



Badlands Visitor Guide

The official newspaper of
Badlands National Park

2007 Issue



Welcome to Badlands

Welcome to Badlands National Park. You will see some of the most spectacular breathtaking scenery in the region and our state. I also hope you are able to experience the quiet and serene surroundings while taking in one of our many hiking trails. Our sunrises are magnificent and our sunsets are amazing; therefore I hope you brought your camera along. The recently remodeled Ben Reifel Visitor Center is a must see with our award winning video and many new and exciting books in our bookstore run by Badlands Natural History Association.



When planning your trip to the South Unit of the park take the time and stop at the White River Visitor Center. You will enjoy the Native American influence and culture along with the vastness of the area in Badlands National Park.

Paige Baker, PhD.
Superintendent

Remember These Numbers . . .

6

Maximum length of the leash (in feet) that must be on your dog if it is in the park. Look for more regulations on page 3.

7

Number of days your passenger vehicle entrance pass permits you to explore the Badlands. Stay a little longer!

45

Maximum speed limit on park roads. Lower speed limits are posted in heavy traffic areas.

100

Minimum distance in yards you should keep from park wildlife. Any time an animal reacts to your presence means you are too close.

Things to See and Do

Plan Your Visit

- Drive the Highway 240 Loop Road (60 minutes).
- Take a side trip down Sage Creek Rim Road to Robert's Prairie Dog Town to see wildlife and experience spectacular views of the park (30 minutes).
- Visit the Big Pig Dig (30 minutes).
- Hike a Trail (see page 6 for a map of the trails that include descriptions, distances, and amount of time to allow).
- Attend a Ranger Program (June - August) (20 - 60 minutes).
- Stop by the Ben Reifel Visitor Center to watch the park video and tour the new exhibits (30 - 60 minutes).
- Take in a sunrise or sunset. They can be viewed from any of the overlooks or campgrounds located in the park (20 - 30 minutes).
- Stop by the White River Visitor Center which is staffed by members of the Oglala Sioux Tribe (45 minutes - 1 hour).
- Tour the South Unit of the park. Be sure to get permission from landowners before crossing private land. A list of contacts is available at the White River Visitor Center (45 minutes - all day).

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Connie Wolf,
Editor

Quick Facts about Badlands National Park

- Established as a National Monument in 1939.
- Redesignated Badlands National Park in 1978.
- Acreage: 244,000
- Wilderness: 64,144 acres
- Visitation: approximately one million visitors each year from all over the world.

Key Resources:

- Largest expanse of protected prairie ecosystem in the National Park system
- Considered one of the world's richest mammal fossil beds
- 50% of Badlands National Park is co-managed with the Oglala Lakota Nation, the second largest American Indian Reservation in the United States
- Badlands National Park and the Buffalo Gap National Grasslands are the most successful reintroduction sites for the black-footed ferret, one of the world's rarest mammals.

Key Management Issues:

- Visitor and employee safety
- Reduction of exotic plant species
- Protection of fossil resources
- Maintenance of park facilities
- Preservation of over 50,000 artifacts and specimens in museum collections
- Reintroduction of native wildlife (pictured below)



Black-footed
Ferret



Swift Fox



Bighorn
Sheep



Bison

Visitor Facilities

Ben Reifel Visitor Center

? Located at park headquarters the Ben Reifel Visitor Center reopened in 2006 with new exhibits, a 97 seat, air conditioned theater, a new park film, *Land of Stone and Light*, and improved classroom and restroom facilities. Badlands Natural History Association sells postcards, books, posters, and other educational materials. Open year round.

Hours of Operation	
April 15 - June 2	8 a.m. - 5 p.m.
June 3 - August 18	8 a.m. - 6 p.m.
August 19 - October 13	8 a.m. - 5 p.m.
October 14 - April 2008	9 a.m. - 4 p.m.

Badlands National Park is in the Mountain Time Zone.

White River Visitor Center

? Located on the Pine Ridge Reservation off Highway 27, this visitor center is operated by the Oglala Sioux Parks and Recreation Authority and is staffed by Tribal members. In 2007, new exhibits will be installed by the National Park Service. Contact (605) 455-2878 for more information.

Hours of Operation	
June 1 through September 15	10 a.m. - 4 p.m.

