



VOL. ONE • NO. FIVE

Visitor Guide

BRING THIS WITH YOU TO VISITOR CENTER

2003

Nature's Windows on Time and Circumstance

Time is a precious commodity to humans. It is the thing we must have if we are to have anything else. Little ticks of it relentlessly, ruthlessly escape us and we keep a wary eye on the balance.

Earth, on the other hand, has a vault of time vast beyond our imaginings: plenty of time for the imperceptible. Three hundred million years of unhurried incremental change led up to the landscape we celebrate in this national park today—hundreds of arches and windows opened in stone, large and small, alone and in close proximity to one another. They are in all stages of development, nascent to collapse, and diverse in design.

Perhaps it is ironic that these openings, the product of so much earth history, are themselves almost ephemeral by comparison. No geologic feature is “permanent.” The earth itself is a somewhat spherical molten ball encrusted in a thin rock rind that is continually in motion. Motion (no matter how slow or small) means change (no matter how slow or small).

Our arches and windows form in sandstone. Think of it exactly as its name implies: grains of sand cemented together to form rock, eminently susceptible to erosion, mostly by water and gravity collapse. In one of many arch-making processes, a small amount of undercutting at the base of one of the characteristic rock fins can allow flakes of stone to fall away, eventually forming an alcove; continued spalling breaks through the alcove, leaving an arch. Naturally, the openings framed by arches of stone continue to enlarge, sometimes slowly, sometimes by great leaps. In 1940 Skyline Arch's opening doubled in size in one swoop. In 1991 a 70-foot-long slab fell from the underside of Landscape Arch's 306-foot span.

Arches are not final products. At some point, they will collapse. Landforms are working toward the ultimate compromise



with gravity: equilibrium. Everything wants to be in repose. This made-by-nature statuary has taken from hundreds to thousands of years to develop. In a few hundreds or thousands of years it will again be dispersed grains of sand. Our good fortune

is to be at the right place (Arches National Park) at the right time (now). Keep an eye on the ground and you will soon witness nature's ongoing work. Perhaps you'll see the tiny crater made by a raindrop falling on desert sand. If you're lucky you'll see storm waters gather until they spill over canyon rims and roil down arroyos, carrying debris toward a resting place.

The beauty of canyon country is that nature makes itself gloriously apparent and our connection with it freely sensed. Among these towering monoliths and open spaces, it is easy to feel folded to the heart of our planet. We are, after all, part of the family.

“Time is a sort of river of passing events ... no sooner is a thing brought into sight than it is swept by and another takes its place, and this too will be swept away.”

— Said a long time ago by Marcus Aurelius (A.D. 121 – 180)

HOW DO I GET TO ARCHES NATIONAL PARK?

Arches National Park is located in southeast Utah.



- 5 miles north of Moab
- 110 miles southwest of Grand Junction, Colorado
- 236 miles south of Salt Lake City, Utah
- 360 miles southwest of Denver, Colorado
- 350 miles north of Grand Canyon National Park's South Rim

Commercial airlines serve Grand Junction and Salt Lake City. From Salt Lake City, a **commuter airline** serves Moab. Nationwide **bus** service is available to Green River (fifty miles from Moab) and Crescent Junction (thirty miles away). **Taxi and shuttle** service can be arranged. ARK Bighorn Express (van shuttle) runs between Salt Lake City and Moab, Blanding, and points in between. Reservations required. For reservations and schedule, call (888) 655-7433 or see www.GoArk.com. For additional information on transportation arrangements, contact the Grand County Travel Council, P.O. Box 550, Moab, UT 84532, (800) 635-MOAB.

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The Park(ing) Experience

Some days at Arches, it's like downtown in the big city — you can't find a parking space! As annual visitation climbs closer to one million, parking lots (as well as restrooms and trails) have not been able to keep up with demand. Problems used to occur only on busy holiday weekends like Memorial Day and during Easter week. Now there is congestion from mid-March through October!

As numbers of visitors increase, people have begun to park in marginal areas — places that damage plants and the road surface itself. Visitors are endangered by vehicles parked on curves or too close to the road. And yes, some people even park *in* the road!

Part of protecting these natural and social resources involves controlling parking. No longer can visitors park just anywhere there seems to be space, as in the past. If you stop in a No Parking zone, we might even give you a citation.

Please park in established lots only. We're trying to make it obvious where it is legal to park and where it's not. If you have any doubt, don't park there. Before 9 A.M. and after 7 P.M. are the easiest times to find parking places (and cooler in summer!). Help keep Arches different than the big city!

... And Now for the Social Side

You have probably heard about natural resources: plants, soils, air, water, animals. At Arches we are also concerned about social resources: issues of solitude, crowding, visitors' acceptance of natural resource damage, what makes a visitor's experience enjoyable.

IN YOUR VIEW: At what point are there too many people, so many that you aren't enjoying yourself?

When does it get so bad that you leave?


What restrictions, if any, are you willing to tolerate, to ensure that it never gets that crowded?

In Visitor Experience and Resource Protection (VERP) surveys, we are asking these and other questions of our visitors as we monitor both our social and natural resource conditions. You may be asked to participate in a VERP survey during your visit. Please take the time — we need your input! Our ultimate goal is to ensure that the natural and social resources are protected and that your stay is satisfying.

Arches Visitor Guide

Published by
Canyonlands Natural History
Association

To protect our environment, some countries restrict the printing industry's use of pollutants. CNHA prints only with companies that follow these guidelines. We use recycled paper stock that is as free of harmful chemicals as current technology allows. We encourage our suppliers to respect the environment and use natural resources wisely.

 Please recycle this paper!

GENERAL INFORMATION

CAMPING

Wood gathering and ground fires are prohibited in the park; bring your own wood or charcoal for the grills.

Devils Garden campground, open year round, \$10 per night fee, is eighteen miles from the park entrance. Campsites are available on a first-come, first-served basis. Facilities include tables, grills, and flush toilets. **Between mid March and late October**, you must pre-register at the visitor center before proceeding to the campground. During those months, the campground fills daily, often by 10 A.M.; plan to arrive early. **Between late October and mid March**, pre-registration is not required.

Two **group tent sites** are available by reservation for eleven people or more: Juniper Basin campsite can accommodate up to fifty-five people; Canyon Wren campsite, up to thirty-five. The group camping fee is \$3 per person per night, with a \$33 per night minimum. No recreational vehicles or trailers are permitted in group sites. Reservations for group campsites are accepted beginning on the first working day of January for that calendar year. Reservations are accepted only by mail or fax, and must be received at least two weeks in advance of a trip. You will receive a response by mail. Mail your request to: **Reservations Office, 2282 South West Resource Boulevard, Moab, Utah 84532 or FAX it to (435) 259-4285.**

All reservation requests must include your name, address, telephone number, the dates desired, number of people expected, and your \$15 reservation fee payment. Fees may be paid by VISA, Mastercard, money order, or check made payable to National Park Service.

