

Landscape Arch

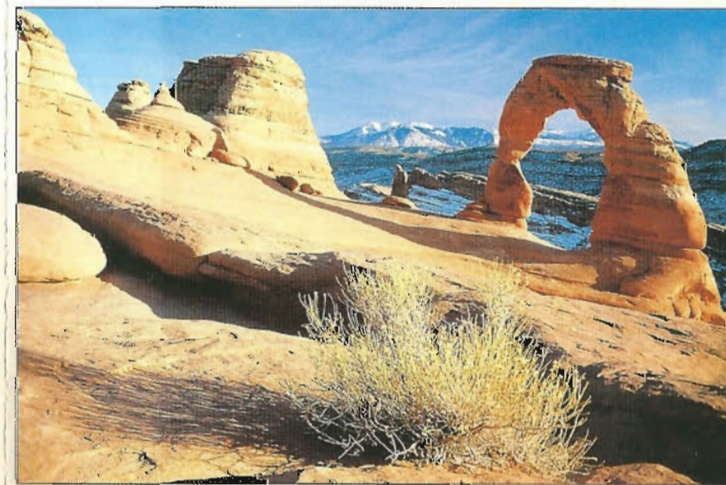
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Water and ice, extreme temperatures, and underground salt movement are responsible for the sculptured rock scenery of Arches National Park. On clear, blue-sky days it is difficult to imagine such violent forces—or the 100 million years of erosion—that created this land boasting one of the world's greatest densities of natural arches. Over 2,000 cataloged arches range in size from a three-foot opening, the minimum considered an arch, to the longest, Landscape Arch, measuring 306 feet base to base.

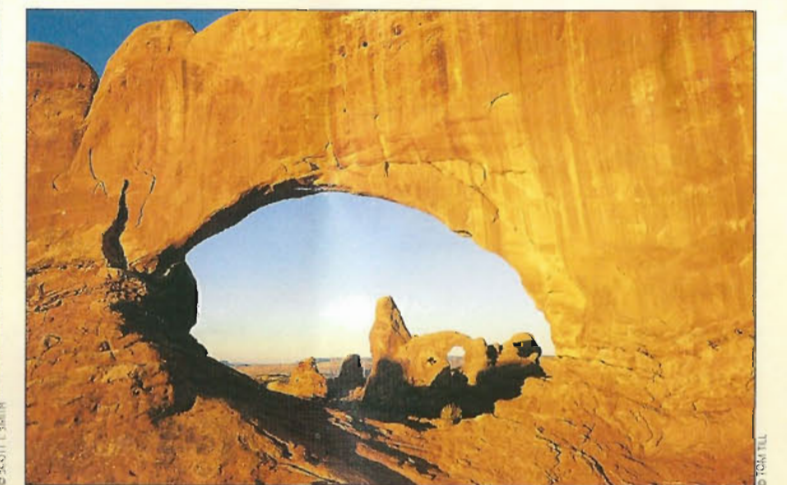
Today new arches are being formed and old ones destroyed. Erosion and weathering work slowly but relentlessly, creating dynamic landforms that gradually change through time. Change sometimes occurs more dramatically. In 1991 a rock slab 60 feet long, 11 feet wide, and four feet thick fell from the underside of Landscape Arch, leaving behind an even thinner ribbon of rock. Delicate Arch, an isolated remnant of

a bygone fin, stands on the brink of a canyon, with the dramatic La Sal Mountains as backdrop. Towering spires, pinnacles, and balanced rocks—perched atop seemingly inadequate bases—vie with the arches as scenic spectacles here.

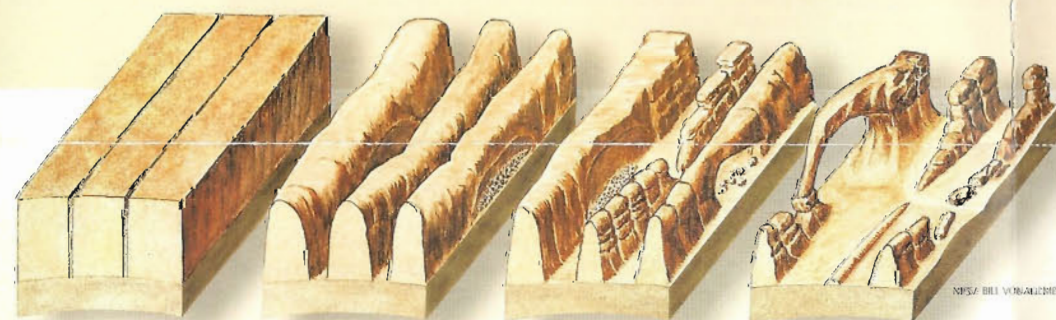
American Indians used this area for thousands of years. The Archaic peoples, and later ancestral Puebloan, Fremont, and Ute peoples, searched the arid desert for food animals, wild plant foods, and stone for tools and weapons. They also left evidence of their passing on a few pictograph and petroglyph panels. The first non-Indian explorers came looking for wealth in mineral forms. Ranchers found wealth as grasses for cattle and sheep. Disabled Civil War veteran John Wesley Wolfe and his son Fred settled here in the late 1800s. A weathered log cabin, root cellar, and corral give evidence of the primitive ranch they operated for over 20 years. A visit to Wolfe Ranch is a walk into the past.



