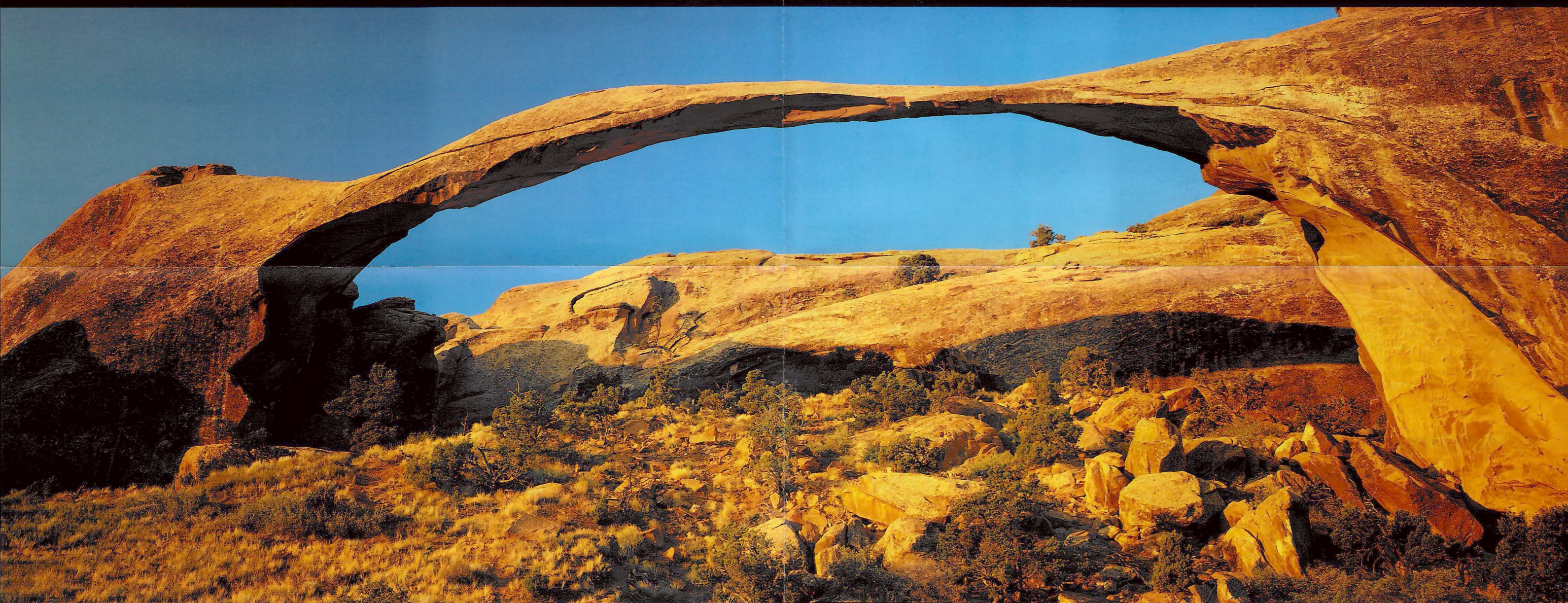




Landscape Arch

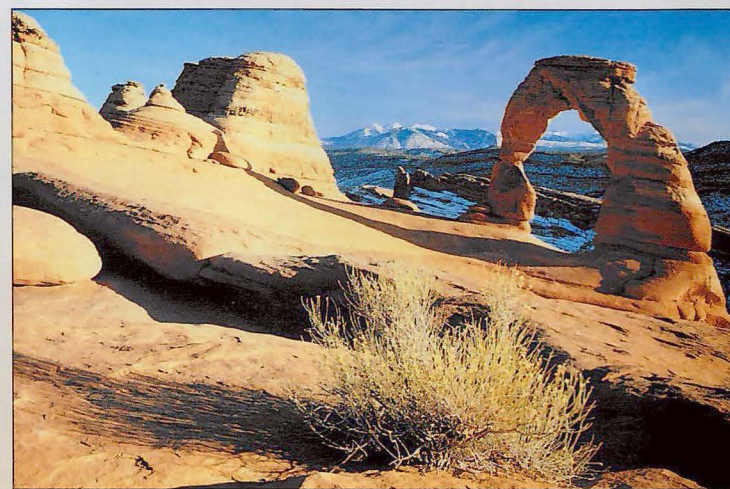
© TOM TILL

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. While several large arches are visible from the road, towering spires, pinnacles, and balanced rocks—perched atop seemingly inadequate bases—vie with the arches as scenic spectacles here.

