OUACHITA MOUNTAINS

Hot Springs National Park is in the Zigzag Mountains, a small range of the Ouachita *(Wash'-i-tah)* Mountain system in the Interior Highlands. The Ouachitas extend from central Arkansas about 220 miles westward into eastern Oklahoma, and average 50 miles in width.

By studying the relationships of rock and their fossil and mineral contents, and interpreting them in the light of what is happening on the earth's surface today, geologists have pieced together a geological history of this region extending over an immense period of time.

In Paleozoic times, 400 million years ago or more, this area lay beneath the Ouachita Embayment, an arm of a sea which extended from what is now Louisiana to New Hampshire. To the south was a lofty mountain range. Throughout a period of many millions of years, erosive forces wore away those mountains,depositing gravel, sand, mud and chemical precipitates under the shallow waters on the gradually sinking floor of the Ouachita Embayment. These sediments accumulated to a thickness of over 30,000 feet.

Following the long period of deposition, a period of mountain-making forces lifted and compressed sediments, squeezing an area 100 miles wide into a folded, fractured mass just half that wide. These rocks have remained above sea level for more than 200 million years. At least twice, they have been eroded down to low-lying, relatively flat lands known as peneplains, only to be uplifted again and subjected to further erosion. Parts of the peneplains are apparent now as the relatively flat tops of many of the Ouachita Mountains.

These processes and the rock formations they produced are shown in exhibits in the Visitor Center.