Reservation office staff are available by telephone to answer questions and assist with trip planning Monday through Friday, 8 A.M. to 12:30 P.M. (MT), at (435) 259-4351. Be aware that this line is often busy, and a fax may be as efficient. Reservations may not be made over the telephone.

RANGER-GUIDED ACTIVITIES

Rangers offer a variety of guided activities from April through October. Check at the visitor center or on any park bulletin board for specific times and locations.

Fiery Furnace Walks — From April through October, rangers lead walks into the Fiery Furnace twice each day. Walks are moderately strenuous, last 2½ to 3 hours, and traverse a maze of sandstone fins and cool, shady canyons. There is no trail, so you are encouraged to accompany a ranger — both for your own safety and to diminish impacts on natural systems. Group size is limited, and these popular walks often fill a day or two in advance. **Make your reservation and pay your fee** at the visitor center no more than seven days in advance of the walk, and for groups of no more than ten people. (Larger groups can request a special tour; a minimum of four weeks' notice is advised.)

Guided Walks — Rangers lead easy, one-hour walks each day at different locations throughout the park between early April and late October.

Evening Programs — Join a ranger at the Devils Garden campground amphitheater (next to Canyon Wren group campsite and across the road from campsite #25) nightly from April through October. Talks last about forty-five minutes, and cover a wide variety of topics, with titles such as "The Bird That Saved the World," "Mines, Minerals and Mayhem," and "Nature Framed: Canyon Country through Hollywood's Lens." Starting times vary through the season.

COMMERCIAL TOURS

There are a few privately operated tour companies authorized by the National Park Service to provide visitors with guided trips into the park. For backcountry vehicle tours, contact:

Canyonlands Tours (North American River Expeditions), 543 N. Main, P.O. Box 1107, Moab, UT 84532; (800) 342-5938; (435) 259-5865;

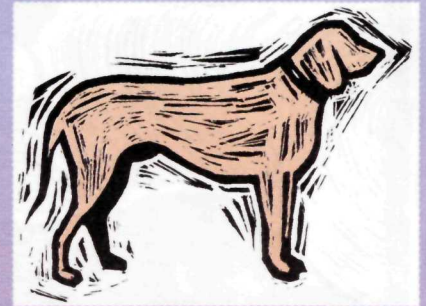
Navtec Expeditions, 321 N. Main, Moab, UT 84532; (800) 833-1278; (435) 259-7983; (435) 259-5823 fax; www.navtec.com.

Tag-A-Long Expeditions, 452 N. Main, Moab, UT 84532; (800) 453-3292; (435) 259-8946.

FOR MORE INFORMATION

For more *park* information, contact the Superintendent, P.O. Box 907, Moab, UT 84532, or call (435) 719-2299 (voice) or (435) 719-2319 (TTY). Also, check out our website at www.nps.gov/arch.

Moab, UT, five miles south of the park, offers lodging, restaurants, fuel, stores and other services. There are no facilities or services within the park. For information about facilities and services *outside the park* contact the Grand County Travel Council, P.O. Box 550, Moab, UT 84532, or call (800) 635-MOAB.



Can Chico Come to Arches??

During her long drive to Arches, Susie had been anticipating a fun hike with her dog, Chico. She was so excited to get out of the car and walk that she overlooked the sign that read NO PETS. Susie let Chico run free, off leash, and as Chico romped, chunks of fragile cryptobiotic crust flew. He then left some urine marks and a few droppings. Susie was concerned when he disappeared for awhile; but, boy, he sure had a good time chasing that rabbit! The porcupine was another story, and the quills in his nose hurt even more than the cactus spines in his feet. Susie's work was cut out for her when he returned.

Such scenarios have made it necessary for pets to be prohibited from the backcountry as well as on trails in Arches. Pets must be leashed at all times and may be walked only on roads or in parking lots. They may not be left unattended (except in a paid-for campsite in the Devils Garden campground, where they must not cause a disturbance). For your pets' safety, do not leave them in vehicles when outside temperatures are above 65°F. They can die of heat exhaustion in a very short time.

Visitors with pets need not fret!

Three kennels with boarding services are in Moab:

Karen's Canine Campground,
2781 S. Roberts
(435) 259-7922

Moab Veterinary Clinic,
4575 Spanish Valley Drive,
(435) 259-8710

Personal Touch Kennels,
(435) 259-6380,
(435) 259-8929

Spanish Valley Veterinary Clinic,
1428 Spanish Valley Drive,
(435) 259-5216

Nearby, there are vast public lands that offer great hiking and do allow pets on trails. We recommend that you keep your pet on a leash, even on public lands, to avoid uncomfortable encounters with wildlife and to prevent resource damage.

FEE DEMONSTRATION PROGRAM

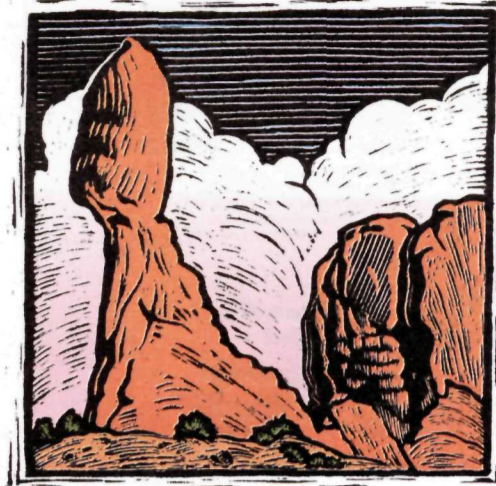
In 1996 Congress passed a three-year pilot program for a hundred parks, Arches among them, that authorized them to collect new or higher entrance and activity fees. The program has been reauthorized three times, expanding it to all National Park Service sites through the year 2003. Eighty percent of the fees will remain in those parks (formerly all fees went to the U.S. Treasury's general fund) to be used for visitor services and park infrastructure. The maintenance backlog in parks is a high priority of the current administration.

ENTRANCE FEES

Here at Arches National Park, entrance fees are now \$10 per vehicle for a seven-day pass and \$5 for bicyclists, those



Trail work at North Window.



walking or on motorcycles. The following special passes are also available. Any pass may be used only by the purchaser; they are not transferable.

Pass for Arches and Canyonlands National Parks, Hovenweep and Natural Bridges National Monuments — \$25, good for twelve months; available to anyone; entrance to these four areas only.

Golden Eagle Pass — \$65, good for twelve months; available to anyone; entrance to all federal fee areas.