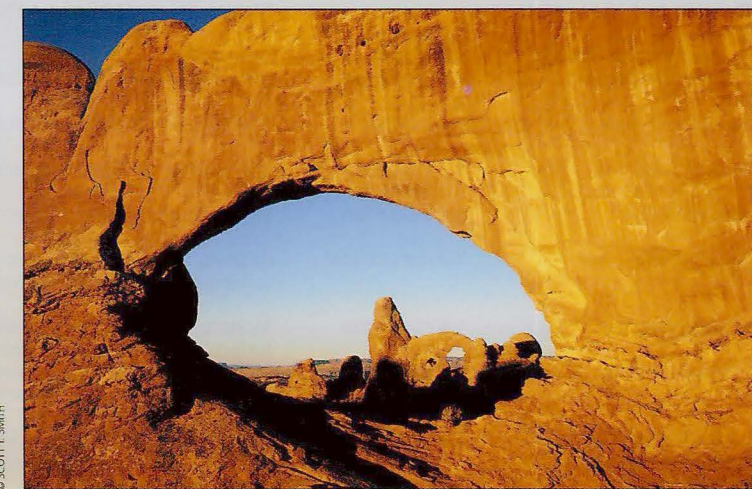
Today new features are being formed as old ones are destroyed. Erosion and weathering work slowly but relentlessly, creating dynamic landforms that gradually change through time. Change sometimes occurs more dramatically. In 1991 a rock slab 60 feet long, 11 feet wide, and four feet

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.

Native Americans 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-native explorers came looking for wealth in mineral forms. Ranchers found abundant 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

© TOM TILL

The Story Geologists Tell



NPS / BILL VON ALLMEN

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 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 freestanding 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, harder and better 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 Arches National Park's geologic story—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 profusely from April to July. Most mammals are active at night, but you might see mule deer, kit foxes, or more often jack-rabbits 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.

Protect Desert Life By Staying On Trails

Desert soils may appear barren, but they teem with living organisms that bind loose, fragile soils together so they can support plant and animal life. These organism-rich soils are a critical part of the ecosystem in canyon country. Called "biological soils crusts," they prevent erosion, absorb water, and provide vital nutrients to plants. This community of cyanobacteria, lichen, algae, and fungi grows extremely slowly. A single foot-step can destroy hundreds of years of growth.



NPS / GREG HARLIN

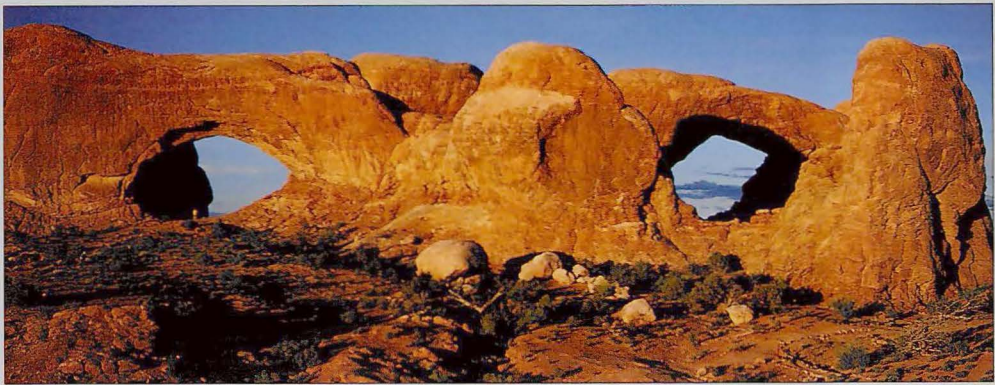
Common raven



Collared lizard

© GREEN ANTIQUARIAN

Exploring Arches



North Window and South Window

Arches National Park is a great family park where you can walk to many features. You can see much from a car, but the special aura of time, silence, and scale may elude you.

