



Southwest USA and Four Corners



Jason Sargerson

Charaxes Publications

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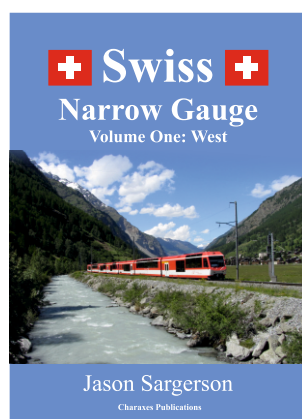
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Front Cover Images:

The Mittens, Monument Valley, Utah/Arizona, 28.06.09

Back Cover Images:

Top: Moab Golf Course, Moab, Utah, 24.06.09

Middle: Durango, DSR 473, Colorado, 20.06.09

Bottom: Two-tailed Swallowtail, Abajo Mountains, Utah, 25.06.09



Dead Horse Point, Colorado River - Utah - 24.06.09

Introduction

This book is an introduction to the South West United States (Arizona, Colorado, New Mexico and Utah). It covers key places of interest in the Four Corners region including National Parks and National Monuments along with other attractions such as Lake Powell and the Durango to Silverton and Cumbres and Toltec Railroads. For each place there is a brief history and introduction, including the climate and the best time to visit. There is a description of the Geology and Natural History, with key places of interest and directions to each site and nearby attractions. Photographs are described by location, state and date.

Books and Websites

The Guide to National Parks of the Southwest (1992): Nicky Leach. This is an excellent guide to all the parks of the Southwest, with superb photographs by George Huey, including maps and visitor information.

The Green Guide USA West (2000): Michelin Travel Publications. This is a comprehensive guide to the Western United States presented in alphabetical order.

Grand Circle Adventure (1994): Allen C Reed. This is a book in the 'Story behind the Scenery' series, covering Four Corners and the National Parks in the South West. It is an excellent introduction to the area and can be supplemented with the other more detailed guides to each National Park.

Field Guide to the South Western States (2006): National Audubon Society: Peter Alden et al. This is a very useful guide to all wildlife and plants and habitat in the south west of the United States.

Butterflies through Binoculars: The West (2001): Jeffrey Glassberg. This is an excellent photographic guide to the butterflies of the western United States.

www.nps.com This is the website of the United States National Park Service. It has comprehensive details of all the National Parks and National Monuments.

www.cnha.org This is the website of the Canyonlands Natural History Association. It has information about Canyonlands and Arches National Parks and the Moab Visitor Centre. There are similar websites for Bryce, Capitol Reef, Grand Canyon and Zion National Parks.

www.discovermoab.com This website describes Moab and all the attractions and activities in the area. There are similar websites for other towns such as Durango and Monticello.

www.mariasbookshop.com This is the website of Maria's Bookshop found at 960 Main in Durango. This superb bookshop is another good reason for visiting Durango.

www.utahlepsociety.org This is the website of the Utah Lepidopterists Society. It has information on field trips and places of interest with photographs of butterflies and habitat.



Monticello Golf Course, Abajo Mountains - UT - 28.06.09

The Abajo Mountains are part of the Manti La Sal National Forest. They are found near Monticello in South Eastern Utah. The mountains rise in elevation from 7,050 feet (2,150m) at Monticello to the highest point, Mount Abajo at 11,360 feet (3,460m). Rainfall in the Abajo Mountains is between 16 and 40 inches (40 to 100cm) per year. Temperatures in the June to August period rarely exceed 25°C, but can fall to 10°C overnight. The best time to visit is in the summer from June until August.

Natural History and Geology.

The Abajo Mountains originated in the same way as the La Sal Mountains, around 25 million years ago when molten rock or magma rose from inside the earth pushing up the sedimentary rocks on the surface. Sedimentary and igneous rocks have banded together with a core of igneous rock to form large structures called laccoliths. Several periods of glaciation have also shaped the structure of these mountains. The Abajo Mountains have a successional forest with aspen and conifers. Fire is also used in the Abajo Mountains for renewing and rejuvenating the forest. The Monticello Golf Course (2150m) or 'The Hideout' is in the valley beneath the Abajo Mountains. Turkey Vultures and Red-tailed Hawks fly over the course. Mule Deer inhabit the woods and the Aspens are home to Downy Woodpecker and Red-naped Sapsucker. Butterfly species found on the course include Mourning Cloak, Milbert's Tortoiseshell, Red Admiral, Weidermeyer's Admiral, Taxiles Skipper, Two-tailed Swallowtail and Western Tiger Swallowtail. The Abajos, or the Blues, are best reached from Monticello on the Harts Draw Road. This is a tarmac road that gently rises into the mountains in a loop passing several campgrounds, Lloyds Lake and Monticello Lake. The best place to see butterflies is at Foy Lake (2450m) on a dead end, off the main road. The lake is home to American Coot and Red-winged Blackbird. Butterflies that can be found include: Mourning Cloak, Weidermeyer's Admiral, Orange Bordered Blue, Common Alpine, Western Tiger Swallowtail and Pale Swallowtail. Continue on the Harts Draw Road after visiting the Foy Lake to meet Highway 211 and make the short journey to Newspaper Rock Historical Site.

Getting to the Abajos and Nearby Attractions

From Monticello follow the signs to the Harts Draw Road and proceed into the mountains. The Harts Draw Road is a 25 mile paved road with Foy Lake located approximately 14 miles from Monticello. The Monticello Golf Course is located on the south side of Monticello just off Highway 191. Trips from Monticello include the Durango and Silverton Railroad at Durango in Colorado (100 miles) and the Monument Valley Tribal State Park on the Arizona/Utah border (100 miles).





Mourning Cloak - LaSal Mountains - UT - 21.06.09



Monticello Golf Course, Abajo Mountains - UT - 05.06.97



Milbert's Tortoiseshell - Rabbits Ears Pass - CO - 20.06.01



Abajo Mountains from Blanding - UT - 05.06.98



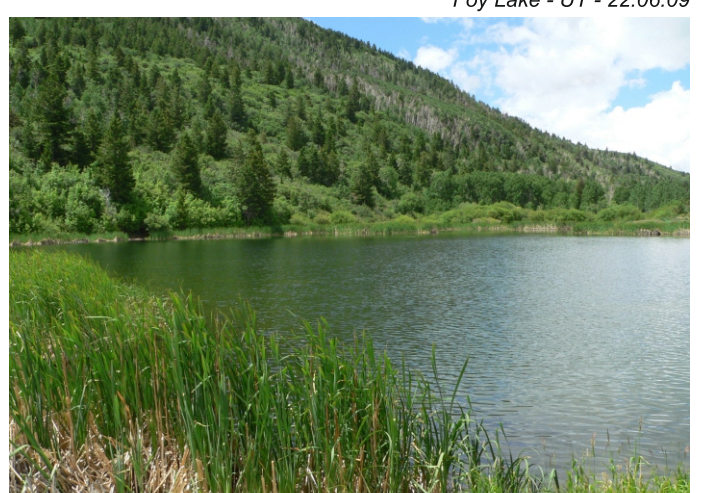
Weidermeyer's Admiral - LaSal Mountains - UT - 27.06.09



Foy Lake - UT - 22.06.09



Western Tiger Swallowtail - Abajo Mountains - UT - 26.06.09



Foy Lake - UT - 26.06.09



Park Avenue and Courthouse Towers - UT - 25.06.09



Arches, LaSal Mountains - UT - 05.06.98



Tower of Babel, The Organ - UT - 09.06.96

Arches: Utah

Arches National Park is in South East Utah. The park visitor centre is located at 4085 feet (1,245m), 5 miles north of Moab. Arches became a National Monument in 1929 and a National Park in 1971. Rainfall in Arches averages 9 inches (22 cm) per year. In the winter there are up to 7 inches (17 cm) of snow. Daytime temperatures in the summer period from May to September often exceed 35°C. The best time to visit is in May and June and again in September and October, avoiding the peak summer months of July and August.

