

Natural Bridges

Natural Bridges National Monument
Utah

National Park Service
U.S. Department of the Interior



The natural bridges represent three states: old age, maturity, and youth.

▲ Owachomo Bridge no longer suffers stream erosion but erosion by rain, frost action, and

sandblast. Now in its late phase, it could already have a fatal crack, or it could stand for centuries.

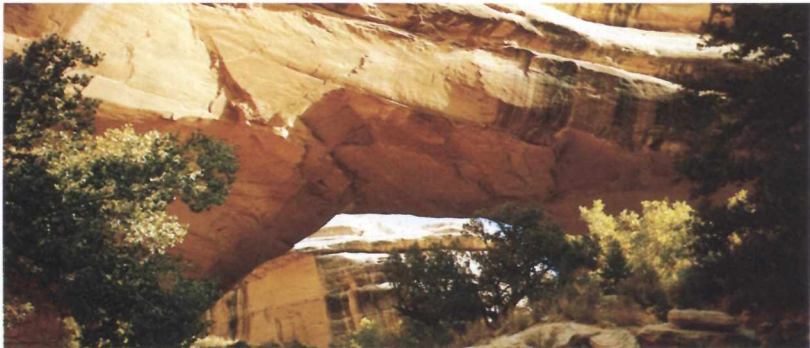
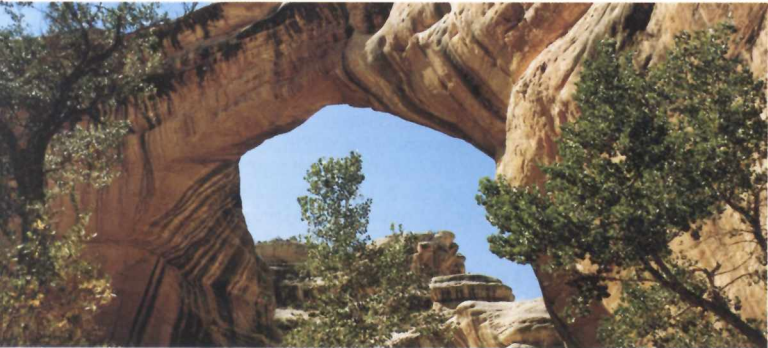
▼ Sipapu Bridge suffers little or no stream erosion because its abut-

ments now lie far from the streambed. A mature bridge, it is largest in both height and span (see chart at right). Sipapu can be hard to spot from the overlook on the canyon rim, despite its size.

▼ Kachina Bridge, in its youthful state, looms huge and bulky. Floodwaters in White Canyon still work to enlarge it. A trail threads the canyon between Sipapu and Kachina bridges.

	Height	Span	Width	Thickness
Owachomo	106	180	27	9
Sipapu	220	268	31	53
Kachina	210	204	44	93

Dimensions in feet



Discovering Three Scenic Treasures

History Prospector Cass Hite came across these perforated rock walls, called natural bridges, when he was exploring White Canyon from his Colorado River placer gold camp in 1883. In 1904 *The National Geographic Magazine* publicized the bridges, and on April 16, 1908 President Theodore Roosevelt proclaimed the national monument. Natural Bridges National Monument is Utah's first National Park Service area.

In 1904 the bridges were known by different names. Owachomo, Sipapu, and Kachina had been named, respectively, Edwin, Augusta, and Caroline, after early explorers or their relatives. In 1909 President William Howard Taft enlarged the boundaries and affixed the Hopi Indian names. Although Navajos and Paiutes are known to have lived in the area historically, there is no known Navajo term for the bridges. The Paiutes did not name the bridges individually but called them "Ma-Vah-Talk-Tump," meaning under the horse's belly." The Hopi names were chosen because of the similarity between Hopi structures and the Anasazi cliff dwellings found throughout the area. Owachomo, meaning "rock mound," is named for the large rounded rock mass found on the northeastern abutment of the bridge. Sipapu means "the place of emergence" in Hopi legends. Rock art on the third bridge resembles symbols which are

found on kachina dolls, thus the name Kachina or ghost dancer.