Picnic Areas

A Picnic tables are located at Bigfoot Pass and Conata Picnic Areas in addition to tables at the White River Visitor Center. Bigfoot Pass and Conata Picnic Areas do not have water available. Remember that open campfires are not permitted.

Cedar Pass Campground

RV Located near the Ben Reifel Visitor Center, Cedar Pass Campground has 96 sites. Camping fees are \$10 per night per campsite. The campground is operated on a first come, first served basis and has a fourteen day limit. Cold running water, flush toilets, covered picnic tables, and trash containers are available. The campground does not have showers or electrical hookups. A dump station is available with a \$1.00 fee per use. Campground hosts are on duty during the summer to assist with registration and provide information. Look for them in the afternoon and early evenings at the campground entrance booth. Open campfires are not permitted.

GROUP CAMPING

Four campsites are available in the Cedar Pass Campground for organized groups with a designated leader. The nightly fee is \$2.50 per person with a minimum fee of \$25.00. Advance reservations are required and can be made by contacting (605) 433 - 5235 or by writing Group Camping Reservations: Badlands National Park; 25216 Ben Reifel Road; P.O. Box 6; Interior, South Dakota 57750

Sage Creek Primitive Campground

A Open year round, access to this campground may be limited in winter and during the spring rainy season due to road conditions. The Sage Creek Rim Road is remote and unpaved. It is not recommended for large recreational vehicles. The campground is currently free and offers pit toilets and picnic tables. There is a fourteen day limit. There is no water available. Open campfires are not permitted.

Cedar Pass Lodge

The only lodging, gift store and restaurant in Badlands National Park, Cedar Pass Lodge provides visitors a distinctive collection of regional and handmade gifts, Native crafts and offers a memorable stay in this unique destination.

Hours of Operation	
May 1 - May 31	7 a.m. - 7 p.m.
June 1 - September 5	7 a.m. - 9 p.m.
September 6 - October 15	7 a.m. - 7 p.m.

The dining room closes 30 minutes before the gift shop.

For additional information: www.CedarPassLodge.com or write Cedar Pass Lodge, P.O. Box 5, 20681 Hwy 240, Interior, SD 57750; (605) 433-5460; fax (605) 433-5560

Accessibility

- The Ben Reifel Visitor Center and White River Visitor Center are both accessible to wheelchair users. Examples of fossils and rocks provide a tactile experience for all who enjoy handling objects, and is appropriate for the visually impaired.
- The Window Trail and the Door Trail are both accessible to wheelchair users.
- The Cedar Pass Campground has two accessible campsites. All campground restrooms are accessible. One group campsite is accessible.
- The Cedar Pass Lodge dining room and gift shop, as well as some cabins, meet accessibility standards.
- Several summer ranger programs, including all talks and portions of the Geology Walk, are accessible to wheelchair users. Others include adaptations for visual or hearing impaired visitors.
- Ask at the Ben Reifel Visitor Center about the listening devices that can be used to aid in hearing the park film.
- A complete listing of accessible facilities is available at the Ben Reifel Visitor Center or online at: <http://www.nps.gov/badl/>.

Local Services

Gas Stations and Convenience Stores

- Cactus Flat
- Interior
- Kadoka
- Philip
- Pine Ridge
- Rapid City
- Scenic
- Wanblee
- Wall

Restaurants

- Cactus Flat
- Kadoka
- Philip
- Pine Ridge
- Rapid City
- Scenic
- Wall

Motels and Campgrounds

- Cactus Flat
- Interior
- Kadoka
- Philip
- Pine Ridge
- Rapid City
- Wall

Hospitals and Clinics

- Kadoka
- Philip
- Rapid City
- Wall

Post Office

- Interior
- Kadoka
- Philip
- Pine Ridge
- Rapid City
- Scenic
- Wanblee
- Wall



For more information about these local communities, contact the Chambers of Commerce or South Dakota Tourism.