Geology.

Arches is formed of rocks representing 200 million years of geology. The key formation is the Entrada Sandstone that forms the arches. The Entrada Sandstone formed 140 million years ago, but has only been exposed to erosion over the last 2 million years. Arches was originally part of the Paradox Basin where huge quantities of salt were laid down. This salt was overlaid by rock and sediment, but eventually the salt layer buckled forming domes and depressions. Erosion and seepage resulted in cracks in the strata, removing the top, younger layers and exposing the older Entrada Sandstone.

Hundreds of parallel fractures in the rocks allowed the start of the formation of arches. Wide crevices allow the formation of free standing fins that are further eroded by wind and rain into arches. The Entrada Sandstone is composed of quartz sand held together by a natural calcium cement. Slightly acidic rainwater dissolves this cement and gradually erodes the rock.



Natural History.

Arches is cool high desert. It has a pygmy forest of Juniper and Pinyon, along with Blackbrush shrubs and grasses. Desert flowers include Yucca and Cactus. Animals include the Kangaroo Rat and Spadefoot Toads.

Key Places of Interest.

From the Visitor Centre the park road climbs up to a plateau where the first stopping point is the La Sal Mountain overlook. Following this the Courthouse Towers become visible. There are further turnoffs for the Windows Section and Delicate Arch Viewpoint. At the end of the 21 mile paved road is the Devils Garden where there are numerous arches.

Getting to Arches National Park and Nearby Attractions.

From Moab take Highway 191 north for 5 miles. The turnoff to Arches is on the right with the Visitor Centre immediately after the entrance. Nearby attractions include Canyonlands National Park (27 miles) and Dead Horse Point State Park (25 miles).



View of LaSal Mountains - UT - 27.06.09



Arches - UT - 27.06.09



View of Moab from Arches - UT - 05.06.98



Bryce Canyon - UT - 14.09.90



Thor's Hammer, Hoodoos - UT - 14.09.90

Tertiary 66 million years ago	Wasatch Formation
	Kaiparowitz Formation
Cretaceous 144 million years ago	Wahweap Sandstone
	Straight Cliffs Sandstone
	Tropic Shale
	Dakota Sandstone
Jurassic 208 million years ago	Wingate Formation
	Curtis Formation
	Entrada Sandstone
	Carmel Formation
	Navajo Sandstone

Geology of Bryce Canyon

Bryce Canyon: Utah

Bryce Canyon National Park is in South West Utah. The park visitor centre is located at 7,893 feet (2,406m) on the scenic rim drive (Highway 63), only 4 miles from the Junction with Highway 12. The highest point is Rainbow Point at 9,105 feet (2,775m). The park achieved National Monument status in 1923 and became a National Park in 1928. Rainfall in Bryce Canyon averages 16 inches (40 cm) per year. The park does have up to 80 inches (200 cm) of snow in the winter. Temperatures in the summer period from May to September often exceed 35°C. The best time to visit is in May and June and again in September and October.

Geology.

Bryce Canyon is at the top of the Grand Staircase on the Paunsaugunt Plateau, the most south-eastern of the high plateaus of Utah. The Pink Cliffs of Bryce Canyon look down on the Gray, White and Vermillion cliffs as they descend towards the Grand Canyon. Because of uplift and tilting Bryce has the most recent geology.

There are seven formations found in the park, the lowest and oldest is the Dakota formation, on top of this is the Tropic Shale, followed by the Wahweap formation and the Straight Cliffs. This is followed by the Kaiparowits formation, the Wasatch formation and the Brian Head formation. The Wasatch multi-coloured limestone is the most characteristic formation. The pillars and spires of Bryce canyon have been formed by the action of a myriad of small streams along the plateau rim. Water has carved out gullies, leaving spires of rock or hoodoos. The red, orange, yellow and white colours in the rock are the result of differing concentrations of iron containing minerals.



Natural History.

At lower elevations Junipers are found, higher up Ponderosa Pine forests are found in the transition zone, replaced at the highest elevations by Spruce and Aspen. Mule Deer are found at lower altitudes along with Ground Squirrels. Nesting in the cliffs are Swallows, flying overhead are Red-tailed Hawks.

Key Places of Interest.

The 18 mile rim drive offers 13 overlooks. Key places of interest near the Visitor Centre include Inspiration Point and Bryce Point. At the end of the scenic drive, Rainbow Point offers the most expansive views, over 100 miles, across to Arizona (Navajo Mountain).

Getting to Bryce Canyon and Nearby Attractions.

From Kanab (73 miles), follow Highway 89 to Mount Carmel Junction and on towards Panguitch. At the junction with Highway 12 take Highway 12 to Bryce Canyon. Nearby attractions include Capitol Reef National Park (115 miles) and Cedar Breaks National Monument (60 miles).



Bryce Canyon - UT - 15.08.91



Red Rocks, Bryce Canyon - UT - 16.08.91



Bryce Canyon - UT - 16.08.91



White House Overlook, Canyon de Chelly - AR - 07.06.96



Face Rock, Canyon de Chelly - AR - 07.06.96

Canyon de Chelly: Arizona

Canyon de Chelly (pronounced d'Shay) National Monument is in Northern Arizona. The park visitor centre is located at 5522 feet (1,683m), just 3 miles east of Chinle. National Monument status was achieved in 1931. Unusually the park is owned entirely by the Navajo Nation and is administered jointly with the National Park Service. Rainfall in Canyon de Chelly averages 10 inches (25 cm) per year. In the winter there are up to 6 inches (15 cm) of snow. Daytime temperatures in the summer period from May to September often exceed 35°C. Sunshine exceeds 2000 hrs per year. The best time to visit is in May and June and again in September and October, avoiding the peak summer months of July and August.

Geology and Natural History.

Canyon de Chelly and Canyon del Muerto are up to 1000 feet (305m) deep in places. They have been carved in the Defiance Plateau by the action of the stream Rio de Chelly, which flows from the Chuska Mountains into Chinle Wash. The canyon walls are composed of Supai, de Chelly and Shinarump formations, with the red de Chelly sandstone being the predominant formation. Dark streaks or desert varnish streamers colour the rock, caused by iron and manganese oxides.

The Anasazi inhabited the canyon for at least 1000 years, up to 1200 AD, building cliff houses or pueblos into the canyon walls in response to flooding, but eventually abandoning the canyon due to drought. At lower elevations the high water table supports Cottonwoods and Willow. Juniper, Scrub Oak and Prickly Pear Cactus are found on the canyon rims. Small animals inhabit the canyon, including Cottontails, Ground Squirrels, Coyotes and Foxes. Rattlesnakes are uncommon, but lizards are frequent. The modern Navajo graze cattle and sheep in the canyon and plough the land.

Key places of interest in the park include the North Rim Drive (Canyon del Muerto) to see Antelope House Overlook and the South Rim Drive (Canyon de Chelly) to see White House Overlook and Spider Rock. Each Rim Drive is approximately 32 miles round trip. Spider Rock is 800 feet tall (245m) and reputed to be the home of Spider woman who taught the Navajo to weave.