National Parks Pass — \$50, good for twelve months, available to anyone; entrance to all national parks.

Golden Age Passport — \$10, lifetime pass for U.S. citizens sixty-two years of age and older; entrance to all federal fee areas plus 50 percent

discount on camping, activity fees, and other special user fees.

Golden Access Passport — free, lifetime pass for permanently disabled U.S. citizens; entrance to all federal fee areas plus 50 percent discount on camping, activity fees, and other special user fees.

ACTIVITY FEES

Fees charged for the popular ranger-guided Fiery Furnace walks will go directly to supporting the program. The cost is \$8 for adults; \$4 for children six to twelve years old and Golden Age card holders. Reservations are required; make them at the visitor center.

THIS NEW REVENUE IS BEING USED FOR THE FOLLOWING PROJECTS AT ARCHES:

- Rehabilitation of the Wolfe Ranch cabin and root cellar,
- Completion of the Balanced Rock Trail,
- New water and sewer system at the Devils Garden Campground,
- Work on the Devils Garden trailhead parking area,
- Installation of park boundary fence to prevent cattle trespass, and
- Road maintenance and safety improvements.

Congress is interested in your comments regarding the Fee Demonstration Program. Comment forms are available at the Arches Visitor Center.

Hey Kids — This One's For You!

Tired of just sitting in the car, looking at that stuff adults call scenery?



Do you want to know more about Arches and help protect the park?

Then the Junior Ranger program is for you!

If you are between the ages of six and twelve, and you are planning to spend at least one day in Arches, pick up a Junior Ranger booklet at the visitor center. You must complete several activities in the booklet, like word games, drawings and fill-in-the-blanks about why you shouldn't chase or catch lizards. You must also gather a bag of litter or bring twenty aluminum cans to be recycled and attend a ranger program or watch the slide program at the visitor center. It's that simple! Then you can pick up your badge at the visitor center.

Becoming a Junior Ranger is a serious and important task, but it's lots of fun too! Check it out!



Photography at Arches

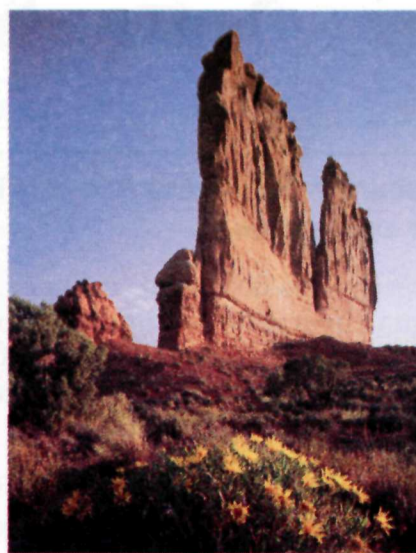
The first time someone asked me about the best place to photograph the sunset, I advised, "Well, most folks would say up at Delicate Arch." Though that information was accurate, and that person probably came away with a memorable photo, I've since come to feel that I could have conveyed more. Read on.

Composition is one of the first ways to improve those photographs. Look at a really good photograph and you'll find the subject is placed off-center, and probably falls along the imaginary line that connects the opposite corners of the frame. Or, imagine a grid in your viewfinder that sections the frame into thirds top to bottom and right to left. Now, place your subject at the intersection of a horizontal line and a vertical line. That's called the Rule of Thirds, and it's a good one to follow. Place a foreground subject on one of those intersections and a background subject on the opposite intersection, and you may find that friends start asking for copies of your photos.

Fill that frame! If your subject fills only 10 percent of the picture, the other 90 percent probably is wasted on uninteresting matter — not the making of a high-quality shot. If you need to move in closer, do it. You might want to get a zoom lens or a longer focal length lens.

Eliminate unnecessary objects. See what your lens sees. Is there a yucca plant that seems to be sticking out of the top of someone's head? Is the red car in the background more obvious than the kids in front of the arch? Have you included too many points of interest, to the detriment of them all? Basic rule: Keep it simple.

A photograph is not about an object, it is about light on an object. The best photographic light occurs early in the morning and late in the afternoon, as the lower angle of light gives your subject depth and a greater sense of reality. The warmth of the light deepens the redness of the rock into amazing hues, the very reason this land is often called "color country."



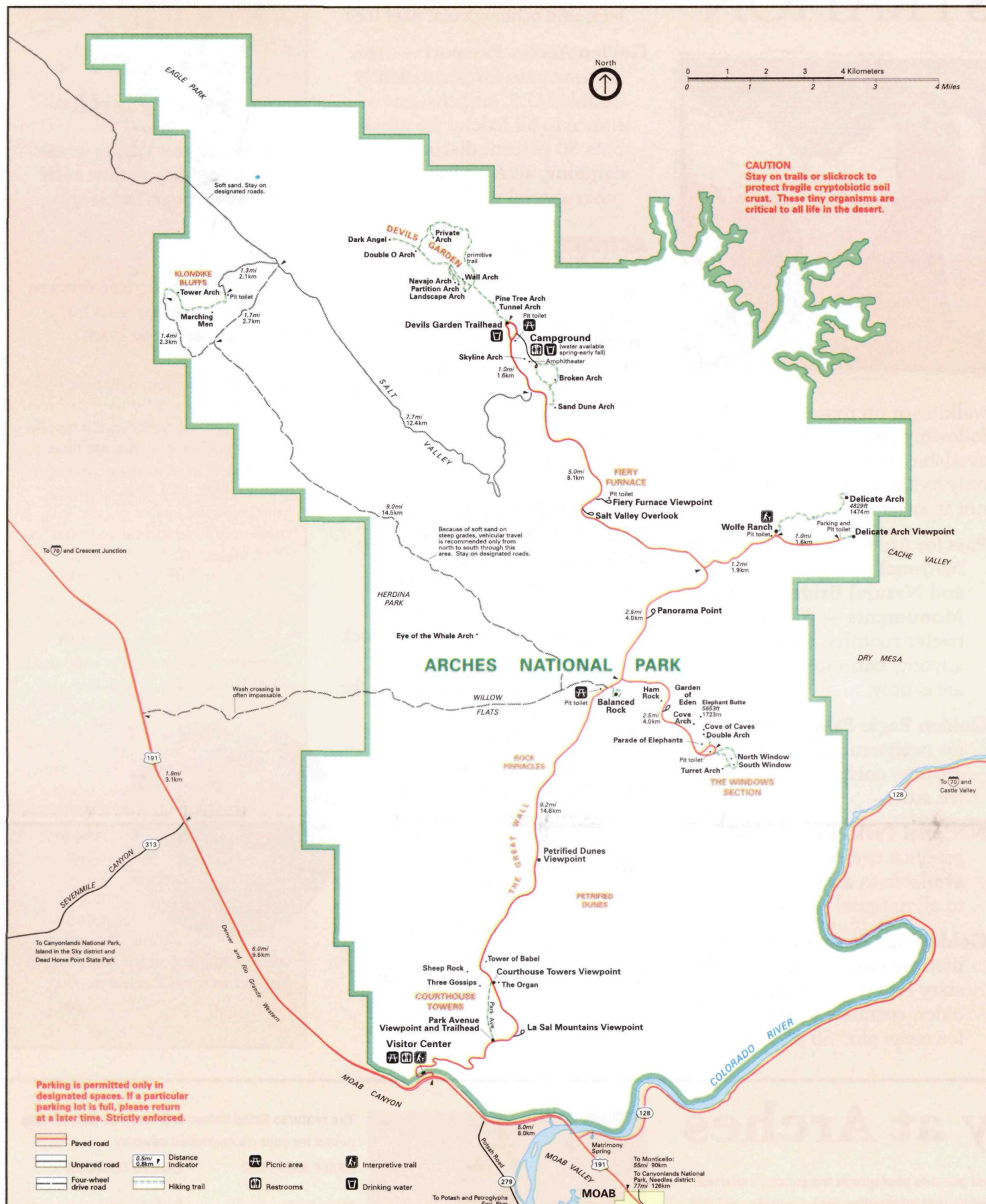
The features listed below will serve as fine starting points for your photographic odyssey.

