

Hot Springs National Park

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<http://www.nps.gov/hosp/index.htm>



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On the second day of our trip, we will travel several hundred miles southwest of Mammoth Caves to the Ouachita Mountain region of Arkansas. For two hundred years water has attracted people to Hot Springs to treat their illnesses and to relax. Both rich and poor came for the baths, and a town built up around the Hot Springs Reservation to accommodate them. Together nicknamed "The American Spa," Hot Springs National Park today surrounds the north end of the city of Hot Springs, Arkansas.

1. Weather & Climate

- a. **Climate** – Central Arkansas has four seasons: mild in spring and fall with some humidity; hot and very humid in summer; in the winter, variable - temperatures may range from below freezing to the 60s, with some humidity. The average rainfall is 54 inches per year and is usually heaviest in April and May. The average relative humidity is 75%.
- b. **Summer Weather** – Summer temperatures have daily highs ranging from 75 to 90 degrees and daily lows ranging from 62 to 72 degrees Fahrenheit.
- c. **Unusual Weather** – During the summer, thunderstorms with severe lightning and hail, as well as tornados, are possible any day. Soaking rain can occur any day of the year.

2. Life Zones

- a. **Elevations** – the official elevation of the city of Hot Springs is 600 feet above sea level. The surrounding hills rise another 600 feet above the town.
- b. **Dominant Vegetation** – The area is primarily forest. The northern slopes of the ridges and basins provide a suitable habitat for deciduous forest dominated by oak and hickory. Pines predominate on the south sides of the ridges. There are 230 acres of unlogged pine and oak forests on North and Hot Springs Mountains, and 90 acres on Sugarloaf Mountain. These old-growth forests contain shortleaf pine, blackjack oak, and white oak; many of the trees over 130 years old, and a few over 200 years old.
- c. **Prominent Animals** – Present day fauna include squirrel, rabbit, Virginia opossum, gray fox, coyote, skunk, raccoon, gopher, long-tailed weasel, American mink, rat, frog, and nine-banded armadillo. Some migratory birds following the Mississippi Flyway spend part of the year in the vicinity.

3. Geology

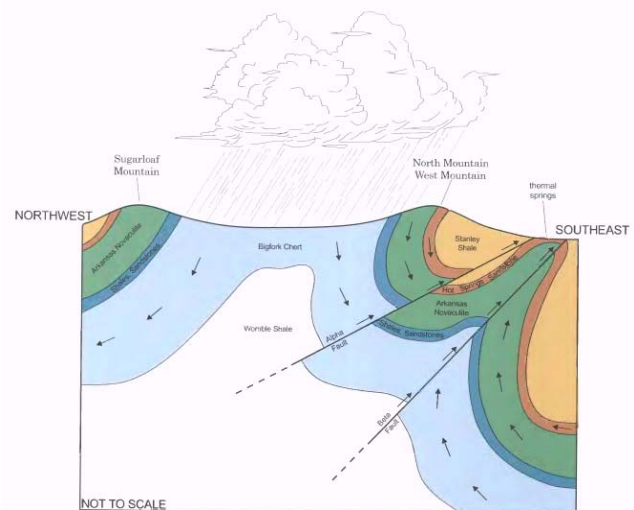
- a. **Processes** – The thermal springs are situated in the Ouachita Mountains of central Arkansas. The springs emerge in a gap between Hot Springs Mountain and West Mountain in an area about 1,500 feet long by 400 feet wide at altitudes from 576 to 683 feet. The springs predominantly are composed of hot water from thousands of feet underground mixed with some shallow cold ground water.

Currently, there are 43 thermal springs in the park that are presumed to be flowing. The water comes from rain which falls in mountains to the north and northeast. Flowing downward through cracked rock at about one foot a year, water migrates to estimated minimum depths of 4,500 to 7,500 feet and achieves high temperatures in the deep sections of the flow path before rising along fault and fracture conduits. Under artesian pressure, the thermal waters rise and emerge through the Hot Springs Sandstone between the traces of two thrust faults, along several northeast-trending fractures. Some rainwater from near the springs mixes with the deep hot water before discharge. The trip down takes about 4,000 years while the hot water takes about a year to reach the surface. The heat comes from the natural heating of rocks as depth increases. The composition of the water indicates it is heated rainwater which has not approached a magmatic source, so no volcanic action is involved in the formation of these hot springs. The result is the mildly alkaline, pleasant tasting solution with dissolved calcium carbonate.

b. Types of Rocks – The sedimentary rocks in the vicinity of the thermal springs consist of shale, chert, novaculite, sandstone, and conglomerate.

c. Geologic Features – The following minerals are dissolved in the water:

Mineral:	ppm:
Bicarbonate (HCO ₃)	130.0
Silica (SiO ₂)	53.0
Calcium (Ca)	47.0
Carbon Dioxide (CO ₂)	9.7
Sulfate (SO ₄)	7.8
Oxygen (O ₂)	4.5
Magnesium (Mg)	4.9
Chloride (Cl)	2.2
Sodium (Na)	4.0
Potassium (K)	1.4
Fluoride (F)	0.26



4. Human History

a. Native Americans – Many Native Americans tribes had been settling in the lands for untold numbers of years before any European establishment. The natural healing power of the water attracted them to the area. They named the land “place of the hot waters,” a name that has stuck over time.

b. Settlers – Hot Springs National Park actually refers to itself as “the oldest park in the national park system” because 40 years before Yellowstone became the first national park; President Andrew Jackson dubbed the hot springs a special reservation. The lands were settled into by many Native American tribes who believed in the waters natural healing powers. The federal land was eventually designated a national park in 1921. By that time, Hot Springs was well-known in the area as being a spa where people sought relief for their aches in pains in the mineral-rich waters. Promoters covered, piped, and diverted the springs into bathhouses along Central Avenue – the main street of Hot Springs. Bathhouse

Row, as it is known, was placed on the National Register of Historic Places on November 13, 1974.

- c. **Today** – Today the park protects eight historic bathhouses with the former luxurious Fordyce Bathhouse which houses the park visitor center.
- d. **Park History** – With the decline of bathing in the 1950s, the bathhouses themselves began to close their doors and fell into disrepair. On Bathhouse Row only the Buckstaff House remains open to public bathing at the present time. In the 1980s, local citizens and the National Park Service began to explore ways to return the Bathhouses to their historic grandeur. The fortuitous union of private money and public guidance has helped return both the exterior and interiors of these buildings to their original beauty. These unique commercial houses have been adapted for multiple uses under the provisions of the historic property leasing program. The Fordyce Bathhouse reopened its doors after undergoing extensive restoration in 1989. To the local visitor that wishes to step back into the 1920s to visit this Post World War II Era, little has appeared to change. The restorative effort is made complete with men and women’s furniture, steam cabinets, tubs, massage tables, chiropody tools, billiard table, grand piano, beauty parlor and hydrotherapy equipment prevalent in those days.

5. Other Interesting Facts – Park Map