Interior City Council (605) 433-5445
 Kadoka Chamber 1-800-467-9217
 Philip Chamber (605) 859-2645
 Pine Ridge Chamber (605) 455-2685
 Rapid City Chamber 1-800-487-3223
 Wall Chamber (605) 279-2665
 South Dakota Tourism (605) 773-3301

kadokacity@wcnenet.com
ccphilip@gwtc.net
pracc@gwtc.net
<http://www.rapidcitycvb.com>
<http://www.wall-badlands.com>
<http://TravelSD.com>

Rules and Regulations

Rules of the Road

- The speed limit is 45 miles per hour, unless posted otherwise.
- Seatbelts are required for all passengers at all times.
- Drive cautiously and use pull outs to allow others to pass safely or to view wildlife.
- Do not pull onto the grass. The underside of your vehicle can start a prairie fire.
- Pedestrians have the right of way. Vehicles must stop for pedestrians in crosswalks. It's the law.
- Gravel roads may be closed due to heavy rain or snow. They will become slick and impassable.

Protect Yourself

- Drink at least one gallon of water each day.
- During lightning storms, avoid lone trees and high ridges. Return to your car if possible.
- Be careful on cliff edges and on Badlands formations, especially when surfaces are wet.
- Wear clothing and sunscreen to protect yourself from the sun.
- Wear sturdy boots or shoes to protect your feet from cactus spines.
- Beware of rattlesnakes that reside in the park. They can be found throughout the park.

Protect Your Park

- Leave fossils, flowers, rocks, and animals where you find them. Collecting in the park is illegal and punishable by a fine and/or imprisonment. Report all unusual sightings and finds to park staff at the Ben Reifel or White River Visitor Centers.
- Preserve your heritage. Do not enter, alter, or deface archeological sites. Do not collect artifacts.
- All vehicles and bicycles must travel on designated roads.
- Stay on designated trails in high use areas such as Fossil Exhibit and Cliff Shelf Nature Trails.
- Observe the speed limit and watch for wildlife crossing the roads.
- Help the park maintain its high air quality rating, turn off your engine when you are away from your vehicle. Letting your vehicle idle is punishable by a fine.



Camping and Campfires

- Campfires are not permitted due to the extreme danger of prairie wildfire.
- Camp stoves or contained charcoal grills can be used in the campgrounds or picnic areas.
- Wood gathering is not permitted.
- There are no hook-ups or showers available at the campgrounds in the park.



Backcountry Camping & Hiking

Before you venture into the backcountry or wilderness, there are some things you should know:

- Permits are not currently required for overnight stays in the Badlands backcountry. You should contact a staff member at the Ben Reifel Visitor Center or Pinnacles Ranger Station before setting out on an overnight trip. Backcountry registers are located at the Conata Picnic Area, the Sage Creek Basin Overlook, and the Sage Creek Campground.
- Twisted or fractured ankles are the most common serious injury sustained in Badlands National Park. Make sure you are wearing sturdy boots with good ankle support. The park is home to many burrowing animals. Watch your footing.
- Campfires are not allowed under any circumstances. Use a backpacking stove.
- Pets are not permitted on trails, in backcountry, or Wilderness Areas.
- The location of your campsite must be at least 0.5 miles from a road or trail and must not be visible from a roadway.
- There is little to no water available in the backcountry. The small amounts of water found are not drinkable or filterable due to the high sediment content. Always carry at least one gallon of water per person per day.
- All refuse must be carried out. Use the cat hole method to dispose of human waste. Dig a small hole 6 to 8 inches deep and a minimum of 200 feet from any watercourse. Since animals will often dig up cat holes and scatter the toilet paper, it is preferred that you pack out any toilet paper used. If you must bury toilet paper, use a minimal amount and bury with at least 6 inches of soil. Strain food particles from wastewater, pack out food scraps, and scatter remaining water more than 200 feet from any stream channel.
- Check the weather forecast. Severe thunderstorms are common during the summer, so are days above 100°F (38°C). September and early October are the best backpacking months.

**Emergency?
Call 911**

**Road Conditions?
Call 511**

Pets

- Pets are allowed only on paved or gravel roads and in developed areas such as campgrounds.
- Pets must be kept on a leash no longer than six feet at all times.
- They are not allowed on trails or in public buildings.
- Leaving an animal unattended and/or tied to an object is prohibited. Due to the extreme summer heat, do not leave your pet in your vehicle without leaving a window cracked or without water.