Getting to Canyon de Chelly and Nearby Attractions.

From Monument Valley take Highway 163 south to Kayenta (24 miles). Turn east on Highway 160 to the junction with Highway 59 (8 miles). Follow Highway 59 to Many Farms (54 miles), Chinle is 13 miles south on Highway 191. Nearby attractions include Monument Valley (100 miles) and Navajo National Monument (95 miles).







Canyonlands - UT - 26.06.09



LaSal Mountains from Canyonlands - UT - 26.06.04



Needles District, Canyonlands - UT - 08.06.96

Canyonlands: Utah

Canyonlands National Park is in South East Utah. There are three sections of the park with two park visitor centres, one in the Island of Sky at 5,920 feet (1,804m), the other in the Needles at 4,960 feet (1,512m). The third section of the park, The Maze District is only accessible by four wheel drive. The park became a National Park in 1964, with an extension in 1971. Rainfall in Canyonlands averages 9 inches (22.5 cm) per year. In the winter there are up to 23 inches (57.5 cm) of snow. Daytime temperatures in the summer period from May to September often exceed 35°C. The best time to visit is in May and June and again in September and October, avoiding the peak summer months of July and August.

Geology.

Canyonlands, like Arches National Park owes its origins to a mile thick layer of salt that formed the Paradox Basin up to 300 million years ago. The faults formed by the Uncomphagre Uplift allowed the Paradox Basin to sink and the huge salt layer was covered by sediment and further salt layers eventually forming hard rocks. These hard rocks squeezed the salt layer below, allowing it to flow and resulting in the fracturing of the upper sediment.

The Colorado and Green Rivers have cut through the sedimentary rock exposing the layers. The lowest and oldest rocks are the limestone Lower Cutler beds. Above the limestone are the red and white bands of Cedar Mesa Sandstone. Above this is a white sandstone called the White Rim. Further sandstone layers include the Moenkopi formation, the Chinle formation and the Wingate Sandstone. The youngest rock found in the park is the Navajo Sandstone, visible only in the Island in the Sky.



Natural History.

At lower elevations near the Colorado and Green Rivers Cottonwoods, Willows and Tamarisks are found. There are several species of lizards along with Colorado Chipmunks and Ground Squirrels. Larger inhabitants include Bighorn Sheep and the rare Peregrine Falcon may be found.

Key Places of Interest.

Key places of interest in the park include the Grand View Point Overlook in the Island in the Sky district and the Big Spring Canyon Overlook in the Needles district. In Dead Horse Point State Park, the overlook has views over Canyonlands.

Getting to Canyonlands and Nearby Attractions.

The Needles district is accessed from Highway 191 along Highway 211. From Monticello it is 14 miles north on Highway 191 to Highway 211 and a further 48 miles to the Needles. Highway 211 is 39 miles south of Moab. The Island in the Sky district is accessed by travelling north from Moab for 10 miles on Highway 191. Take Highway 313 to the Island in the Sky a further 32 miles. Nearby attractions include Arches National Park (5 miles from Moab) and Dead Horse Point State Park (32 miles from Moab).

Dead Horse Point State Park.

Dead Horse Point is accessed from Moab travelling north on Highway 191 (10 miles), then Highway 313 (22 miles). This park has similar geology to Canyonlands, with the key attraction the spectacular overlook of the gooseneck of the Colorado River. On this plateau the legend has it that a herd of horses was corralled and then forgotten so that they died of thirst within sight of the Colorado 2000 feet (609m) below.



Dead Horse Point, Colorado River - UT - 24.06.09



LaSal Mountains, Potash Mining - UT - 24.06.09



Canyonlands from Dead Horse Point - UT - 24.06.09



Capitol Reef - UT - 09.06.97



Capitol Reef - UT - 09.06.97

Capitol Reef: Utah

Capitol Reef National Park is in South West Utah. The park visitor centre is located at 5,500 feet (1,676m) on Highway 24. The park achieved National Monument status in 1937 and became a National Park in 1971.

Rainfall in Capitol Reef averages 8 inches (20 cm) per year. The park does have up to 12 inches (30 cm) of snow in the winter. Temperatures in the summer period from May to September often exceed 35°C. The best time to visit is in the early summer months of May and June and again in the fall in September and October.

Geology.

Capitol Reef is 70 miles long and almost encompasses the 100 mile Waterpocket Fold. This is a monocline, with one very steep side on the west, lifted almost 7000 feet (2,100m) higher than the rock layers on the east. The bending of the rock to form the Waterpocket Fold took place 50 to 70 million years ago during the Laramide Orogeny, with an ancient buried fault warping the earth's crust. The exposed layers represent 250 million years of geologic history. There is a slight overlap with the formations at the Grand Canyon North Rim, the oldest formations being the Cutler Formation and the Kaibab Limestone found at the lowest levels. Above these layers are the Moenkopi, Shinarump and Chinle formations from the Triassic, up to 200 million years old. Above these layers are the sandstones of the Jurassic period including the Wingate, Kayenta, Navajo and Entrada Sandstones formed up to 150 million years ago. The youngest layers formed during the Cretaceous period around 80 million years ago include the Summerville Formation, Morrison Formation, Dakota Sandstone and Mancos Shale. Recent lava flows, 20 million years ago have deposited lava boulders in Capitol Reef. Ancient seas cemented the limestones, shales and sandstones, but rivers and the action of water have carved the canyons and valleys seen today.



Natural History.

Along the Fremont River there are stands of Cottonwood, Ash and Willow. There are Mountain Bluebirds and Ducks along with Marmots and Mule Deer. Away from the river, desert ecology predominates. The scenic drive from the Visitor Centre is a 20 mile round trip including Fruita, the Egyptian Temple and finishing at the Golden Throne. Chimney Rock and The Castle are seen from Highway 24.

Getting to Capitol Reef and Nearby Attractions.

From Interstate 70 at Green River, take Highway 24 to Capitol Reef. It is 56 miles to Hanksville and a further 40 miles to Capitol Reef. From Bryce Canyon it is 115 miles on Highway 12 via Escalante and Boulder. Nearby attractions include Bryce Canyon National Park (115 miles) and Lake Powell (80 miles).

Cedar Breaks National Monument: Utah

In 1933 Cedar Breaks National Monument was established in South West Utah. This is a spectacular natural amphitheatre, 2000 feet (609m) deep and 3 miles in diameter, with a similar geology to Bryce Canyon. Varying combinations of iron and manganese give the limestone its red, yellow and purple colouration. The early settlers named it 'Cedar' after the juniper trees, and 'Breaks' another name for badlands. There is a 5 mile scenic drive from the Visitor Centre with four overlooks. Cedar Breaks is 60 miles from Bryce Canyon via Highway 12, Highway 89 and Highway 14. On Highway 14 stop off at beautiful blue Navajo Lake before continuing to the Highway 148 Junction. It is 2.5 miles on Highway 148 to the Visitor Centre, located at 10,350 feet (3155m).



