## **Rainbow Bridge**

National Monument Utah

National Park Service U.S. Department of the Interior



Nonnezoshi, the Navajos called it, "rainbow of stone," this soaring ribbon of sandstone that surprises and profoundly delights. Rainbow Bridge, the world's largest natural bridge, is considered a sacred place by the Navajo Indians, for whom personified rainbows have stood as guardians of the universe. This natural wonder nestles among canyons carved by streams en route to the Colorado River from Navajo Mountain's north flank. Until Lake Powell recently backed up Bridge Creek to the bridge itself, this was one of the most remote and inaccessible regions in the contiguous United States. Today the bridge is accessible by boat.

The first publicized sighting of the bridge was made by the Douglass-Cummings party in 1909. Two parties had set out, under government surveyor W.B. Douglass and under University of Utah Dean Byron Cummings, to seek the great stone arch that Indians said lay near Navajo Mountain. The two parties eventually met and joined forces. They were guided by two Paiutes, Jim Mike and Nasja Begay, and by John Wetherill, trader and self-taught archeologist. The country proved rough and treacherous. Horses slipped and skidded on the slickrock surfaces. Rimrock ledges, like terrible sandstone mazes, frequently blocked progress and turned the party back. They struggled through canyons, some dry and boulder-choked, some containing water and dense brush. Then, coming down what is now Rainbow Bridge Canyon in the late afternoon of August 14, the party beheld this beautiful natural stone bridge.

caused by iron oxide or hematite. Afternoon sunlight makes the coloration especially brilliant.

The base of Rainbow Bridge is composed of Kayenta Formation, reddish-brown to purplish consolidations of sands and muds laid down hundreds of millions of years ago. Above its

## How the Bridge was Formed

Rainbow Bridge, Ed Cooper photo

these massive layers of rock now lifted far above sea level. As the landscape lifted and tilted, these streams acquired more force and began to downcut their meanders.

As Bridge Creek entrenched itself into the landscape, the scene was set for carving Rainbow Bridge. As the canyon cut through



Water flows off Navajo Mountain on its way to the Colorado River. In Bridge Creek Canyon various layers of sandstone resist erosion by the rushing stream. As the water slows it meanders, ever cutting weaker sandstone layers. Stream meanders form large loops, creating thin rock walls as the water circles back on itself. Floods will pound away at these thin walls until the loosely cemented Navajo sandstone opens a small hole to its relentless foe. Illustration by Jaime Quintero

With a span of 84 meters (275 feet), Rainbow Bridge gracefully arches to a height of 88 meters (290 feet). The top is 13 meters (42 feet) thick and 10 meters (33 feet) wide. The bridge's predominant color is salmon-pink, with dark stains—called desert varnishbase the bridge is composed of Navajo Sandstone. This formation was created as wave upon wave of sand dunes were deposited to depths of 300 meters (1,000 feet). Over the next 100 million years, both these formations were buried more than 1,500 meters (5,000 feet) deep by still other strata. The pressures and temperatures of this profound burial consolidated and hardened the rock of these formations.

Some 60 million years ago the landscape we know as the Colorado Plateau began a gradual uplift. Today's landscape results from the erosion caused by streams cutting into the Navajo Sandstone and then hit the hard Kayenta Formation rock, the cutting became more difficult. The stream then widened its path and undercut the canyon walls. Finally it cut through the neck of a meander loop. The stream then altered its course, taking the more direct course through the break. Huge flakes of sandstone broke loose and fell, leaving a concoidal or shell-like pattern like that found in the chipping of Indian arrowheads. Natural flaking, called exfoliation, contributes to the formation of alcoves and natural bridges throughout this region.

