

present but rarely observed. Birds of many species, numerous small rodents such as ground squirrels, rabbits, and kangaroo rats, and, occasionally, small reptiles are seen. From May to August, except in abnormally dry years, colorful displays of wildflowers carpet moist locations, particularly in the Salt Valley.

Visitor Facilities

WITH the extension of State Highway No. 93, major scenic features of the monument were made accessible by graded road. However, as in the majority of national parks and monuments, leisurely travel through portions of the area which cannot be reached by motor yields much in the way of interest that is missed by the hurried tourist.

Foot trails lead to many scenic points, and saddle stock and pack animals may be obtained in Moab, Utah, for pack trips into the more remote portions of the monument. Arrangements for pack trips may be made through the superintendent.

There are no facilities whatever for food or lodging on the monument, but several restaurants and comfortable auto courts and hotels are located in Moab. Persons planning hiking or pack trips, or who desire to camp anywhere on the monument, should report to the superintendent before entering the area. Lack of drinking-water sources, possibility of getting lost, and sudden storms that wash out portions of the road present real hazards; therefore, the superintendent should know of all parties in the area in case his assistance is needed.

Administration

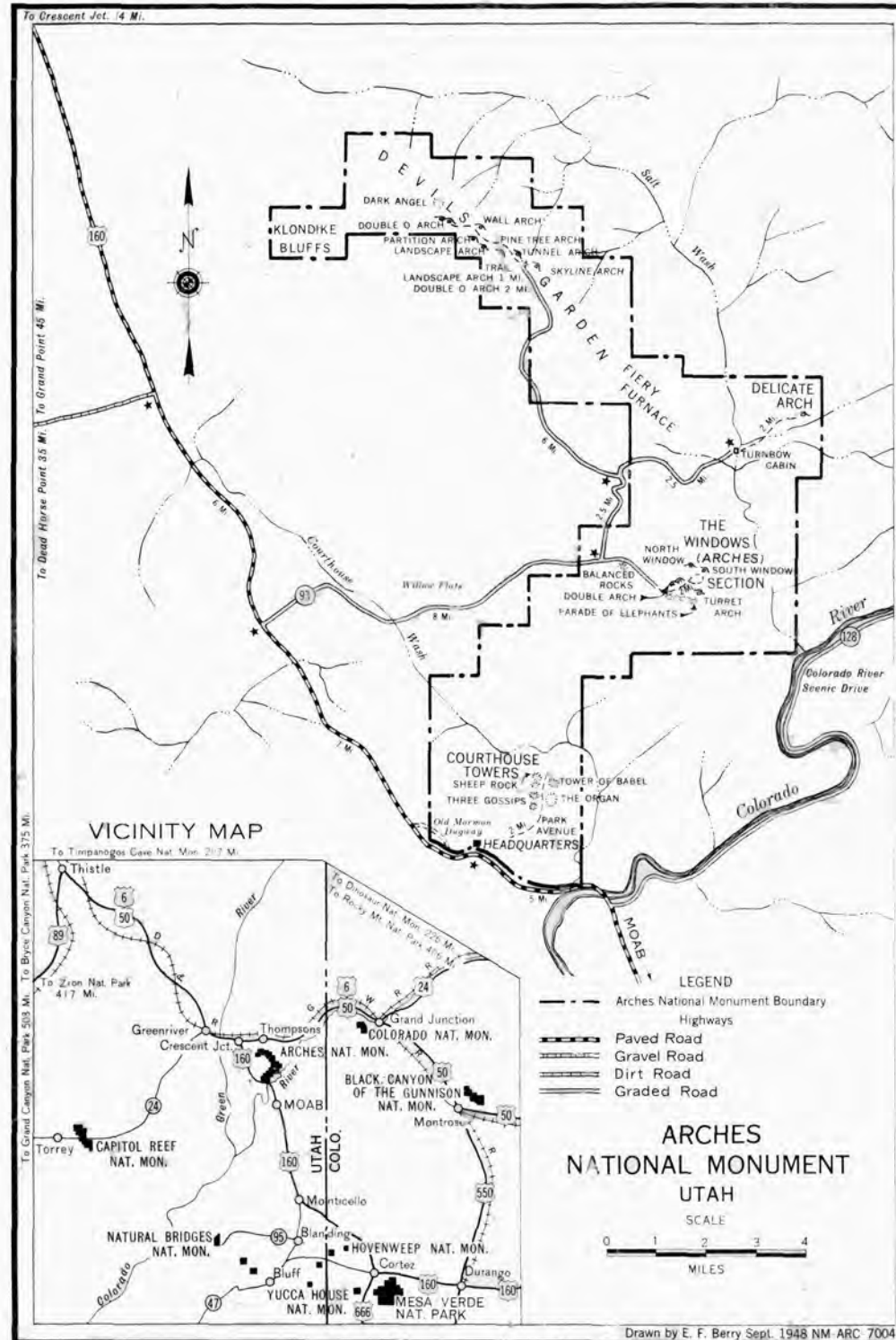
ARCHES NATIONAL MONUMENT was established by proclamation of President Herbert Hoover on April 12, 1929, with an area of 4,520 acres. On November 25, 1938, President Franklin D. Roosevelt proclaimed an addition to the reserve, enlarging it to 33,770 acres. It is one of the many areas of scenic, his-