Lake Powell, Highway 95 to Hanksville - UT - 11.06.96



Capitol Reef - UT - 09.06.97



Cedar Breaks, Brian Head - UT - 11.06.95



Navajo Lake - UT - 11.06.95



Durango, Animas River, DSR 482 - CO - 21.06.09



Durango, DSR 476 - CO - 04.06.97



Durango, Animas Bridge, DSR 480 - CO - 20.06.09



Chama, Cumbres and Toltec 488 - NM - 11.06.97

Durango and Silverton: Colorado

The Durango and Silverton Railroad runs from Durango to Silverton in Southwest Colorado. This is a 3 feet gauge line and is 45 miles long. The line was originally built in 1882 and the first train from Durango to Silverton also ran in 1882. There are 10 steam locomotives, one 2-8-0 and nine 2-8-2 locomotives with up to six in working order. Durango is located at 6,520 feet (1,990m) and has summer temperatures of 30°C, whereas Silverton is much higher at 9,308 feet (2,837m) and has summer temperatures of only 20°C. Although it can be very warm starting in Durango it is advisable to take warm clothing for the journey and time spent in Silverton.

Trains begin their journey from Durango and run through the town crossing streets and alerting traffic with the sound of the haunting whistle. For much of the journey the railway follows the Animas River. It crosses the river just after leaving Durango and follows a fairly level stretch of 11 miles to Hermosa. After Hermosa the line climbs continuously at 2.5% (1 in 40), except for a section of descent of 3 miles between Rockwood and Tacoma. There is a turning Y after 26 miles, at Cascade Canyon built in 1981. This is used in winter when the trains do not venture as far as Silverton. For most of the journey there is the spectacular scenery of the Animas River and the Rocky Mountains.

The journey from Silverton to Durango takes three and a half hours with four trains leaving Durango at 0730, 0815, 0900 and 0945 in the middle of the summer. The return services from Silverton are at 1315, 1400, 1445 and 1530. Reservations are needed for this very popular excursion. This is a historic mountain line with superb scenery, linking two key tourist towns in Colorado. Durango is 36 miles by car from Mesa Verde National Park via Highway 160.



Cumbres and Toltec: New Mexico

The Cumbres and Toltec Railroad starts at Chama in New Mexico, reached from Durango on Highway 160 via Pagosa Springs (60 miles) and Highway 84 (60 miles). The Cumbres and Toltec Railroad is also a 3 feet gauge railway running from Chama in New Mexico to Antonito in Colorado a distance of 64 miles. Chama is located at 7,848 feet (2,392m), with the train climbing to the Cumbres Pass at 10,015 feet (3,052m) before descending to Antonito at 7,888 feet (2,404m). There are four active steam locomotives, all Baldwin 2-8-2s. The journey is broken at Osier where passengers can return to either Chama or Antonito or make the full trip one way. The best time to visit both these railroads is between May and October, although special winter services do operate.





Silverton, Storm Peak (13,326ft, 4062m), Animas River - CO - 06.06.96



Durango, DSR 480 - CO - 21.06.09



Grand Canyon, South Rim - AR - 12.09.90



Grand Canyon, South Rim - AR - 13.09.90

Triassic 245 million years ago	Moenkopi Sandstone
Permian 286 million years ago	Kaibab Limestone
	Toroweap Layer
	Cocorino Layer
	Hermit Shale
Pennsylvanian 320 million years ago	Supai Formation
Mississippian 360 million years ago	Redwall Limestone
Devonian 408 million years ago	Temple Butte Limestone
Cambrian 570 million years ago	Muav Layer
	Bright Angel Shale
	Taipaite Shale
Pre Cambrian 2 billion years ago	Vishnu Schist

Geology of Grand Canyon

Grand Canyon: Arizona

Grand Canyon National Park is in Northern Arizona. The park has been created in two sections separated by the canyon: South Rim and North Rim. The visitor centre at South Rim is at 6,860 feet (2,090m), whereas the North Rim visitor centre is much higher at 8,200 feet (2,499m). The area became a National Park in 1919, with further extensions in 1932, 1969 and 1975.

Rainfall at South Rim averages 16 inches (40cm) per year and at North Rim rainfall averages 24 inches (60cm) per year. In the winter there are up to 134 inches (335 cm) of snow at North Rim. Daytime temperatures in the summer period from May to September usually don't exceed 30°C at South Rim, with North Rim being much cooler at 25°C.

Best Time to Visit.

The best time to visit South Rim is in May and June and again in September and October. North Rim is not so busy and can be visited from May to October, but not in the winter when the park is closed.

Geology.

The Grand Canyon represents two billion years of earth's history in its rock formations. There are five chapters of geologic time, starting with the early Precambrian - Chapter I, followed by the later Precambrian - Chapter II, the Paleozoic - Chapter III, the Mesozoic - Chapter IV and the Cenozoic - Chapter V. Ten major large scale geologic events have been identified. Two billion years ago volcanic materials and sediments accumulated in horizontal layers, followed 1.7 billion years ago by mountain uplift and metamorphosis of the rock into Vishnu Schist.

Erosion 1.5 billion years ago levelled the mountains. About 1.2 billion years ago the plain subsided, layers of sediment 12,000 feet thick were laid and the Grand Canyon Super-group layers were deposited. 800 million years ago the horizontal layers were broken and tilted and Fault-block mountains were formed, followed 700 million years ago by erosion into hills.



About 600 million years ago Paleozoic layers were deposited, followed 230 million years ago by the deposition of Mesozoic layers. 65 million years ago faulting uplifted the Mesozoic and the Colorado River established westward drainage. Only 4 million years ago the Colorado River began to down-cut the canyon, exposing the ancient rocks.

Natural History.

The significant changes in elevation influence the wildlife and vegetation found at Grand Canyon. The Kaibab Plateau supports forests of Spruce, Fir and Quaking Aspen. Porcupines and Spruce Squirrels are common along with the unique Tassel-eared Squirrel of the North Rim. At the floor of the canyon, desert conditions predominate, with cactus, agave and black-brush. Skunks, rattlesnakes and lizards are common. Key places of interest at South Rim include Grand View Point and Desert View. At North Rim sample the overlooks at Bright Angel Point and Cape Royal.

Getting to Grand Canyon and Nearby Attractions.

Starting from Kanab in Utah, drive south on Highway 89 to Grand Canyon North Rim. It is 37 miles to Jacob Lake, then 44 miles on Highway 67 to North Rim. Grand Canyon South Rim is north from Williams in Arizona on Highway 64. It is 66 miles to Grand Canyon Village. Nearby attractions include Lake Powell (106 miles from South Rim) and Zion National Park (124 miles from North Rim).



On the Colorado River - AR - 13.08.91



Cape Royal, North Rim - AR - 10.06.95



Point Imperial, North Rim - AR - 16.08.91



Lake Powell, Page - AR - 18.06.95



Lake Powell, Glen Canyon Dam - AR - 14.09.90



Lake Powell, Glen Canyon Dam - AR - 14.09.90

Glen Canyon-Lake Powell: Utah/Arizona

Glen Canyon-Lake Powell extends from Northern Arizona and across into Southern Utah. The creation of Glen Canyon Dam has backed up water for 180 miles to form Lake Powell. The Carl Hayden visitor centre is at an altitude of 3,700 feet (1,127m) and is located at the dam near Page, Arizona. Rainfall at Page averages 13 inches (32cm) per year. In the winter there are up to 35 inches (87 cm) of snow. Daytime temperatures in the summer period from May to September can be as high as 35°C. Lake Powell can be visited at any time of the year, but the summer months are more popular.

History and Operation.

The site for Glen Canyon Dam was chosen by geologists and engineers in 1950. The construction of the dam was authorised by the US Congress in April 1956. The Colorado River was diverted and foundations for the dam created by 1960. From 1960 to 1963 the dam was built using 400,000 'buckets' (24 tonnes each) of concrete. The turbines and generators for production of electricity were installed between 1963 and 1966, with the first power being generated in September 1964. The filling of the lake has taken place over 17 years, from 1963 to 1980. The dam height is 710 feet (216m) above the bedrock.