EARLY MORNING	LATE AFTERNOON
Moab Fault	Park Avenue
The Three Gossips	Courthouse Towers
Sheep Rock	Petrified Dunes
The Great Wall	Balanced Rock
Turret Arch	The Garden of Eden
The Spectacles	North and South Windows
Double Arch	Delicate Arch
Cache Valley	Fiery Furnace
Wolfe Ranch	Skyline Arch
Landscape Arch	Fins in Devils Garden
Double O Arch	Tower Arch

Those places should keep your eyes — and shutter fingers — busy, but remember, they are just the starting points. Countless other opportunities will present themselves if you keep an open mind and simply respond to that place *within you* that says, "Wow, look at that!"

This land is every bit as fragile as it is beautiful. If you step off the trail or away from the pullout, you may injure our living land. When cryptobiotic crust is damaged, it can take centuries (literally) to heal. Allow others who'll be inspired by your photos to come and see this land as Nature intended: organic and alive.

HIKING TRAILS



Do you have more than two or three hours to see Arches National Park? If so, TAKE A HIKE! There are a variety of trails to guide you in your exploration.

ESSENTIALS • Each year, park rangers respond to dozens of search or rescue incidents in the park, many of which involve heat exhaustion and/or dehydration or improper footwear. Always carry (and drink) water! Even the shortest stroll will make you thirsty on a 100°F (38°C) day. One gallon (4 liters) per person per day is recommended for longer hikes. Water is available **only** at the visitor center and at Devils Garden.

- ♦ Wear sturdy shoes with enough tread to give you good traction. Do not hike in leather-soled shoes or boots. Some trails cover uneven terrain and follow rock ledges.
- ♦ Protect your skin with a hat, long-sleeved shirt, and sunscreen! There is little shade in the desert. The sun is intense year round and can easily burn your skin, especially in the summer.

HIKING ETIQUETTE • Stay on established trails: Follow the rock cairns. Help protect the fragile cryptobiotic crust and other vegetation in our desert environment. Leave no trace: Move like a shadow — and please take out the trash, even if it isn't yours.

PETS AND BICYCLES ARE NOT PERMITTED ON HIKING TRAILS.

EASY TRAILS

Desert Nature Trail

Start: Arches Visitor Center
Length: 0.2 mile (0.3 km) round trip
Time: 15 to 30 minutes
 Discover the adaptations of plants and animals in the desert on a self-guided nature walk. Trail guide available at the trailhead.

Balanced Rock

Start: Balanced Rock parking area
Length: 0.3 mile (0.5 km) round trip
Time: 15 to 30 minutes
 A loop trail at the base of fragile, picturesque rock formation.

The Windows

Start: Windows parking area
Length: 1 mile (1.6 km) round trip
Time: 30 to 60 minutes
 A gentle climb up a gravel loop trail leads to three massive arches (North and South Windows and Turret Arch). An alternate return, slightly longer, is by way of the primitive loop around the back of the two Windows. The primitive loop trail starts at the South Window viewpoint.

**Double Arch**

Start: Double Arch parking area
Length: 0.5 mile (0.8 km) round trip
Time: 15 to 30 minutes
 A relatively flat, sandy trail leads to the base of two giant arch spans which are joined at one end.

Delicate Arch Viewpoint

Start: Delicate Arch Viewpoint parking area
Length: 100 yards (91 meters) round trip
Time: 10 to 15 minutes
 In addition to the short accessible trail, another (moderately strenuous) hiking trail climbs 0.5 mile (0.8 km) toward Delicate Arch and ends at the rim of a steep canyon that separates the viewpoint from the arch. (This is not the popular trail to Delicate Arch, which starts at the Wolfe Ranch parking area.)

Sand Dune Arch

Start: Sand Dune Arch parking area
Length: 0.4 mile (0.6 km) round trip
Time: 15 to 30 minutes
 Trail leads through deep sand to a secluded arch among sandstone fins. **DO NOT CLIMB OR JUMP OFF THE ARCH.**

Broken Arch

Start: Sand Dune Arch parking area or Devils Garden campground across from campsite #40
Length: 1.2 miles (2 km) round trip; 2 miles (3.2 km) including the loop

HIKING TRAILS

Time: 30 to 60 minutes

From the Sand Dune Arch parking area, the trail cuts across a large meadow to the arch and continues to the campground. Loop trail leads through fin canyons with sand dunes and slickrock.

Skyline Arch

Start: Skyline Arch parking area
Length: 0.4 mile (0.6 km) round trip
Time: 10 to 20 minutes
 A short hike on a flat, well-defined trail. On a cold November night in 1940, a large chunk fell out of the arch, instantly doubling the size of its opening.

Landscape Arch

Start: Devils Garden trailhead parking area
Length: 2 miles (3.2 km) round trip
Time: 30 to 60 minutes
 A relatively flat, gravel-surfaced trail (usually heavily populated with hikers) leads to a spectacular ribbon of rock, whose span is more than a football field in length. Short side trips to Tunnel and Pine Tree Arches. Trail guide available at trailhead.

MODERATE TRAILS

Park Avenue

Start: Park Avenue parking area
End: Courthouse Towers parking area
Length: 1 mile (1.6 km) one way
Time: 30 to 60 minutes
Elevation change: 320 feet (98 meters)
 From Park Avenue parking area, the trail descends steeply into a spectacular canyon and continues down the wash to Courthouse Towers. If you have a shuttle driver, you can begin at one point and be picked up at the other. For round-trip hiking, retrace your steps along the trail rather than walk along the park road.