Delicate Arch



Turret Arch



The Story Geologists Tell

The park lies atop an underground salt bed that is responsible for the arches, spires, balanced rocks, sandstone fins, and eroded monoliths of this mecca for sightseers. Thousands of feet thick in places, this salt bed was deposited across the Colorado Plateau 300 million years ago when a sea flowed into the region and eventually evaporated. Over millions of years, residue from floods, winds, and the oceans that came and went blanketed the salt

bed. The debris was compressed as rock, at one time possibly a mile thick.

Salt under pressure is unstable, and the salt bed lying below Arches was no match for the weight of this thick cover of rock. The salt layer shifted, buckled, liquefied, and repositioned itself, thrusting the rock layers upward as domes, and whole sections fell into the cavities.

Faults deep in the Earth made the surface even more unstable. You see the result of one 2,500-foot displacement, the Moab Fault, from the visitor center.

Fault-caused vertical cracks later contributed to the development of arches. As the salt's subsurface shifting shaped the Earth, surface erosion stripped off younger rock layers. Except for isolated remnants, today's major formations are salmon-colored Entrada Sandstone, in which most arches form, and buff-colored Navajo Sandstone. They stand like a layer cake over most of the park. Over time water seeped into superficial cracks, joints, and folds. Ice formed in the fissures, expanding and pressuring the rock, breaking off bits and pieces. Wind later cleaned out the loose parti-

cles, leaving a series of free-standing fins. Wind and water then attacked these fins until the cementing material in some gave way and chunks of rock tumbled out. Many of these damaged fins collapsed. Others, hard enough and balanced, survived despite missing sections. These became the famous arches. Pothole arches are formed by chemical weathering as water collects in natural depressions and then eventually cuts through to the layer below. This is the geologic story of Arches National Park—probably. The evidence is largely circumstantial.

Much More Life Than Meets the Eye

Park Plants and Wildlife Pinyon and gnarled juniper trees add a splash of green contrast to the red sandstone terrain. When conditions are just right, wildflowers bloom in profusion from April to July. Most mammals are active at night, but you might see mule deer, kit foxes, or more often jackrabbits and cottontails, kangaroo rats and other rodents, and small reptiles. Flocks of blue pinyon jays chatter in tree tops. Migratory birds like mountain bluebirds and residents like golden eagles are seen by careful observers.

Help Preserve Biological Soil Crust Biological soil crust is alive, so watch your step! Once called cryptobiotic soil, this dark crust covers much of the untrammelled desert. Composed of cyanobacteria, lichen, algae, and fungi, it combats erosion, absorbs moisture, and provides nitrogen and other nutrients for plant growth. Avoid crushing these life-giving organisms. Stay on the trails. Without these crusts many larger plants could not survive, and if plants go, so do animals. The desert could lose much of the life that makes it magical.

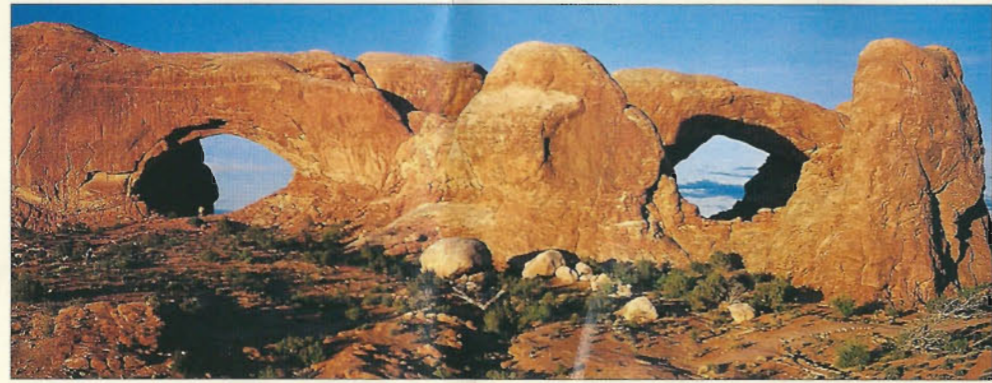


Common raven



Collared lizard

Exploring Arches



North Window and South Window

Arches National Park is a great family park with foot trails to many features. You can see a lot from a car, but the special aura of time, silence, and scale may elude you unless you walk, too. Stop at the visitor center for advice on how to use your time well. Watch the orientation film, see the exhibits, and browse the publications, maps, and other sales items. A self-guiding booklet and audio tour for the drive are available. In season, naturalists lead Fiery Furnace walks—check www.nps.gov/arch or at the visitor center for information on this hike and on other ranger-guided programs. There are no

food or lodging facilities in the park; Moab offers full visitor services just south of the park.