Lake Powell is a key reservoir in the Colorado River Storage Project. The previously erratic flow of the Colorado River is now controlled, with a regulated water supply and generation of electricity. The maximum power-plant capacity is 1,288,000 kilowatts. The power is sold to small and medium sized towns in Arizona, Utah, Colorado, Wyoming, Nebraska and New Mexico. To reduce transmission losses, transformers increase the voltage from 13,800 volts to 345,000 volts and the power is transferred by aluminium bundles up to 1 inch in diameter.



Geology.

Glen Canyon is part of the Colorado Plateau, characterised by thick deposits of uplifted sedimentary rocks have been eroded by the region's rivers. Between 80 and 40 million years ago the Colorado Plateau was uplifted during a period of geologic activity known as the 'Laramide Orogeny'. The Rocky Mountains were created and magma poured through the fractured rocks to form the igneous rock of the Henry Mountains and Navajo Mountain. About 10 million years ago the plateau underwent further uplift of about 1 mile, allowing the water courses to erode more deeply, forming meanders that are essential to the creation of natural bridges such as Rainbow Bridge. Rocks are younger in age at the lower end of Lake Powell and older at Hite, Utah. The Navajo Sandstone gives Glen Canyon its character, with erosion forming hills, domes, alcoves and gullies.

Natural History.

The canyon exhibits a desert flora with Prickly Pear and Rabbitbrush and pygmy forest of Pinon Pine and Juniper. The 'hanging gardens' of the canyon alcoves allow for larger mammals to thrive, including Beaver, Mule Deer and Coyote. Migrating birds such as Geese and Ducks now stop off at Lake Powell.

Key Places of Interest: Rainbow Bridge

Key places of interest include the dam at Page, the marinas at Wahweap, Bullfrog and Hite and Rainbow Bridge. Rainbow Bridge was created a National Monument in 1910, following discovery in 1909. It is the largest natural arch in the world and measures 278 feet across and is 290 feet above the lake below. When Lake Powell began to fill there was some concern for Rainbow Bridge, but there has been no change in the structural integrity of the arch. Rainbow Bridge can be visited by boat from Wahweap, a journey of 48 miles, usually a round trip of five hours. Rainbow Bridge is known as 'Nonnezoshi' by the Navajo – rainbow turned to stone. The Navajo believe that passing under the bridge brings misfortune, so visitors are asked not to walk beneath the arch.

Getting to Page/ Lake Powell and Nearby Attractions.

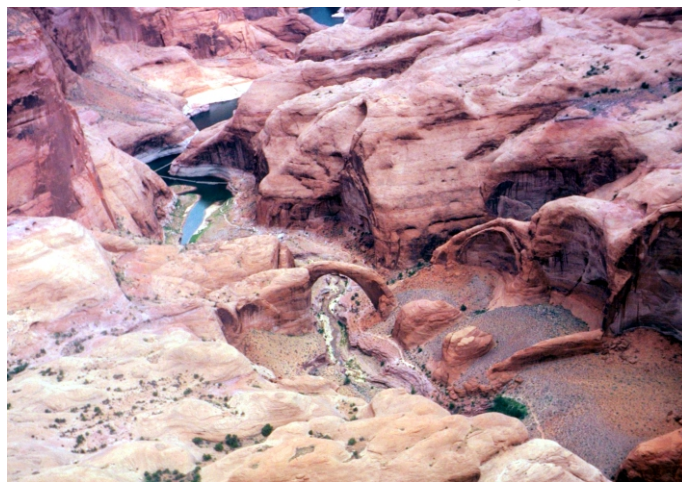
Starting from Kanab in Utah, it is 74 miles to Page in Arizona on Highway 89. From Kayenta in Arizona it is 100 miles to Page via Highway 160 and Highway 98. Nearby attractions from Page include Grand Canyon South Rim (106 miles) and Monument Valley (124 miles).



Lake Powell from the air - AR - 13.09.90



Rainbow Bridge - UT - 07.06.95



Rainbow Bridge from the air - UT - 18.08.91



Wahweap Marina, Navajo Mountain - AR - 08.06.95

La Sal Mountains: Utah



Mount Peale Group, LaSal Mountains - UT - 29.06.09

The La Sal Mountains are part of the Manti La Sal National Forest located near Moab in South Eastern Utah. These mountains are a green forested island in the desert, rising from 4130 feet (1,250m) at Moab to 12,721 feet (3,870m) in the shape of Mount Peale, the highest peak. As you ascend the mountains, forests of Gambel Oak give way to Douglas Fir and Quaking Aspen and eventually ground covering plants of the alpine zone. At the La Sal weather station the annual average rainfall is 31 inches (77 cm). Summer temperatures in the La Sal Mountains rarely exceed 25°C. The best time to visit is from June through to the beginning of August.

Natural History and Geology.

The La Sal Mountains originated up to 25 million years ago when molten rock or magma rose from inside the earth pushing up the sedimentary rocks on the surface. The magma did not erupt but spread horizontally and bowed upward the overlying rock. Sedimentary and igneous rocks, banded together with a core of igneous rock, form large structures called laccoliths. Two periods of glaciation have also shaped the structure of the La Sal Mountains. The La Sal Mountains have a successional forest with aspen and conifers. Originally it was thought that fires in the forest were destructive to the natural cycle but now fire is used as a means of renewing and rejuvenating the forest. A more balanced ecosystem is being generated with trees with a wide range of ages. The Oowah turnoff (3050m) is a gravel road that branches off an elbow of the La Sal Mountain Loop road. Butterflies to be seen here include Weidermeyer's Admiral, Mourning Cloak, Anise Swallowtail, Northern Crescent, Boisduval's Blue and Arrowhead Blue. After passing the La Sal Mountain north viewpoint from where there is a fine view of Castle Valley, the road begins to descend. Passing over a cattle grid the road dips down an avenue of aspens and makes a sharp turn to the left. Here there is a gravel turnoff to Miners Basin (3050m). Butterflies seen here include Mourning Cloak, Weidermeyer's Admiral, Hoary Comma, and Field Crescent. The avenue has lots of passing Swallowtails including Pale Swallowtail, Western Tiger Swallowtail and Two-tailed Swallowtail.

Getting to the La Sals and Nearby Attractions.

Drive south from Moab about 3 miles on Highway 191, leaving the highway at the sign for the La Sal Mountain Loop. The road passes Ken's Lake rising gently for several miles. Eventually the road makes a sharp left turn and begins to climb steeply. The Oowah Lake turnoff is approximately 20 miles from Moab and Miners Basin is another 6 miles further on. Continue on the loop to Castle Valley and Scenic Byway 128.