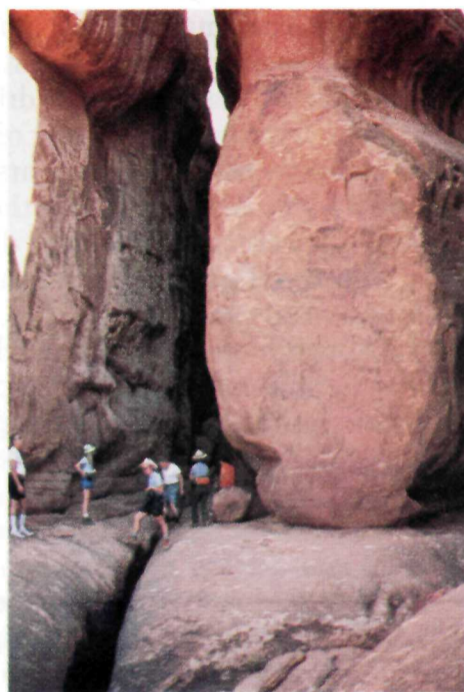
Tower Arch

Start: Klondike Bluffs parking area, via the Salt Valley road
Length: 3.4 miles (5.5 km) round trip
Time: 2 to 3 hours
 The trail climbs a steep, but short, rock wall, cuts across a valley and then meanders through sandstone fins and sand dunes. An alternate, shorter trail (0.3 mile [0.5 km] one way), begins at the end of the four-wheel-drive road on the west side of Tower Arch. This unpaved road washes out quickly in rainstorms; inquire at the visitor center about road conditions before heading out.

STRENUOUS TRAILS

Delicate Arch

Start: Wolfe Ranch parking area
Length: 3 miles (4.8 km) round trip
Time: 2 to 3 hours
Elevation change: 480 feet (146 m)
 Take at least 1 quart (1 liter) of water per person! There is no shade. Open slickrock with some exposure to heights. The first half-mile is a wide, well-defined trail. Upon reaching the slickrock, follow the rock cairns. The trail climbs gradually and levels out toward the top of this rock face. Just before you get to Delicate Arch, the trail goes along a rock ledge for about 200 yards (183 m).

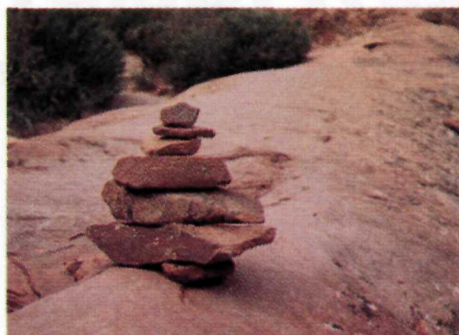


Fiery Furnace (Fee Area)

Any visitor entering the Fiery Furnace must obtain a ticket for a ranger-guided hike or a hiking permit at the visitor center. Guided hikes are offered daily (April through October) through this trail-less area. Reservations are required and tickets must be purchased in person at the visitor center (up to seven days in advance). These popular hikes may fill one to two days in advance. Group size is limited to ten people. If there are more than ten in your group, you may request a special walk. It is recommended that such requests be made four weeks in advance. The Fiery Furnace is a mazelike labyrinth of narrow sandstone canyons. These 2- to 3-hour hikes wind through terrain that occasionally requires the use of hands and feet to scramble up and through narrow cracks and along narrow ledges above drop-offs.

Devils Garden (including primitive loop trail)

Start: Devils Garden Trailhead parking area
Length: 7.2 miles (11.6 km) round trip, including all spur trails to points of interest
Time: 3 to 5 hours
 Longest of the maintained trails in the park, Devils Garden Trail leads to



eight awe-inspiring arches. Expect narrow ledges with rocky surface hiking and scrambling on slickrock. **Not recommended when rock is wet or snowy.** Trail guide available at trailhead.

Double O Arch

Start: Devils Garden Trailhead parking area
Length: 4 miles (6.4 km) round trip
Time: 2 to 3 hours
 Beyond Landscape Arch, the trail becomes more challenging as it climbs over sandstone slabs; footing is rocky; there are narrow ledges with exposure to heights. Spur trails lead to Partition and Navajo Arches. Dark Angel is one-half mile (0.8 km) farther. Trail guide available at trailhead.



For more information on trails in the park, refer to *Hiking Guide:*

Arches National Park or Exploring Canyonlands and Arches National Park. Both are available from Canyonlands Natural History Association at the visitor center. Trail guides for the Desert Nature Trail and Devils Garden Trail are available at the trailheads and the visitor center at a nominal cost.



BE SAFE

Slickrock invites adventure. When you climb or scramble, be sure you can retrace your steps, and remember that it is often easier to go up than down.

Sudden **thunderstorms** with deadly lightning do occur here. The distance of lightning can be calculated by counting the time interval between a lightning flash and the subsequent thunderclap. Sound travels about a mile in five seconds, so if the interval is fifteen seconds (or three miles) or less, you should seek shelter immediately. One of the safest places to be during a thunderstorm is in your vehicle with the windows completely closed. If you are unable to reach your vehicle, go to a low-lying area. Stay away from open areas, high spots or tall objects (such as Delicate Arch), and solitary trees. If your skin tingles or your hair stands on end, signs that a charge is building up, crouch down and place both feet firmly on the ground.

CLIMATE INFORMATION

	Average High Temperature		Average Low Temperature		Average Precipitation	
	F	C	F	C	IN	CM
January	44	7	19	-7	.5	1.3
February	53	12	25	-9	.5	1.3
March	64	18	33	1	.9	2.3
April	76	24	39	4	1.2	3
May	84	29	49	9	1.1	2.8
June	98	36	58	14	.1	.25
July	100	38	62	17	1.2	3
August	99	37	61	16	.8	2
September	86	30	50	10	.8	2
October	77	25	40	4	1.6	4.1
November	58	14	32	0	1.2	3
December	48	9	21	-6	.5	1.3

CRYPTOBIOTIC SOIL CRUST

Arches is a minimalist landscape for the most part: slickrock and stretches of sandy terrain sparsely vegetated with clumps of stiff grass and low-growing, tough-looking shrubs. In some places, the ground around and between the widely spaced plants appears to have large patches of dark, knobby, brittle crust. This same scruffy, apparently dead and dried out rind covers almost 75 percent of the ground surface of the 130,000-square-mile Colorado Plateau. It is called cryptobiotic soil crust, it is very much alive and of great ecological importance. Cryptobiotic soil crust, you may hear it called crypto for short, is made up of cyanobacteria, mosses, soil lichens, green algae, microfungi and bacteria.