toric, prehistoric, or scientific value with superlative features of national significance, owned by the people of the United States, which the National Park Service is obligated by law to preserve, unimpaired, for their benefit and enjoyment. Numerous other areas in southeastern Utah and southwestern Colorado, which have outstanding scenic, archeological, and geological values, are included in the National Park System.

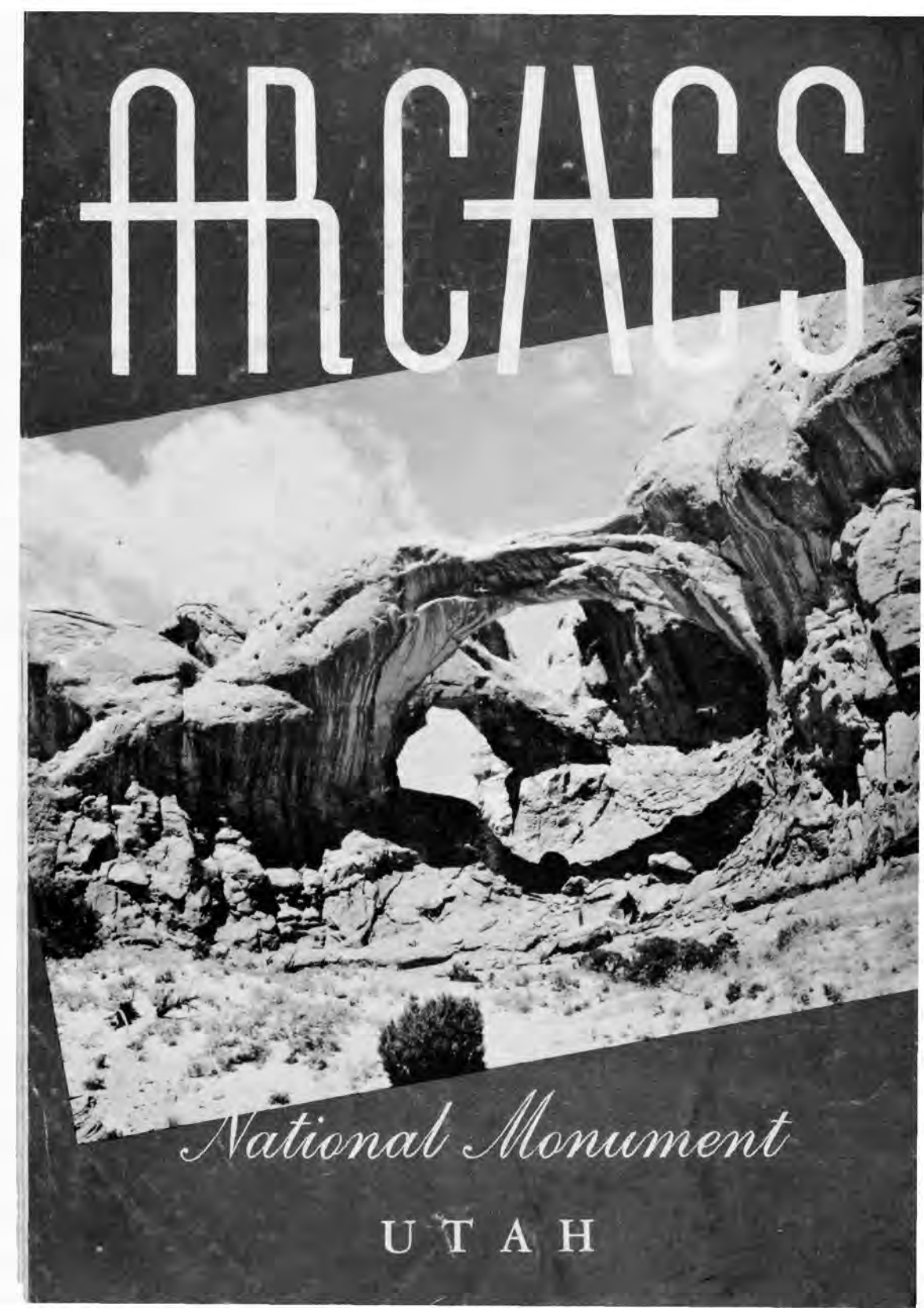
The superintendent in charge of the monument maintains an office at monument headquarters, approximately 5 miles northwest of the town of Moab. He furnishes free informational service and enforces the regulations. As necessary measures of protection to the monument features, including the wildlife, visitors are required to keep cats and dogs on leash or in cars; fires may not be built within the monument boundaries without permission of the superintendent; visitors are not permitted to carry firearms, to pick flowers, to carve names or initials on rocks, or otherwise to deface, destroy, or remove any natural object or artifact.