Weidermeyer's Admiral - LaSal Mountains - UT - 27.06.09



LaSal Mountains - UT - 22.06.09



Hoary Comma - LaSal Mountains - UT - 22.06.09



Oowah Turnoff, LaSal Mountains - UT - 29.06.09



Mourning Cloak - LaSal Mountains - UT - 24.06.09



Miners Basin, LaSal Mountains - UT - 22.06.09

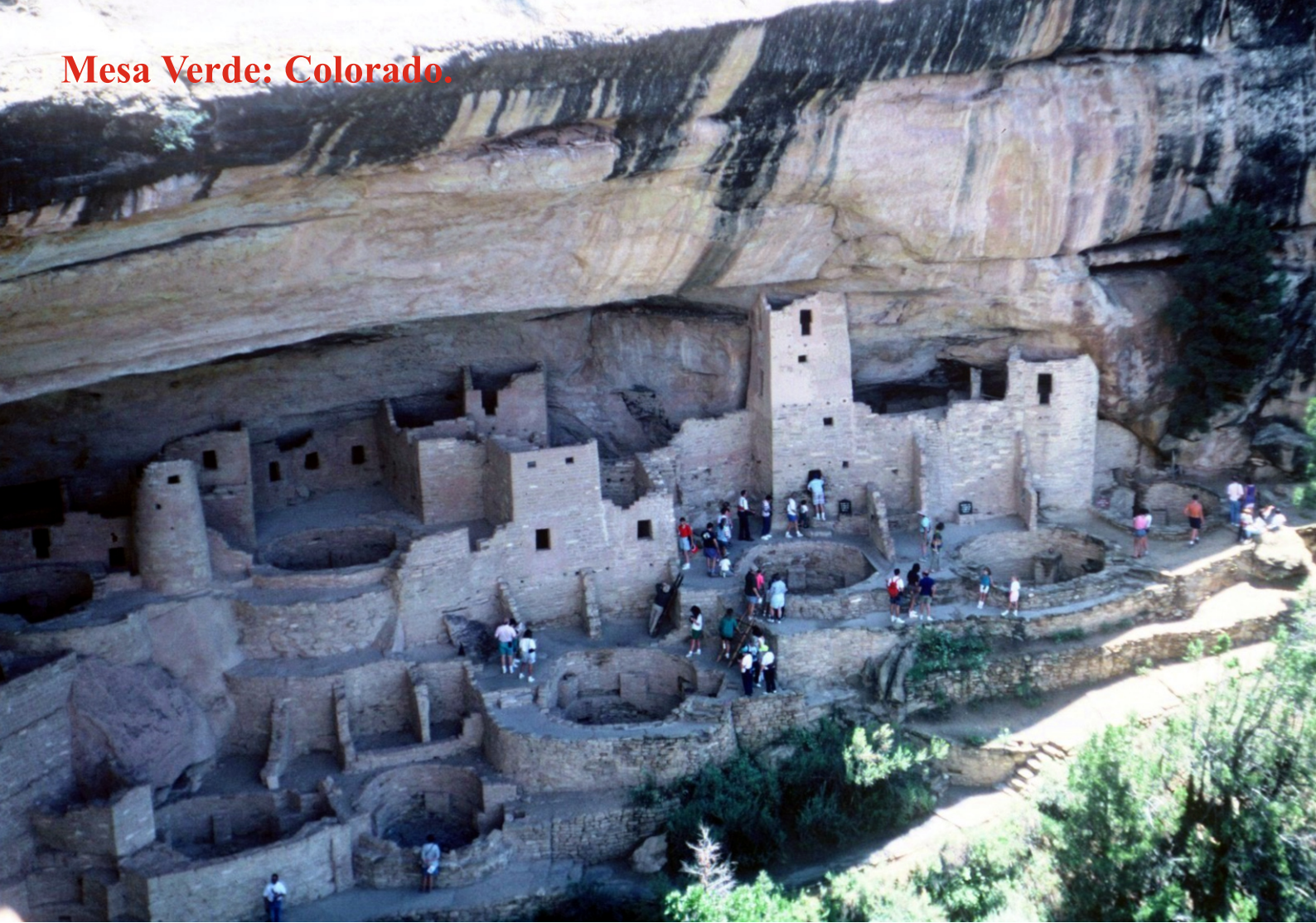


Anise Swallowtail - LaSal Mountains - UT - 27.06.09



LaSal Mountains - UT - 17.06.99

Mesa Verde: Colorado.



Cliff Palace, Mesa Verde - CO - 19.08.91

Mesa Verde National Park is found in Southwest Colorado. Far View Visitor Centre is located at 8,040 feet (2,450m), 15 miles from the park entrance and it is a further 6 miles to Park Headquarters, the Museum and Chapin Mesa. Mesa Verde National Park was created in 1906 and became a World Heritage Site in 1978. Rainfall in Mesa Verde averages 18 inches (45 cm) per year. In the winter there are up to 74 inches (185 cm) of snow. Daytime temperatures in the summer period from May to September are in the region of 30°C. The best time to visit is in May and June and again in September and October. In the winter, snow makes most of the park inaccessible.

History.

Mesa Verde (Green Table) is a densely wooded sandstone plateau high above the Mancos River valley. The land has been divided into narrow canyons and the action of seeping water has created alcoves where the Anasazi (Ancient Ones) established homes for up to 700 years. These Cliff Dwellings were developed into multi-story complexes by approximately 1300 AD. The first Anasazi settled in Mesa Verde about 550 AD. They developed farming as well as continuing hunting and began the Basket Making Period. Pit Houses were built on the mesa tops. An average Anasazi man was about 5 feet 5 inches tall, with the women about 4 inches shorter and on average lived until they were 35 years old. Further development of the dwellings with connected rooms into villages from 750 AD characterises the Pueblo Period. The final development came in the last 100 years up to 1300AD. The people moved from the cliff tops to multi-storied cliff houses in the alcoves. This is the Great Pueblo Period characterised by the complex buildings including large underground ceremonial rooms or Kivas. In the last 25 years of their occupation it is believed that soil depletion, crop failure and drought contributed to the migration of the Anasazi out of the cliff dwellings south onto the plain.

Natural History.

At higher elevations the park is covered by mountain shrubs, including Gambel Oak and Pinyon Juniper. Douglas Fir is found in sheltered canyons. Mule Deer are common, other mammals include Gray Fox, Coyote and Badger. Black Ravens are common along with Steller's Jay. In recent years Wild Turkeys have been reintroduced.



Key Places of Interest

The park road is 21 miles long and has distinct changes in altitude and because of sharp bends there are speed restrictions. It is best to allow at least 60 minutes for the drive to Chapin Mesa. Key places of interest include Park Point overlook at 8,571 feet (2,621m), Far View Visitor Centre, the Museum and Spruce Tree House and the overlooks at the end of the park road over Balcony House and Cliff Palace (Chapin Mesa).

Getting to Mesa Verde and Nearby Attractions.

From Monticello in Utah, take Highway 666 east to Cortez (60 miles). Mesa Verde park entrance is 11 miles east of Cortez on Highway 160. Alternatively it is 36 miles west from Durango in Colorado on Highway 160. Nearby attractions include Arches National Park (117 miles) and the Durango and Silverton Railroad at Durango (36 miles).



Navajo National Monument: Arizona

The Navajo Reservation in northern Arizona is home to some of the best preserved Anasazi Cliff Dwellings at Navajo National Monument. The cliff houses were created by the Kayenta Anasazi in approximately 1200AD and were inhabited for about 100 years. There are three significant sites: Inscription House, Betatakin (Ledge House) and Keet Seel (Broken Pottery). The turnoff for Inscription House is 53 miles from Page on Highway 98. Continue on Highway 98 for 12 miles to Highway 160, then 13 miles to Highway 564. The Visitor Centre is 9 miles along Highway 564. From the Visitor Centre, the Sandal trail takes 60 minutes round trip to overlook Betatakin. To see Keet Seel, a permit is required and an official guide.