Cyanobacteria are the most prevalent and most important component. When filaments of cyanobacteria are moistened, they advance through the soil, leaving sheaths of sticky mucilage on their trail. These gluey filaments bind to soil particles and, over time, can create an erosion-resistant surface. Because cyanobacteria is able to capture nitrogen from the air and convert it to a form that plants can use, it serves as a fertilizer — a truly useful trait in an ecosystem notoriously poor in nitrogen. Calcium, potassium and manganese bind to the sheaths and are made available to plants in usable form. When wet, the sheaths will expand to ten times their dry size, enabling the cryptobiotic soil crust to retain moisture, to its own benefit as well as that of nearby vascular plants.

In this harsh environment, plants need all the help they can get! Cryptobiotic soil crusts provide stable soil, nutrients and moisture. Unfortunately, the interwoven mat of sheath material is easily broken, especially when dry. If you tramp on a well developed patch of crust, you erase decades of growth. Bike and vehicle tracks leave long,



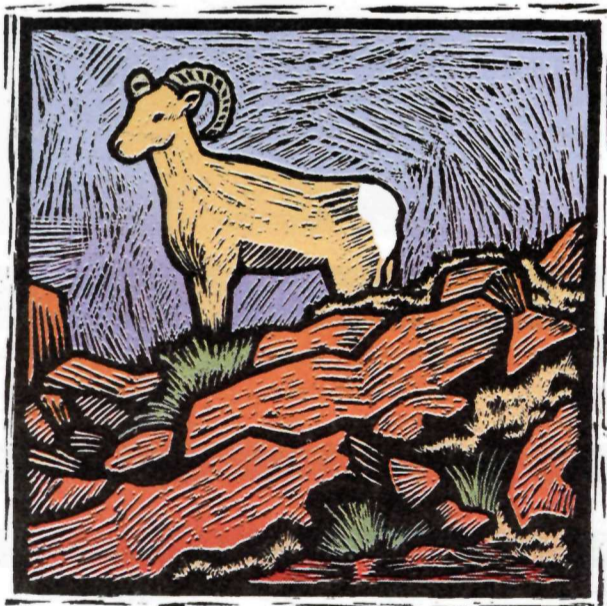
straight strips of damaged crust that are extremely prone to wind and water erosion. Pieces of the damaged crust can also be carried away by the wind. The now loose soil underneath often blows over adjacent undamaged patches of cryptos, preventing

them from receiving sunlight. No sunlight, no photosynthesis, no cryptos. Unstable sandy soils can turn a nearby solidly anchored, crypto-covered "garden" into a drifting sand dune.

Does cryptobiotic soil ever recover? Well . . . sort of. The thin top layer can grow back in a few years. Down where the dead sheath material binds sand grains together, the damage heals much more slowly. It is estimated that for a disturbed area of cryptos to become fully functional again, to do all the wondrous things it can, may take as long as 250 years.

Though mature cryptos quickly become easy to recognize, young crusts are without distinctive coloration or features. To preserve this unique resource, we ask your help. Vehicles and bikes, please remain on designated roads. Hikers, stick to trails or, if walking cross-county, walk only on rock or in drainages. Avoid using "social" (unofficial) trails.

For the sake of the park and other park visitors, please leave no trace of your passage. In many natural areas, visitors are asked to "Take only pictures, leave only footprints." In southeast Utah, you are asked to be even more careful. We all cared enough to seek out this unique place, let's care enough to keep it healthy, beautiful and wild for generations to come.



Animals That Call This Desert Home

The landscape of Arches, for all of its sparseness, provides life's necessities for a variety of animals that have adapted to meet its demands: 65 species of mammals, 190 bird species, 22 reptiles, 9 amphibians, 8 fish, and who knows how many kinds of insects.

Most desert mammals hunt in the early morning and evening hours to avoid the heat of day. About one-third of the area's mammals are rodents — squirrels, packrats, chipmunks, porcupines — and most of these spend daylight hours in burrows. You are most likely to glimpse even desert cottontails and jackrabbits at dawn and dusk. Mule deer are the most commonly seen large mammal in the park, especially in the Devils Garden area. Fawns and weak adults provide a food base for the park's large predators, coyotes and mountain lions.

If you are lucky, you may spot solitary coyotes foraging either day or night. The coyotes' predations help maintain a natural balance among animal populations in the park. Late in the evening, the yips and howls of one

coyote are answered by a coyote chorus singing the tremulous Song of the West. Very rarely are bobcats and mountain lions sighted.

Protection programs within Arches and Canyonlands National Parks have dramatically increased opportunities for visitors to glimpse the magnificent desert bighorn. The Moab Fault Overlook and along Highway 191 near the park entrance are particularly good places to watch for them. During the breeding season (November to January), extremely fortunate observers may see males engage in bouts of head-butting to establish dominance.

Of the lizards, the western whiptail (its tail is twice the length of its body) is most commonly seen. The western collared lizard is the park's most photogenic, with coloring of bright green with a distinctive black collar. It is not often seen, but is very cooperative with photographers.

Some poisonous animals live here: rattlesnakes, scorpions, and black widow spiders. They do not seek you out and will get out of your way if they have a chance. Watch for them, but chances are you will not see any of these fascinating creatures. Even so, always look before you put your feet under ledges, rocks, debris or in any crack, crevice or dark place. Never lay your hand on a surface you cannot first see.

Autopsies Performed on Park Deer

Grand Canyon National Park — When fifteen park deer became so ill that rangers had to shoot them, autopsies were performed in an effort to trace the problem. Every one of these deer had become accustomed to food meant for humans, and their stomachs were filled with, and blocked by, food-associated garbage — packaging, plastic bags, string. They could not digest appropriate browse even when they got it; they were starving.

When animals eat other than their natural foods, they develop nutritional problems that can be fatal. Repeated contact with humans causes them to lose their "wildness." Those that congregate by roadsides where people feed them are often hit by cars.

Aside from the risk to the animals, you may be in danger, too. Coyotes and small rodents are known to bite, and often carry rabies and other diseases.

When you are unable to resist the urge to feed a wild animal, you are contributing to its death. Think about it. Enjoy watching them, but leave them wild.

DO NOT FEED ANIMALS!

MORE INFORMATION

ACCESSIBILITY

Not all park facilities meet mandated standards, but we're always trying to increase accessibility. We would appreciate your comments.

Visitors with mobility impairments can access:

- Visitor Center — ramp and reserved parking;
- Restrooms — throughout the park including the visitor center and Devils Garden;
- Campsite — Devils Garden campground site #37;
- Park Avenue Viewpoint — paved path with slight decline near end;
- Delicate Arch Viewpoint — hard surface; level.
- Balanced Rock Viewpoint — paved surface; level.