Stop at the visitor center for advice. Watch the orientation film, see the exhibits, and browse the publications, maps, and other sales items. A self-guiding audio tour is available. Ranger programs are offered seasonally. For more information check www.nps.gov/arch or ask at the visitor center.

The park has no food or lodging facilities. Moab, just south of the park, offers full visitor services. Devils Garden Campground, open all year, has 52 sites, water, and flush toilets. Two group sites (tents only, no RVs) are for groups of 11 or more. Reservations for individual sites and both group sites must be made at least six months 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 roundtrip unless otherwise noted. Trails are listed from south to north (see map).		
Park Avenue (one way)	1.0 mi/1.6 km	Moderate; short hill leads to smooth rock canyon bottom; tall walls, balanced rocks.
Balanced Rock	0.3 mi/0.5 km	Easy walk around the base of Balanced Rock.
Windows Trail	1.0 mi/1.6 km	Easy trail to North and South Windows and Turret Arch; 0.7 mi/1.1 km. Alternate return with primitive trail is slightly longer and more difficult.
Double Arch	0.5 mi/0.8 km	Easy trail through some loose sand; spectacular arch.
Delicate Arch	3.0 mi/4.8 km	Difficult trail with elevation gain of 480 ft/146m; no shade—take at least one quart of water per person. Open slickrock with some exposure to heights.
Delicate Arch Viewpoints		Distant views of Delicate Arch.
Lower Viewpoint	100 yds/91 m	Easy walk.
Upper Viewpoint	0.5 mi/0.8 km	Moderately difficult, rocky uphill route.
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	Easy walk over rocks to closer view of arch.
Devils Garden Trail	7.2 mi/11.6 km	Difficult. Longest of the trails. Includes Double O Arch, Landscape Arch, and primitive trail.
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 trail from Double O Arch to Landscape Arch	2.2 mi/3.5 km	Difficult 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). Heat and dehydration can be fatal. Carry at least one gallon (four liters) of water per person per day.

Sandstone is dangerous—it crumbles and breaks easily. It is easier to climb up than down; don't get stranded.

Driving Park roads are narrow and winding. Don't stop in the road; sightsee at viewpoints. Watch for pedestrians and bicyclists. Keep a safe passing distance (at least 3 ft/1 m). Stay on designated roads.

Bicycles Ride single file and only on designated roads; do not ride on trails or in backcountry.

Accessibility We strive to make our facilities, services, and programs accessible to all; call or check our website.

Regulations All federal and state laws are strictly enforced. • Federal law protects animals, plants, rocks, and other natural or historic features. • Launching, operating, or landing an unmanned aircraft, such as a drone, is prohibited. • Do not scratch or carve rock. • Do not forage for firewood. Bring fuel (grills provided) or bring a stove. • Carry out all trash, even cigarette butts. • No hunting.

• Get information and free rock climbing and canyoneering permits online or at the visitor center. • Do not walk or climb on arches.

Firearms For regulations check the park website.

Pets are allowed on park roads, in parking lots, or in your campsite but must be leashed at all times. Pets are not permitted on or off trails, in the backcountry, or in buildings. Pets left unattended in vehicles on hot days can quickly die from the heat.

Backcountry Use Backcountry overnight hikers must get permits at the visitor center. The backcountry has no designated trails or campsites.

Use low-impact camping techniques. Carry all your water. • Fires are prohibited.

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

Arches National Park is one of over 400 parks in the National Park System. To learn more about parks and National Park Service programs in America's communities, visit www.nps.gov.

Emergencies call 911

National Park Foundation. Join the park community. www.nationalparks.org