Spruce Tree House, Mesa Verde - CO - 19.08.91



Prickly Pear Cactus, Navajo National Monument - AR - 06.06.97



Betatakin, Navajo National Monument - AR - 06.06.97



Colorado River, Scenic Byway 128 - UT - 08.06.98



Castle Valley - UT - 24.06.09



Moab Golf Course - UT - 24.06.09

Moab: Utah

Moab is a small town on the River Colorado in South East Utah. It is the gateway to the nearby Arches and Canyonlands National Parks. The town is based on the adventure travel industry with key local attractions being mountain biking on the slick-rock and river rafting on the Colorado. The town has a population of 5000 people and is located at 4000 feet (1,218m). Moab was first settled by Mormon colonists in 1855, but a permanent settlement was not made until 1876. The desert surrounds have provided refuge for outlaws such as Butch Cassidy. Uranium mining sustained the town until the 1980s. Rainfall at Moab averages 9 inches (22cm) per year. In the winter there are possibly 6 inches (15 cm) of snow. Daytime temperatures in the summer period from May to September can be as high as 35°C. Moab can be visited all year round with winter providing some skiing in the LaSal Mountains.

National Scenic Byway 128.

This drive by the Colorado River starts 3 miles north of Moab and runs for 44 miles to the Interstate 70 junction near Cisco. It is an excellent diversion and introduction to the locality if driving from Denver. There are high red rock walls and the bends of the fast flowing Colorado River as a scenic backdrop. There are often parties of visitors taking part in river-rafting down the Colorado.

Castle Valley.

From Byway 128 there is a junction for the LaSal Mountain Loop road after 17 miles. This initially follows Castle Valley for 11 miles, named after the red rock formation known as 'The Castle'. There are several ranches along the road before it turns to ascend into the LaSal Mountains.



Scenic Byway 279.

This scenic road starts north of Moab and runs west along the Colorado River. There are superb views of the river with a backdrop of the LaSal Mountains. The road is a dead end and is a 36 mile round trip. Other features include dinosaur tracks and Indian Petroglyphs. This is often named the Potash road as it ends near the Potash extraction area.

Moab Golf Course.

The Moab Golf Course is located to the south of the town. Follow the sign-posted road up to a unique roundabout and then bear right to the golf course. For a course overlook and views of the Moab valley, carry straight on at the roundabout and then bear left through the housing development.



Moab Golf Course - UT - 24.06.09

Scott Matheson Wetland.

This is located to the south of the town alongside the Colorado River. The Preserve was named in 1991 after the former Utah State Governor, Scott Matheson. This wetland reserve is 875 acres and has cottonwood, willows, sedges and knotgrass. There are defined paths for visitors. Many bird species can be observed between March and October. It is wise to take precautions against biting insects.



Colorado River, Scenic Byway 279, LaSal Mountains - UT - 05.06.98

Wilson Arch.

This is located 26 miles south of Moab on Highway 191. Wilson Arch is a distinctive natural arch easily accessed from the road. There is a car park and visitors can climb up to the arch for a view across the plain to the Abajo Mountains.



Wilson Arch - UT - 22.06.09

Getting to Moab and Nearby Attractions.

Moab is 54 miles north from Monticello on Highway 191. Nearby attractions include Arches National Park (5 miles), Canyonlands National Park (42 miles) and Dead Horse Point State Park (32 miles).





Church Rock, LaSal Mountains - UT - 04.06.97



Newspaper Rock - UT - 30.06.04



Sleeping Ute Mountain, Anasazi Heritage Centre - CO - 21.06.09

Monticello: Utah

Monticello is situated beneath the Abajo Mountains in South East Utah. It has views to the north of the snow-capped LaSal Mountains 50 miles away; to the east, Lone Cone beckons 100 miles away in Colorado; to the south east, Sleeping Ute Mountain is 65 miles away in Colorado and on leaving Monticello to the south, Monument Valley can be seen 100 miles away. Monticello is a key junction for traffic passing between Utah and Colorado. The town has a population of 2000 people and is located at 7,069 feet (2,154m). The first Mormon settlers arrived in 1888 finding the elevation was suitable for crops such as wheat. The town was named after Thomas Jefferson's country home in Virginia – Monticello, but the locals now pronounce it 'Montisello'. Rainfall averages 16 inches (40cm) per year. In the winter there are 70 inches (175 cm) of snow. Daytime temperatures in the summer period from May to September are a moderate 25°C. Monticello is a year round destination, with hiking, riding and golf in the summer and plenty of snow in the winter for skiing.

Newspaper Rock State Park.

Newspaper Rock is 26 miles from Monticello. Follow Highway 191 north to U211 for 14 miles, then turn off near Church Rock along U211 down Indian Creek Canyon to Newspaper Rock a further 12 miles. This rock wall has extensive Indian Pictographs and Petroglyphs including the hunchbacked flute player Kokopeli. Newspaper Rock is desert varnished sandstone, the dark brown shiny coating is composed of clays and oxides of Iron and Manganese. It is possible that this site was a message board for the ancient people. More modern signs are also in evidence.



Anasazi Heritage Centre

This is located in Colorado 3 miles west of Dolores and 10 miles north of Cortez. Travelling from Monticello, it is a useful place to break the journey to Durango for example, taking Highway 184, bypassing Cortez. The centre is sited on two 12th century Pueblos. The excellent museum has displays of Pueblo life and there is a trail around the ruins. Admission is free. There are good views of the Sleeping Ute Mountain (9,977 feet, 3,040m) in the Ute Mountain Tribal Park where there are Anasazi Cliff Dwellings.



Goosenecks State Park.

Goosenecks State Park is 72 miles from Monticello near Mexican Hat. Follow U261 and U316 for 6 miles to Goosenecks. This overlook offers a superb view of the San Juan River 1500 feet (457m) below. This is an impressive example of entrenched river meander. Here the meander of the river flows for six miles but covering only one mile in linear distance.

Muley Point and Moki Dugway.

It is best to travel to Muley Point from Monticello via Blanding and Highway 95 and U261 along the Trail of the Ancients. The turnoff for Muley Point is to the right at the top of the cliff. This is a dirt road that should be avoided when wet. It is 5 miles to the overlook, where there are spectacular views toward Navajo Mountain and Monument Valley. On returning to U261 the descent down the Moki Dugway can be made very slowly. This is a 3 mile section of dirt road that descends 1200 feet (365m) from the mesa to the plateau. The road then runs across the plain to Goosenecks State Park and Mexican Hat. There are fine views from the Moki Dugway for passengers, but drivers must concentrate on the road.

Natural Bridges National Monument.

Natural Bridges was discovered in 1883 and became a National Monument in 1908. The Visitor Centre is located at 6,505 feet (2,001m) just prior to the paved loop that takes visitors to the arches. There are three bridges formed by the erosion of the white sandstone by running streams of water. The nine mile one way loop visits each bridge in turn: Sipapu, Kachina and Owachomo. Natural Bridges is 12 miles along Highway 275 from Highway 95. It is 77 miles from Monticello.

Getting to Monticello and Nearby Attractions.

Monticello is 54 miles south from Moab on Highway 191. Nearby attractions include Arches National Park (60 miles north on Highway 191) and Monument Valley (100 miles south on Highway 191 and 163).