Visitors with hearing impairments may call our TTY at (435) 719-2319 to obtain additional information. Leave your number and the best time to reach you, and we'll call you back.

BACKPACKING

Arches is a relatively small park, with very few areas far enough from roads to qualify as "backcountry." Outside the developed visitor area there are no designated trails, campsites, or reliable water sources. If you'd like to backpack, consider nearby places like Canyonlands National Park that offer more extensive backcountry opportunities.

If you do backpack in Arches, you must obtain a backcountry permit at the visitor center. The maximum group size permitted is twelve, but smaller groups are strongly recommended to reduce impacts. You should know how to navigate with a topographic map, recognize safety hazards and practice low-impact camping specific to the Colorado Plateau. Primary safety considerations include rocky, steep terrain; lightning; flash floods; and dehydration. Know how to avoid problems and how to solve them if they occur.

CLIMBING

The rock at Arches offers excellent climbing opportunities in spite of its sandy nature. Most climbing routes in the park require advanced techniques. No permits are required; however, it is your responsibility to know current climbing regulations and route closures, so ask at the visitor center. Climbers are encouraged to employ clean-climbing ethics, leave dull-colored webbing when recovery is impossible, and access climbing routes via established trails, slickrock or sandy washes. The use of white chalk is prohibited; sandstone-colored chalk is available at local climbing shops. For route information, refer to the book *Desert Rock* by Eric Bjornstad (available at local climbing shops or from Canyonlands Natural History Association in the Arches Visitor Center).

BICYCLING

Within the park, bicycles are permitted only on roads, never on hiking trails or off-road. If you ride on the main paved road, be aware of passing cars and motor homes who may not be aware of cyclists! Please ride single file and stay to the edge of the lane. Many of the dirt roads here are sandy or washboarded; however, the Willow Springs road offers an enjoyable two- to three-hour ride.

The most well-known and best biking trails in the Moab area are found on Bureau of Land Management (BLM) land outside of Arches National Park.

EMERGENCY!

Any number of emergency situations can occur while you are visiting a national park: hiking accidents, medical emergencies, motor vehicle accidents; or perhaps you have locked your keys in your vehicle, run out of gas, or have mechanical problems.

If you have an emergency:

- Contact a park employee:** park ranger, campground host, or maintenance person. Many park rangers are trained emergency medical technicians. Law enforcement rangers can investigate vehicle accidents and handle other police matters. They can also take reports of lost hikers, fires, or other emergencies; or
- Go to the visitor center:** If the building is closed, use the pay phones in front of the building to dial 911 (no coin is needed); or
- Go to the campground:** The telephone is at the campground entrance; dial 911 (no coin is needed); or
- Dial 911 on your cell or mobile phone:** You will reach the Grand County Sheriff's Office; they will in turn contact a ranger in the park.

Have a safe and enjoyable visit!

Delicate Sky

Light is fast . . . very fast. Light can circle the earth in less than one-quarter second. If you could see the Eiffel Tower, while you were standing atop Mount Peale in the La Sal Mountains, you would be viewing light that left Paris about 3/100ths of a second before. In one minute, light travels 11.2 million miles. In one year, light travels 5.88 trillion miles. Zoom.

In areas not plagued by light pollution, without a telescope you can see about 2,700 stars. Every one of those stars is in the Milky Way, our own galaxy. In cosmic terms, they are close neighbors. In the northern hemisphere, the brightest star (other than our own Sun) is Sirius, 8 1/2 light years away, or about 51 trillion miles. When you look at Sirius, you are seeing it as it was 8 1/2 years ago.

The Milky Way is a spiral-structured disk that contains an estimated 100 billion stars, and our solar system, revolving around one of those stars, is in one small arm of it. If you started at this very moment to count the stars in the Milky Way at the rate of one per second, it would take you 3,171 years to count them all. You'd be finished in the year 5173.

Scholars estimate that there are more than 100 billion galaxies, each one containing hundreds of billions of stars. Is your mind reeling yet? We can see thousands of those galaxies with amateur telescopes, which are, in essence, time machines. The Andromeda Galaxy, our closest

neighboring galaxy, is more than 2 million light years away. If we want to see what Andromeda looks like right now, we would have to wait 2 million years. In comparison, we would wait only 8.3 minutes to see our Sun as it is right now; it is only 93 million miles away.

Many of us are becoming more aware of the beauty of the night sky, and the darkness necessary to enjoy it fully. Darkness, like many other environmental factors, is a shrinking commodity. Here at Arches, you are in a wonderful place to star gaze; there is less light pollution than near

large cities, and the altitude

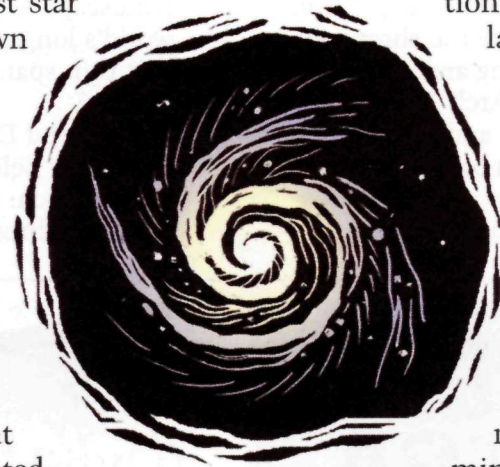
gives us a clear atmosphere.

When you step into the outdoor darkness, your eyes will

need several minutes to adapt.

Then in a sky filled with glimmering stars, you will see the Milky Way as a luminous streak. Binoculars will make thousands more stars visible. The sky changes with the time of day or night or year, and star maps will help you know what to look for and when. The visitor center and Moab Information Center educational sales outlets have a wealth of information on hand.

Millions of people travel to southeast Utah to see Earth's natural wonders. Don't overlook those countless marvels in our sky.



FOOD FOR THOUGHT • Most people know that littering is unlawful, but it does still occur. Small items like twist ties and cigarette butts are most commonly found. Food is considered litter too since it does not biodegrade in the desert. Orange peels and apple cores will dry out and remain long after they have been left behind. Please don't litter! Be especially careful on windy days when things can fly away.

Aluminum cans may be deposited for recycling throughout the park, including the visitor center and Devils Garden campground. Clear and brown glass, tin cans, clear No. 1 plastic, corrugated cardboard and aluminum can be dropped off at the Canyonlands Community Recycling Center on the way to the Slickrock Bike Trail in Moab. Keep these items in use — don't send them to our landfill!