Prehistory Prehistoric people, referred to as the Anasazi, occupied this part of Utah from about 2,500 to 700 years ago. There is evidence that the park area was used extensively by these early people. Both White and Armstrong canyons are too narrow to support the farming activities of many families at any one time. It is thought that they may have farmed the mesas. At Natural Bridges a unique blend of the Northern San Juan (Mesa Verde) and Kayenta Anasazi cultural traditions have been discovered. Archeologists identified this blend by studying the remains of the structures, pottery, and other remnants left behind. As new techniques are developed to study these sites, more information may be learned about how these people lived and why they left the area.

These ruins are very fragile. Do not enter the structures or walk on or near walls. Leave everything you find as it is.

Natural History Millions of years ago these sandstones were deposited and then, as part of the Colorado Plateau, were slowly uplifted. Erosional forces gradually created the canyons and landscapes seen today. Plant communities have varied over time as

well. Pollen studies indicate that this area was once a spruce-fir forest. Gradual climatic changes altered the dominant plant type; however, small pockets of Douglas-fir trees are still seen on the cooler, moister north-facing cliffs near Sipapu Bridge.

Precipitation is infrequent, unpredictable, and at times dramatic—varying between long periods of drought and periods of relatively heavy precipitation. Plants and animals have adapted to this environment. Microbiotic soil, the black and lumpy crust throughout the area, retains moisture and stabilizes and adds nutrients to the soil. This allows other plant communities, such as the pinyon-juniper forest, to develop and mature.

How Bridges and Arches Differ What is the difference between a natural bridge and an arch? Natural bridges are formed by the erosive action of running water, while arches are formed by other erosional forces. Stream erosion is the primary force in the formation of natural bridges. Natural bridges are enlarged and shaped by the freeze/thaw and percolation actions of water, which are also the major erosive processes that form arches.

How Natural Bridges Form

The rock in the park is a sandstone initially formed by windblown sand. The deep, looping White and Armstrong Canyons and the three bridges within them can be traced to the relentless action of

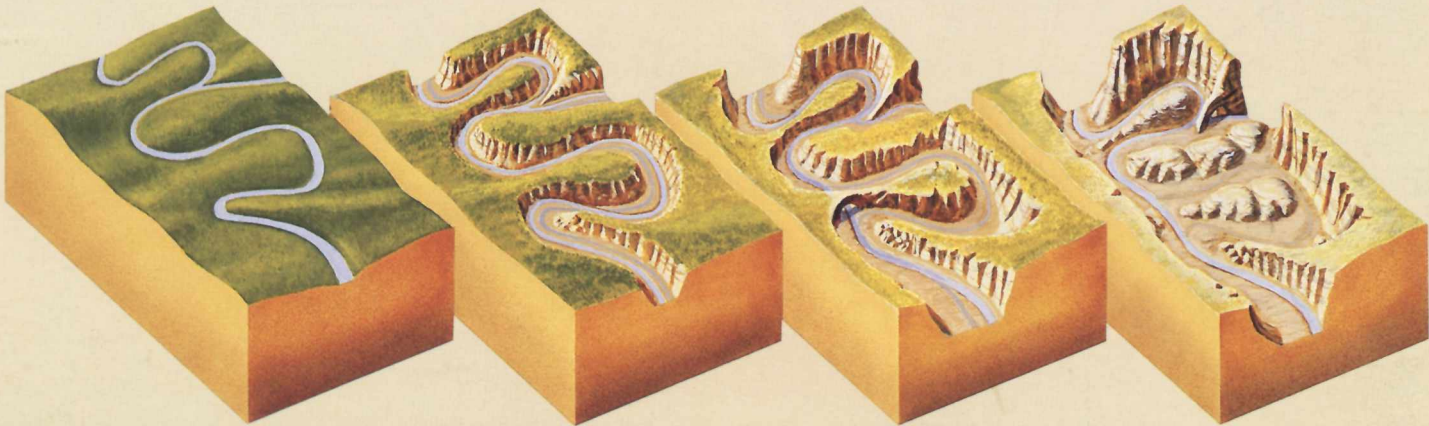
water against the cross-bedded sandstone. The desert stream would occasionally scour its bed with a great head of water and sand, so that conditions for forming natural bridges were set. Kachina and Sipapu

straddle streams with long winding curves. (Owachomo, now straddling no stream, was apparently cut by the action of two streams.) When a river forms a great looping meander, almost circling back

on itself, it can create the thin rock wall in which natural bridges form. Raging flood waters scrape away at both sides of the thin wall. Even during low water, percolation further weakens the wall.