For further information, queries should be addressed to The Superintendent, Arches National Monument, Moab, Utah, or to The Regional Director, Region Three, National Park Service, P. O. Box 1728, Santa Fe, N. Mex.

Funnel Arch—Devils Garden Section



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ARCHES

National Monument

U T A H

UNITED STATES DEPARTMENT OF THE INTERIOR, J. A. KRUG, Secretary
NATIONAL PARK SERVICE, NEWTON B. DRURY, Director



Gigantic but graceful arches and immense windows perforate vertical fins of dull red sandstone in Utah's "slickrock" country overlooking the deep gorge of the Colorado River.

IN THE HEART of the famed redrock country of southeastern Utah, north across the Colorado River from the picturesque old Mormon pioneer town of Moab, is situated Arches National Monument. It contains more natural stone arches, windows, spires, and pinnacles, carved by the Master Sculptor in great buff-colored sandstone cliffs and fins, than any other known section of the Nation. The name "Arches" stems from the many natural windows, enlarged and smoothed by weathering, in the hundreds of vertical slabs cut by erosion from a 300-foot layer of sedimentary rock called the Entrada Sandstone.

Eighty-eight openings, large enough to be classed as arches, have thus far been discovered within the boundaries of the national monument. It is reasonably certain that there are others hidden away in remote and rugged portions of the reserve. Spectacular towers, sweeping coves, picturesque shapes resembling figures of beasts and men, balanced rocks, and other weird forms resulting from the combined action of running water, wind, rain, frost, and sun form a setting to which the arches themselves are a majestic climax.

The Windows (Arches) Section

WITHIN the east-central and most readily accessible portion of the monument, a great mass

COVER: Double Arch in the Windows Section

of the Entrada Sandstone towers over the surrounding plain, dotted with piñon and juniper trees. In these massive walls the forces of nature have carved eight immense arches in addition to many smaller windows, passageways, coves, pinnacles, spires, and balanced rocks. Here are the famous Double Arch, Parade of the Elephants, Cove of the Caves, North and South Windows, Balanced Rocks, and other erosional features which have helped to make the monument famous. This portion of the reserve may be reached by automobile through Willow Flats at all seasons of the year over graded State Highway No. 93, which leaves United States Highway No. 160 12 miles north of Moab. A foot trail enables visitors to approach closely all of the numerous features of interest.

Twin Arch—Fiery Furnace Section



Courthouse Towers

ALTHOUGH they are much nearer to U. S. 160 than to The Windows, the scenic features of the Courthouse Towers section can be reached only by foot, or on horseback, over a trail which climbs from monument headquarters to the top of the escarpment overlooking the gorge of the Colorado River. In the mesa top behind these cliffs are several canyons, the most spectacular of which is known as Park Avenue because of the massive towers, spires, and pinnacles topping its sheer walls and resembling the skyscrapers of a great city.