Time Flies! Use It Well

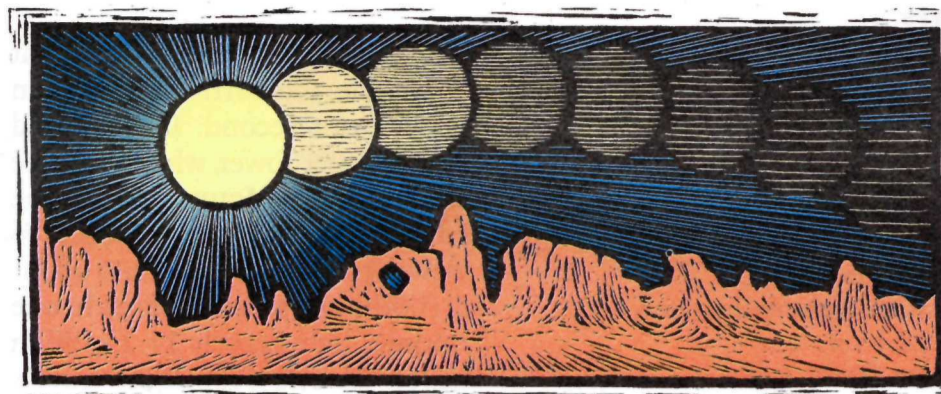
Have a limited time in which to explore Arches? We have a few suggestions to help you make the most of your visit, even if it is brief.

IF YOU LIKE TO HIKE

Time allocations are based on an average hiking speed of two miles per hour, and include time to drive to the trailheads. (Time spent marveling and contemplating the majestic wonders and sights varies greatly and is not included here.) Add time to take in the scenery from roadside pullouts between destinations.

In two hours, you can do one of these four routes:

- Hike the Windows loop trail and get an up-close view of the North and South Windows and Turret Arch. Then take the short trail between parking areas and hike up to Double Arch. Drive back to Balanced Rock and take the loop trail around its base. Contemplate its precarious position as you walk beneath it.



- Take the Delicate Arch Trail which begins at Wolfe Ranch and hike up the sloping slickrock to stand under the best known arch in the world. (During hot months, do this hike early or late in the day.)
- Hike between the tall sandstone fins in the Devils Garden to see Landscape Arch, perhaps the world's longest. How long will this thin span resist the forces of gravity?
- Walk to Sand Dune Arch, across the grassy field and onward to Broken Arch. Continue around the loop, through the end of the

campground, and return. Enjoy the vista toward the distant Book Cliffs, the beautiful Tapestry Arch, and your passage through sandstone fins.

In half a day, take one of these three hikes:

- Hike the entire Devils Garden Trail, all the way out to the spire called Dark Angel. When you return, take the primitive loop.
- Take the moderately strenuous ranger-guided hike through the complex passages of the Fiery Furnace. Remember to sign up ahead of time at the visitor center.
- If you don't mind driving the rough and often "washboard" road to the remote island of rock known as Klondike Bluffs, hike the primitive trail to Tower Arch.

If you have a *whole day* or more, combine the above hikes to fill the time you have.

IF YOU LIKE TO TOUR BY CAR

In 1½ hours you can take one of the following routes:

- Drive to the Windows Section and see some of the park's largest arches. (Add one-half hour to stroll beneath either North Window or Double Arch.)
- Drive to the Delicate Arch Viewpoint and see the world's most famous arch, a mile distant. Stop at Wolfe Ranch on your way back and imagine what it would have been like to homestead this relatively barren area in the late 1800s.

Three hours will give you time to do both drives.

(Or you could do one drive, spending ten minutes at each viewpoint along the way.)

If you have 4½ hours:

You could drive all of the paved park roads, spending ten minutes at each viewpoint, and take quick drives to the Windows Section, Wolfe Ranch, and Delicate Arch Viewpoint.

Can't decide? Well, forget the schedule and stay another day. If you try to see too much on your vacation, you end up really "seeing" nothing.

Park and Visitor Center Hours

Arches National Park is open every day of the year, twenty-four hours a day. The visitor center is open daily except December 25. Utah is on Mountain Time. Daylight Savings Time begins on the first Sunday in April and ends on the last Sunday in October. Arches Visitor Center hours for the year 2003 are as follows:

March 9 through October 11
— 7:30 A.M. to 6:30 P.M.

October 12 through November 1
— 7:30 A.M. to 5:30 P.M.

November 2 until following spring
— 8 A.M. to 4:30 P.M.

Want To Be a VIP?

Arches may have just the job for you as a Volunteer in the Park. The park provides training and orientation, and most VIPs receive a uniform and minimal subsistence payment. Many VIP positions involve visitor contact, so a love of people is a must. We like folks to stay three or four months, and need:

Campground Hosts: Hosts provide on-site coverage in the campground, the park provides a campsite with electrical, water and sewer hookups.

Interpreters: Volunteers provide full-time (four or five days per week) help in the naturalist program, housing is provided (usually a private room in shared apartment or house).

Resource Management: Volunteer provides full-time (four or five days per week) help in the natural resource program, the park provides housing (usually a private room in shared apartment or house).

To apply, send a resume or volunteer application to the Park Volunteer Coordinator, P.O. Box 907, Moab, UT 84532. Tell us what you're interested in doing and when you're available.

The Student Conservation Association, a privately funded, non-profit organization, places volunteers (not necessarily students) around the country in parks, wildlife refuges, forests and other resource agency locations. They provide a uniform allowance, \$50 per week subsistence, and transportation costs (by least expensive means) from your home to the park. We use SCAs for both interpretation and resource management positions. Contact them directly at Student Conservation Association, P.O. Box 550, Charlestown, NH 03603-0550. Their web address is www.sca-inc.org.

CANYONLANDS NATURAL HISTORY ASSOCIATION

PARTNERS IN
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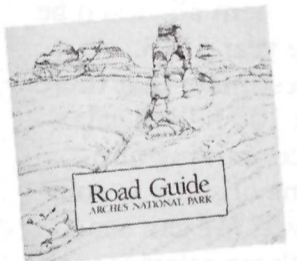
OUTLETS IN:
Arches National Park
Visitor Center
AND
Moab Information
Center in downtown
Moab

Hundreds of items about Utah's canyon country, Arches and Canyonlands National Parks, Hovenweep and Natural Bridges National Monuments, USDA Forest Service, and Bureau of Land Management areas.

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Handy pocket-sized guide, 21 favorite short hikes, detailed trail descriptions. 70 pages \$6.95



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A 46-mile round trip within the park; go at your own

pace; highlights 20 stops; learn about the park's amazing plants, animals and geology. 30 pages. \$3.50

Visit on-line bookstore at www.cnha.org

Browse and place your order on-line or call (800)840-8978 toll free



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www.cnha.org

CNHA net proceeds are donated to the NPS, BLM, and USFS to fund visitor education activities.