Devils Garden Campground, open all year, has 52 sites and centrally located flush toilets and water. Two group sites (tents-only, no RVs) are for groups of 11 or more. Reservations for some individual sites and both group sites must be made at least four days in advance. Park staff cannot make reservations for you and cannot tell you what dates are available. For details on how to reserve sites, visit www.nps.gov/arch or call the park information line at 435-719-2299.

Trail	Length	Description
Trail distances are round-trip, unless otherwise noted. Trails are listed from south to north (see map).		
Park Avenue (one way)	1.0 mi/1.6 km	Moderately easy; short hill leads to smooth rock canyon bottom; tall walls, balanced rocks.
Balanced Rock (loop)	0.3 mi/0.5 km	Easy walk around the base of Balanced Rock.
Windows (loop)	1.0 mi/1.6 km	Easy to North and South Windows and Turret Arch; 0.7 mile/1.1 km. Complete loop, for view of both windows, is more strenuous.
Double Arch	0.5 mi/0.8 km	Easy trail through some loose sand; spectacular arch.
Delicate Arch	3.0 mi/4.8 km	Elevation gain of 480 feet/146 meters; no shade—take at least one quart of water per person! Open slickrock with some exposure to heights. Best at sunset.
Delicate Arch Viewpoints		Reach base of arch only on Delicate Arch trail.
Lower Viewpoint	100yds/91m	Surfaced trail, distant view of arch.
Upper Viewpoint	0.5 mi/0.8 km	Rocky, uphill route to top of nearby ridge.
Sand Dune Arch	0.3 mi/0.5 km	Easy trail that is great for kids!
Broken Arch	1.3 mi/2.1 km	Easy trail across open grassland.
Skyline Arch	0.4 mi/0.6 km	Moderate walk over rocks to closer view of arch.
Devils Garden Area		
Landscape Arch	1.6 mi/2.6 km	Moderately easy with some elevation gain; gravel surface. Short side trips to Tunnel and Pine Tree arches.
Double O Arch	4.2 mi/6.8 km	Difficult with many short elevation changes, rocky footing, some exposure to heights. Short side trips to Navajo and Partition arches.
Primitive loop from Double O Arch to Landscape Arch	2.2 mi/3.5 km	Difficult low route through fins; short section of smooth slickrock; slippery when wet. Side trip to Private Arch.
Tower Arch	3.4 mi/5.5 km	Moderately difficult in remote section of Klondike Bluffs. Some sand and elevation changes.

For Your Safety Both climate and landscape at Arches pose special problems for your safety and convenience. Summer daytime temperatures can reach 110°F (43°C). Carry at least one gallon (four liters) of water per person per day. Heat and dehydration can be fatal.

Sandstone is dangerous—it crumbles and breaks easily. It is easier to climb up than down; don't get stranded. Rock climbing is permitted in the park, but it is prohibited on most features named on USGS maps. Ask for details on the current closures.

Gathering wood is prohibited. Bring fuel for the grills (provided), or bring a stove. Carry out all trash, even cigarette butts.

Firearms You are responsible for knowing firearm regulations, which vary by state.

Pets Pets are allowed only on park roads, in parking lots, or in your campsite but must be physically restrained at all times. Pets are not permitted on or off trails, in the backcountry, or in buildings. Unattended pets in vehicles on hot days can quickly die from heat exhaustion.

Backcountry Use Backcountry overnight hikers must get a permit at the visitor center. There are no designated backcountry trails or campsites. Low-impact camping techniques are essential. You must carry all your water. No fires are allowed.

More Information Arches National Park, P.O. Box 907, Moab, UT 84532-0907, 435-719-2299 (voice), 435-719-2319 (TTY), www.nps.gov/arch

Drivers: Roads are narrow and winding. Don't stop in the road; sightsee at the viewpoints. Watch for pedestrians and bicyclists. Keep a safe passing distance (3 feet/1 meter minimum). Vehicles must stay on designated roads.

Accessibility The visitor center and its restrooms are wheelchair-accessible. Ask about accessibility on trails, at other restrooms, and in the campground. Service animals welcome.

Regulations All federal and state laws are strictly enforced. Everything in the park—plants, animals, rocks, and cultural resources—is protected and must be left undisturbed for future visitors. No hunting is permitted.

Bicycles are allowed only on designated roads; do not take them on trails or in the backcountry. Ride single file.