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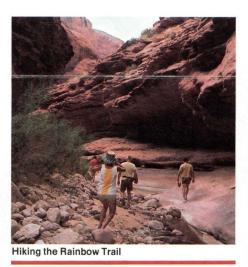


To Reach Rainbow Bridge by Water. Most people take the water route on Lake Powell, some 80 kilometers (50 miles) from Wahweap, Bullfrog, or Halls Crossing to the landing in Bridge Canyon. From there it's a 400-meter (1/4-mile) walk up the canyon to the bridge. For using your own boat there are launching ramps at Wahweap, Halls Crossing, Bullfrog, and Hite. Here concessioners sell boating and camping supplies and provide guided boat trips. Tour boats operate from Wahweap. The nearest marina is Dangling Rope Marina, 16 kilometers (10 miles) south of the bridge, offering gasoline, supplies, and emergency service. Concessioners: Canyon Tours (Wahweap), Box 1597, Page, AZ 86040; Hite Marina, Hanksville, UT 84734; Halls Crossing Resort & Marina, Halls Crossing, Blanding, UT 84511; Bullfrog Resort Marina, Bullfrog Basin, Hanksville, UT 84734. Arrange



The bridge and courtesy dock

scenic flights over Rainbow Bridge with Lake Powell Air Service, Box 1385, Page, AZ 86040. By Hiking or on Horseback. You can reach Rainbow Bridge on foot or by horseback via the trail from Navajo Mountain Trading Post (26 kilometers/16 miles), and on foot via the trail from abandoned Rainbow Lodge (21 kilometers/13 miles). Before you begin a trail trip, be sure to ask a park ranger about conditions (the trail is not maintained), if trading posts are open, and where water and



supplies are available. Recommended hiking times are April, May, early June, September, and October.

Trail Ethics and Regulations. The hiking trails begin on the Navajo Reservation, where you are a guest. Respect their land. Hogans are private property; treat them as such. Do not drive or otherwise harass livestock. Leave gates as you find them. Build fires only in previous fire sites and extinguish them completely. Better yet, carry a backpacking stove. Pack out all trash and bury waste 20 centimeters (8 inches) below ground. Each person will require 4 liters (1 gallon) minimum water per day in warm weather. **Regulations.** Hunting and carrying firearms are prohibited. Destruction, cutting, or removal of plantlife, other natural features, or Indian artifacts are prohibited, as is defacing sandstone with names, dates, or any other marks. Camping and kindling fires are prohibited in the park.

Safety and Courtesy. Use common sense for safety. Please respect the right of others to contemplate the bridge-do not swim, dive, or throw rocks under and around the bridge itself. Thank you.

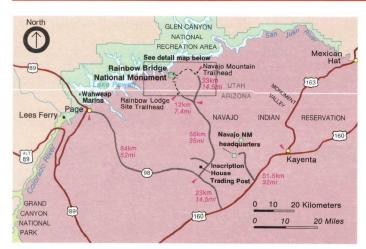


**Boating on Lake Powell** 

Facilities. There is no campground or picnic area. A portable flush toilet is available. The nearest town with hospital, bank, markets, churches, motels, and restaurants is Page, Ariz., on U.S. 89.

Administration. The 65-hectare (160-acre) monument was established in 1910. The superintendent's address is: Glen Canyon National Recreation Area, Box 1507, Page, AZ 86040.

## Hiking to the Bridge



The Trailheads. The trailheads are near Navajo Mountain (see park map below). The Navajo Mountain Trading Post trailhead is unmarked; trail starts at the end of the road. The Rainbow Lodge-Rainbow Bridge trailhead lies at the west end of the old Rainbow Lodge ruins. Both trails lie on the Navajo Indian Reservation and terminate at Rainbow Bridge National Monument. The trails are not maintained and they cross rough canyon country. They are not recommended for the

CANYON

beginning, casual, or careless hiker. In summer the trails are hot and dry; in winter elevations make them subject to severe cold and high winds. Portions of both trails are subject to flash floods. You can use the two trails roundtrip fashion. You can also make advance arrangements with a park concessioner for boat transportation back to Wahweap from Rainbow Bridge.

Hikers should carry the 15-minute quadrangle map "Navajo-Mountain, Arizona-Utah." Know your timetable, stick to it, and leave your itinerary with someone who expects you back.

Trail bikes and other motorized vehicles are illegal. Horse use on the Lodge-Bridge trail is **not** recommended.

GLEN CANYON NATIONAL RECREATION AREA

Dangling Rope • Marina