Devils Garden

OPENED to automobile travel in 1948 by the extension of State Highway No. 93, the Devils Garden section may be reached by continuing 8½ miles north and west from The Windows Junction. From the terminus of this road near Skyline Arch, trails lead 2 miles to Double O Arch, 1 mile to Landscape Arch, and to Fin Canyon, Tunnel Arch, and others of the 70 arches which are found in this spectacular portion of the monument.

Landscape Arch, believed to be the longest natural-stone span in the world, has a length of 291 feet. One portion of this area was utilized

Park Avenue is lined with pinnacles resembling big-city skyscrapers



by Ute Indians, perhaps as a winter camp ground, for here the soil is littered with chips of agate and chalcedony used by the aborigines in making arrow points and other stone implements. Here, too, the cliffs are adorned with many petroglyphs, including the figures of human beings and various animals.

The lower end of the Devils Garden, a portion of the monument known as the Fiery Furnace, is so rough and rugged that it has not yet been thoroughly explored. The great jumble of vertical slabs of red rock, which in the light of the setting sun appear to glow with the heat of a mighty fire, have given this area its descriptive name.

Klondike Bluffs

ANOTHER area which, because of its rugged terrain consisting of parallel rows of vertical rock fins, has not yet been thoroughly explored, lies west of the Dark Angel portion of the Devils Garden. Tower Arch, a rock formation known as Joseph Smith and the Golden Plates, and the long rows of immense parallel sandstone fins make well worth while the 4-mile trail trip necessary to reach the Klondike Bluffs section of the monument.

Delicate Arch

THE impressive grandeur of Delicate Arch in its unsurpassed setting of precipitous cliffs and massive "slickrock" domes, with the gorge of the Colorado River beyond and the snowcapped peaks of the La Sal Mountains in the distance, makes this the climax of the monument's inspiring scenic features. A spur of State Highway No. 93 leads to within 2 miles of Delicate Arch, a foot trail covering the balance of the distance.

How the Arches Were Formed

TO VISITORS interested in earth structure and the power of erosion, Arches National Monument is a great outdoor geological museum. Rocks of the area are predominately sedimentary with a few metamorphics in evidence. Geologists explain that here the Entrada Sandstone, composed of deposits of the Jurassic Period, is cut by two series of master joints, or cracks, crossing each other at right angles. These cracks, about 20 feet apart, extend through the entire thickness of the formation. For untold centuries, water entering these cracks has dissolved the cementing substances in the sandstone, carrying away the loosened materials, and progressively enlarging the parallel cracks of the series of master joints which follow the slopes. During thousands of years, these parallel cracks have been gradually enlarged to form wide, deep fissures between which rise huge slabs of the dull red sandstone. These slabs, or fins, are often less than 20 feet in thickness and 100 feet or more in height.

It is in these fins that the arches form. Water entering the second series of cracks, that run at right angles to those along which running water has worn and enlarged the fissures, has loosened great blocks of sandstone. Under the influence of freezing and thawing and the pull of gravity, blocks break away, leaving holes or windows perforating the fins. The pressure at the base of these fins is so great from the overlying weight, and the rock so weak, that great chunks break

away and roll down the slopes. Such crumbling and spalling of rock at the base of the fins are similar to the failure of high masonry was unsupported by buttresses. Rain and wind gradually enlarge and smooth the rough and angular edges of each opening to make a characteristic window or arch. But the destructive processes of weathering do not stop here. Gradually the arch becomes larger as the rock surrounding it is worn away. Eventually the span of the arch becomes so thin that it can no longer support its own weight and it falls, leaving the remnants of the fin standing as buttresses at either end. All stages in the development and decay of such arches may be seen in Arches National Monument. Natural arches thus are openings through obstructing rock fins, in contrast to natural bridges which may be defined as rock passageways across water-worn channels.

Wildlife

NATIVE plants and animals found in Arches National Monument, and protected by the National Park Service against activities of man that might reduce their numbers or alter their habitats, are characteristic of the piñon-juniper communities of the Great Basin Desert. Larger mammals such as deer, coyotes, and foxes are

Delicate Arch, with La Sal Mountains in the distance