Eventually the river breaks through and takes the shorter course under its new bridge, abandoning the old looping meander. The river continues to wear down the rock, enlarging the hole by

cutting itself deeper. A natural bridge is temporary. Blocks fall from its undersides and its surfaces weather, wear, and weaken. The span of Owachomo, for example, the oldest bridge, has worn thin.



Natural Bridges



High Desert Environment An average of 13 inches of precipitation falls here annually, and elevations range from 5,500 to 6,500 feet. Pinyon-juniper forest dominates the mesa, where the visitor center and Bridge View



Drive are located. Pinyon pine and Utah juniper are prevalent. Shrubs and grasses dominate lower areas. In the canyons or where water sources are perennial, cottonwood and willow trees and other water-loving



plants grow. Hanging gardens are found near seeps in canyon walls. Douglas-fir and ponderosa pine occur along some cliffs. Centuries ago prehistoric Basketmaker and Pueblo Anasazi inhabited the Natural Bridges area.



Basketmaker Anasazi typically lived in pit-houses on the mesa top. Later Pueblo Anasazi lived in cliff dwellings. Both traditions farmed and ate wild foods. They fashioned homes, baskets, pottery, stone tools, and

textiles from natural materials. **Preserved primarily by the dry climate, these fragile archeological remains are irreplaceable cultural resources.** Hidden in this deep, dry, apparently desolate canyon country today are many

Making the most of your stay

Visitor Center Spending a short time at the visitor center before you see the rest of the monument will enhance your understanding and enjoyment of the area. In the visitor center are museum exhibits and a color slide program that present the history of the natural bridges area and a sample of the area's wildlife and plants. You can find out about activities and which trails you might find most enjoyable. Remember, you must fill your water bottles here. There are no water or toilet facilities once you leave the visitor center area.

Services There are no services in the monument. The closest gasoline, groceries, and overnight accommodations are 40 miles away either in Blanding (east) or Mexican Hat (south). Water is available only at the visitor center. A primitive 13-site campground provides tables, tent pads, grills, and pit toilets. There is a 21-foot and 1-vehicle-per-site limit.

Bridge View Drive Bridge View Drive leads to the overlooks and trailheads to the three

bridges. This paved, one-way road is 9 miles. Limited parking is provided at each overlook and trailhead. If you are towing a trailer or vehicle, please unhook it and leave it in the visitor center parking lot. The monument is open all year, but the most pleasant season occurs from late April through October.

You can hike into the canyons by trail to view the bridges from beneath or view them from overlooks—see map. Various loop trails may be hiked.

Dropping into the Canyon As you descend into the canyon you may get glimpses of hanging gardens on shelves in the canyon. The many shelves or benches in the canyon walls result from the different rates of erosion of the various layers of rock. The layers of mudstone and siltstone erode faster than the sandstone, promoting collapse, break up, and removal of the harder sandstone. This creates the stairstep effect of alternating cliffs and benches from mesa top to canyon floor.

Wildlife Although wildlife is abundant here, you may see only birds, rabbits, lizards, and an occasional mouse or rat. Larger animals such as bobcats, coyotes, bear, mule deer, and mountain lions live in the area as well, but unless you surprise them, they will try to evade you.

For more information write to: Superintendent, Natural Bridges National Monument, Box 1, Lake Powell, UT 84533.

WARNINGS: Sheer drop offs and unfenced trails are many here. During thunderstorms, watch for lightning and flash floods. Always carry water, at least one gallon per person per day. Climbing on the bridges is prohibited.

Loop Trails

	Sipapu	Kachina	Owachomo
Sipapu	0	5.4	8.2
Kachina	5.4	0	6
Owachomo	8.2	6	0

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