum charges for general massage, including all necessary accessories, at all bathhouses)

Single treatments	\$2.00
6 treatments	9.60
12 treatments	17.75
18 treatments	25.85



#### Government Free Baths

THE Government free bathhouse for the indigent was established pursuant to act of Congress of December 16, 1878. Legislation requires that an applicant for free baths shall make oath that he is without and unable to obtain means to pay for baths, and a false oath as to his financial condition makes him guilty of a misdemeanor and subjects him, upon conviction thereof, to a fine of not less than \$25 or more than \$300, or 60 days' imprisonment.

Tickets are issued only to those who, after examination, are found to be suffering from diseases that may reasonably be expected to be benefited by the baths. Children are not allowed in the bathhouse except as patients.

The Government free bathhouse is a modern concrete building fully equipped for bathing large numbers of people under sanitary conditions.

All applicants for free baths and treatment for disease must be prepared to provide and pay for their own board and lodging and have return railroad fare. There are no hospitals in the city of Hot Springs to which they can be admitted, nor any funds available from which relief can be afforded or railroad transportation furnished.

This statement is emphasized because many destitute invalids come from other and distant States in the belief that the Government maintains a public institution at which they will be cared for free of charge.

#### The Army and Navy General Hospital

THE Army and Navy General Hospital is also supplied with water from the springs. It is administered by the War Department for the benefit of officers and enlisted men of the military and naval service of the

United States, cadets at the United States Military and Naval Academies, officers of the Revenue Cutter Service, now forming part of the Coast Guard, officers of the Public Health Service, and honorably discharged soldiers and sailors of the Regular and Volunteer Army and Navy of the United States.

In the case of veterans whose service was rendered since 1897, application for admission to this institution should be made to the Veterans' Administration, Washington, D. C., or to a district office of the Administration. The nearest district office to the hospital is at Little Rock, Ark. In all other cases applications should be submitted to the Surgeon General, United States Army, Washington, D. C. No local applications can be considered.

#### Climate and Recreation

Hot Springs has a favorable climate all year. The winters are mild, permitting outdoor recreation in comfort except at infrequent intervals, while the summers are moderated by the elevation of the rugged hills, with their forests of fragrant pine and mixed hardwoods.

The beneficial effects of outdoor life in Hot Springs, with its pure atmosphere and sunshine, are considered important aids to the bath treatments.

As a resort, Hot Springs has a popular appeal throughout the year, offering numerous and varied attractions. The majority of visitors during the autumn, winter, and spring months are from the more northerly States, while most of the summer visitors come from the Gulf States and those immediately adjoining Arkansas.

Life in the open offers almost every form of diversion. Motoring, horseback riding, and tramping through pine forests of the park are popular. The mountain roads adjacent to the park are numerous and lead through interesting Arkansas mountain-life

settings. Many side trips to scenic places of interest and recreation require only a few hours' motor trip. On Catherine and Hamilton Lakes, created through the building of two large hydroelectric dams on the Ouachita River near Hot Springs, motorboating, sailing, canoeing, and fishing are enjoyed. Many streams also are accessible for fly fishing.

Excellent facilities for golf are found at the Hot Springs Golf and Country Club, where there are 3 complete 18-hole courses. At Oaklawn Park there is a 9-hole course.

#### Plant and Animal Life

A dense forest covers the steep rocky hills of the park. Oaks, pines, and hickories occur in great abundance. Huckleberries predominate in the thick forest understory. Many of the trees have attractive flowers and leaves, the autumn foliage being particularly colorful. Wild flowers bloom every month of the year. Goldenrod, aster, bitterweed, coreopsis, and black-eyed susan make particularly noticeable natural displays. Lichens, mosses, ferns, grasses, and sedges occur abundantly.

The animal life consists of a few common mammals, several species of lizards, snakes, turtles, salamanders, and frogs, and over 90 species of birds.

#### Park Interpretation Services

A modern museum is housed in the administration building at the corner of Central and Reserve Avenues, including displays depicting geologic history; mechanism of the hot springs; rocks, minerals, and fossils; prehistoric culture; early and recent history; development of bathing; interesting plants and animals; and scientific studies of the hot waters.

Visitors enjoy the novelty of seeing Hot Springs from the horse-drawn carriage.





Trail hiking on North Mountain.

#### How to Reach Hot Springs

By railroad.—Hot Springs is served by the Missouri Pacific Railroad and the Chicago, Rock Island & Pacific Railway.

Missouri Pacific.—Through sleeping car daily between St. Louis and Hot Springs, and between Chicago and Hot Springs via Chicago & Alton. Through parlor car between Memphis and Hot Springs.

Chicago, Rock Island & Pacific.—Through sleeping car daily between Memphis and Hot Springs, and between Chicago and Hot Springs via Illinois Central. Through parlor car between Memphis and Hot Springs.

Passengers enroute to other destinations will find stop-over privileges available on both one-way and round-trip tickets for the purpose of making side trips to Hot Springs.

By automobile. — Hot Springs is located on two transcontinental motor highways, U. S. Highways Nos. 70 and 270, and State Highway No. 7, which are all-year, hard-surfaced roads. In addition, the State government has provided many hard-surfaced roads throughout Arkansas, some of which



Scenic road on West Mountain.

afford unusual scenic attractions, and all of which connect with the main arteries of interstate highway travel.