Goosenecks, San Juan River - UT - 11.06.96



Muley Point - UT - 05.06.98



Sleeping Ute from Monticello - UT/CO - 27.06.09



Monument Valley, The Mittens - AR - 10.06.97



Monument Valley from the air - AR - 13.09.90



Monument Valley, The Mittens - AR - 29.06.04



View from Gouldings, Monument Valley - AR - 23.06.09

Monument Valley: Utah/Arizona

The entrance to Monument Valley Navajo Tribal Park is in southwest Utah, but most of the park is located in northeast Arizona. The park visitor centre is located at 5200 feet (1,584m), 4 miles east of Highway 163. Monument Valley was established by Navajo Tribal Council resolution in 1958 and is administered by the Parks and Recreation Department. Rainfall in Monument Valley averages 7 inches (17 cm) per year. In the winter there can be significant snowfall. Daytime temperatures in the summer period from May to September often exceed 30°C. The best time to visit is in May and June and again in September and October.

Geology and Natural History.

Monument Valley is a good example of differential erosion. Materials deposited in shallow seas, such as sand and shale form interbedded layers. The shale is weak and non-resistant, but the sandstone is more resistant, forming a protective cover or cap rock. The Monument Uplift, which occurred 10 million years ago, caused the plateau surface to bulge and crack. Natural forces of wind and rain eroded the rock, forming gullies and canyons. As erosion progresses, portions of the plateau are detached to form a Mesa, this shrinks by sloping retreat to form Buttes, which further erode away to Pillars or Pinnacles, which eventually disappear. The wearing down of alternate layers of hard and soft rocks gradually revealed Monument Valley as seen today. On top, the harder Shinarump formation caps and protects the underlying De Chelly (Shay) Sandstone. Beneath this the soft Shale or Organ Rock forms the base of the cliffs, eroding out in horizontal terraces, creating the sloping foundations of the mountains. The orange-red sandstone cliffs are of the Cutler formation from the Permian period 160 million years ago. The buttes and mesas rise up to 1000 feet (305m), above the floor of the desert. There is evidence that the Anasazi inhabited the area up to 1300AD, with the presence of petroglyphs, pictographs and cliff dwellings.

Wildlife is scarce in this landscape, Black Throated Sparrows and lizards are present, with Ravens and American Kestrels flying overhead. The modern Navajo graze sheep in the canyon allowing the production of wool and woven rugs. From the Visitor Centre there are magical views of the famous Mittens and stretching across the desert to further Buttes and Mesas. The 17 mile scenic drive around the park can be attempted in a 4 wheel drive, but a Navajo Guided Tour is the best way to see the park in comfort.

Getting to Monument Valley and Nearby Attractions.

From Arizona it is 24 miles north from Kayenta on Highway 163. From Utah it is 25 miles south from Mexican Hat via Highway 163. The Gouldings Trading Post is 2 miles west of Highway 163, opposite the turning for Monument Valley. Gouldings has its own unique views of the Monuments. Nearby attractions include Canyon de Chelly (100 miles) and Navajo National Monument (53 miles).





Highway 163 to Monument Valley - UT - 28.06.09



Monument Valley, The Mittens - AR - 28.06.09



Zion - UT - 15.09.90



West Temple, Towers of Virgin, Zion - UT - 12.06.95

Zion: Utah

Zion National Park is in South West Utah. The park has an elevation of 4000 feet (1,200m) reaching a high point of 8700 feet (2650m) in the shape of Horse Ranch Mountain. The main visitor centre is on Highway 9 just inside the south entrance. The park was established in 1919. Rainfall in Zion averages 16 inches (40 cm) per year. The park does have 4 inches (10 cm) of snow in the winter. Temperatures in the summer period from May to September often exceed 35°C. The best time to visit is in May and June and again in September and October, avoiding the peak summer months of July and August.

Geology.

Zion National Park is at the western edge of the Colorado Plateau. The canyons have been sliced and formed over 15 million years by the action of the Virgin River. Zion is the midpoint on the natural system that ascends the Grand Staircase from Grand Canyon to Bryce Canyon. The significant tilting of the land allows rock formations to appear at elevations distinctly lower than formations that are much older.

There are seven formations found in the park: lowest and oldest is the Kaibab limestone, on top of this is the Moenkopi formation, mainly sandstone and shale; the Chinle formation is sandstone; the Moenave formation and Kayenta formations are on top of this, followed by the Navajo Sandstone, with the Temple Cap and occasionally the Carmel formation. The Navajo Sandstone is the most visible formation, in bright sunlight this rock appears white rather than tan, thus the name 'White Cliffs'

Jurassic 208 million years ago	Carmel Formation
	Navajo Sandstone
Triassic 245 million years ago	Kayenta Formation
	Wingate Sandstone
	Chinle Formation
	Moenkopi Sandstone
Permian 286 million years ago	Kaibab Limestone



Natural History.

At lower elevations forests of oak, cottonwood and willow are found surrounding the river. Higher up there are Ponderosa Pine and Quaking Aspen. Mule Deer are found along with predators such as Coyote and Bobcat. Ground Squirrels and Rock Squirrels are common and are prey for overflying Eagles and Red-tailed Hawks. Key places of interest in the park include Checkerboard Mesa (2033m) near the east entrance, Canyon Overlook and the Scenic Drive beside the Virgin River.

Getting to Zion and Nearby Attractions.

From Kanab (41 miles), follow Highway 9 to Mount Carmel Junction and proceed to the East Entrance, to go through the narrow Zion-Mount Carmel Tunnel, completed in 1930. From St George (41 miles) on Interstate 15, travel north to the Highway 9 junction to Hurricane. Proceed to Springdale and into the park via the South Entrance. Nearby attractions include Bryce Canyon National Park (86 miles) and Cedar Breaks National Monument (78 miles).



Virgin River, Zion - UT - 14.06.95



Checkerboard Mesa, Zion - UT - 06.06.95



Rock formations, Zion - UT - 16.08.91



Zion - UT - 14.06.95



Abajo Mountains, Monticello Golf Course - UT - 28.06.09



Bryce Canyon - UT - 15.08.91



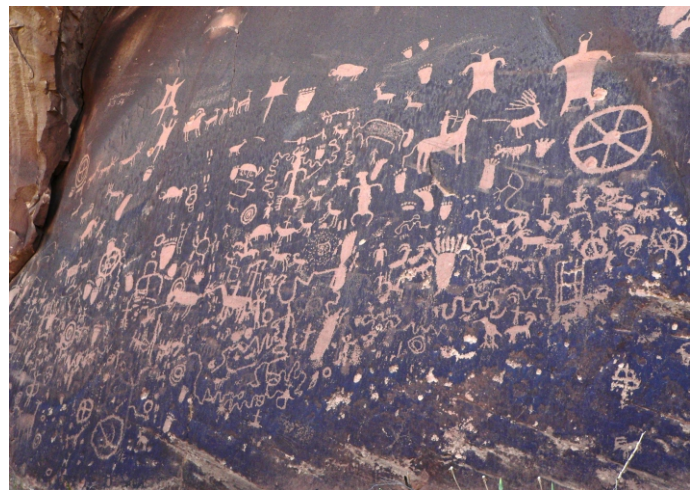
DSR 473, Durango - CO - 20.06.09



Grand Canyon North Rim - AR - 16.08.91



Monument Valley - AR - 13.09.90



Newspaper Rock - UT - 26.06.09



View from Gouldings, Monument Valley - AR - 23.06.09



Wilson Arch, Moab - UT - 22.06.09

The Grand Circle



Foy Lake, Abajo Mountains - UT - 22.06.09



Monument Valley - AR - 28.06.09



Southwest USA and Four Corners



- Describes National Parks and National Monuments in Southwest USA
- Includes Lake Powell, Moab and Monticello
- Describes Durango to Silverton and Cumbres and Toltec Railroads
- Includes Climate, Geology and Natural History of sites
- 100 colour photographs

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