By bus.—The Arkansas Motor Coaches, Dixie Motor Coaches, Missouri Pacific Transportation Co., Santa Fe Trail System, and Tri-State Transit Co., with their connections, provide bus service to Hot Springs. During the summer months low round trip fares to the park are in effect from practically all points in the United States and Canada. In addition, convenient side trips and stop-over privileges may be arranged on bus tickets to or via most points in Arkansas, allowing passengers to include a side trip to the park.

By airplane.—American Airlines, with its connecting services to all points of the United States, and its through service from New York, Buffalo, Boston, Cleveland, and Chicago to Los Angeles, has Little Rock, Ark., as a regular stop.

Chicago and Southern Airlines makes daily scheduled stops at Memorial Airport, adjacent to the city of Hot Springs and about 2 miles from the park.

#### Hot Springs—The City

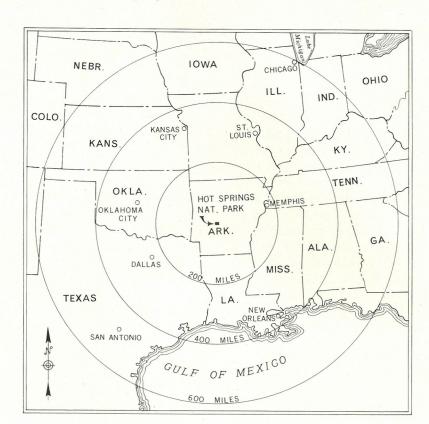
ADMINISTRATION of the national park by the Federal Government does not extend to the city of Hot Springs, which operates under its own municipal and State laws. City and park authorities join forces in promoting community welfare, coordinating their efforts for the common good.

Hot Springs, with its central location and excellent accommodations, offers peculiar advantages as a convention city. As a result of years of experience, efficient handling of conventions, from both a business and entertainment standpoint, is assured.

There are many hotels in Hot Springs, the largest affording accommodations for more than 1,000 guests and equaling in service and cuisine those of other well-known resorts and watering places in America and Europe. Among the larger



Central Avenue, city of Hot Springs.





Administration building.

hotels, visitors have a choice between those operating on the European plan and those on the American plan. Several hundred boarding places, ranging in price from \$7 per week upward, also are available. Those desiring permanent or light housekeeping quarters will find kitchenette and standard apartments and cottages, furnished and unfurnished.

Lists of hotels, boarding houses, and other accommodations, as well as general information regarding transportation, road maps, and recreation features, may be obtained from the Hot Springs Chamber of Commerce.

#### Public Campground

FOR automobile tourists, the Government operates a tourist camp in the Gorge, a beautiful valley at the foot of the eastern

slope of Hot Springs Mountain. Fireplaces and tables are available for picnic use. The camp is 2 miles from the center of the city of Hot Springs.

#### Administration

HOT SPRINGS National Park is under the control and supervision of the Director of the National Park Service. The officer in immediate charge is the superintendent, whose post office address is Hot Springs National Park, Ark.

The superintendent, in addition to enforcing the rules and regulations of the Department within the park, supervises sanitation, hydrotherapy, and the general operation of all bathhouses served with the hot waters, including supervision of bath attendants and their general fitness for employment.

#### "Let no one say, and say it to your shame, That all was beauty here until you came."

National parks are established "to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." Please cooperate with us in maintaining and protecting this park. The following observations are made for your guidance:

*Preservation of natural features.*—Public buildings, signs, trees, flowers, shrubbery, rocks, animals, or birds must not be disturbed, injured, or destroyed.

Fires.—Fires are one of the greatest perils to the park's existence. They are not permitted to be kindled anywhere but in designated sites. Extreme care should be taken that all cigarettes or cigars have been completely extinguished before they are thrown away.

*Hunting.*—No hunting whatever is permitted within the park boundaries.

Private operations.—To solicit or sell anything, no matter how minor, except by persons holding contract with the United States, is prohibited. The excepted activities are those restricted to the bathhouses and the Hot Springs Mountain Observatory.

*Advertising.*—No advertising or distribution of placards or advertising matter is permitted in the park.

Automobiles and motorcycles.—All roads are of mountain type, and care should be taken at all times while driving through the park area. Muffler cut-outs must always be closed. Speed of motor vehicles in campground areas must not exceed 15 miles an hour.

Horses and horse-drawn vehicles.—Horses have the right-of-way at all times and must be given the inside of roads when they desire it. Please be careful not to frighten horses.

Camping.—Visitors using the public campgrounds on Gorge Creek must first register in the office of the caretaker and obtain permit for campsite. Automobiles and trailers should be placed in assigned areas and not moved to other sites without permission of caretaker. No structure of poles, lumber, or sheet metal may be erected. Campgrounds must be kept clean. They are closed between the hours of 10 p. m. and 5 a. m.

Park rangers are glad to answer inquiries at all times.

VISITORS are advised that soliciting for hotels, boarding houses, or doctors on the trains and busses running into Hot Springs is in violation of law, and are warned against heeding the advice of irresponsible and unknown persons. In the interest of the public it has been found necessary to prohibit the bathing of anyone stopping at a hotel or boarding house in which the solicitation of patronage for doctors (commonly known as "doctor drumming") is allowed.