Bicycling

Bicyclist Warning: The Badlands Loop Road is narrow with many curves. Watch out for large RVs with extended mirrors.

- Bicycles are prohibited on park trails.
- Bicyclists are permitted on all park paved and unpaved roads and must obey all traffic regulations.
- Always ride with the flow of the traffic.
- Several steep passes make riding the Loop Road challenging.
- See and be seen. Wear bright colors and a helmet. A map of suggested routes is available at the Ben Reifel Visitor Center.

Contact Us

Mailing Address
Badlands National Park
25216 Ben Reifel Road
PO Box 6
Interior, SD 57750

Park Website
www.nps.gov/bad/

Email
badl_information@nps.gov

Park Headquarters
605-433-5361

Fax Number
605-433-5404

Paleontology



The National Park Service, working with South Dakota School of Mines and Technology (SDSMT), will spend another summer at the Pig Wallow Site, nicknamed the Big Pig Dig. From early June through late August, student paleontologists carefully remove centuries of sediment to expose more mysteries buried deep within the Badlands strata. The excavation started in June 1993 when two visitors from Iowa discovered a large backbone protruding from the ground near the Conata Picnic Area. Fortunately for all of us, these visitors followed the correct procedure: They left the bones undisturbed and contacted staff at the Ben Reifel Visitor Center. Although fossils are common in the Badlands, the newly discovered site sparked the interest of the park staff. Originally thought to be a four-day excavation, the site is now in its eleventh season of excavation.

The site's name, the Pig Dig, comes from that first exposed fossil, originally thought to be the remains of an ancient pig-like mammal called Archaeotherium. It was later identified as a Subhyracodon, a hornless rhinoceros, but the name "Big Pig Dig" stuck. Rhinoceroses are found today in Africa and Asia but smaller versions once lived in the Badlands. Along with Archaeotherium, seventeen other animal species have been found at the site. Discoveries include an ancient three-toed horse, tiny deer-like creatures, turtles, and a bobcat-sized saber-toothed cat. Over 13,000 bones have been excavated from the site for research purposes.

Why so many animals in one small place? Scientists hypothesized that 33 million years ago the area was a spring-fed watering hole, similar to the large watering areas used by African game today. As the climate began to change to semi-arid, the creatures had to travel longer and longer distances to find water. Some perished as they fought to survive after being mired in the soft sediments. Opportunistic animals



were drawn to feed on the dead carcasses. Archaeotherium was a scavenger, feeding on both plants and flesh. These large creatures trampled the site, deeply imbedding some bones and breaking up skeletons. Taphonomy is the study of how fossils are formed and preserved. Taphonomists working at the Pig Dig study the position and condition of bones at the site. These scientists attempt to interpret the activities of animals and try to puzzle out the conditions under which death occurred.

Simply put, a fossil is a preserved sign of ancient life. Paleontologists study animal tracks and plants preserved over time, as well as bones that have been converted into fossils through natural chemical processes. Additionally, other signs such as feces and pollen have also been fossilized and are studied to help get a broader picture of life in prehistoric North America. Paleontology is a science shrouded in mystery; however, it is not a science that can work in a vacuum. Geologists have examined the individual



rock layers contained within the Pig Dig to study the chemistry of the layers and the relationship between the fossils and the surrounding strata. Evolutionary biologists use specimens from the Badlands and compare them to relatives living today to try to create the path of change and adaptation that permitted some animals to thrive and others to become extinct.

The Pig Dig is an excellent example of the questions professionals have to answer: What events led to this large conglomeration of dying animals in one place? Oreodonts are the most common mammal found in the Badlands but only a few oreodont remains have been found in this site. Why is the most common mammal so rare at this site?

Fieldwork has a glamorous reputation from movies like Jurassic Park. Firmly in our minds is the idea of sunburnt scientists diligently working to uncover huge fossilized bones belonging to the great dinosaurs. However, reality is that for every hour of fieldwork, fossil preparators and other scientists spend twelve or more hours in a laboratory cleaning, repairing, and identifying each specimen. Prehistoric creatures range in size from huge dinosaurs to microscopic insects. A single specimen may fill a storage building or one hundred specimens may fit inside a film canister.



After labwork is completed, fossil specimens are maintained in storage facilities for research purposes or for display in museums and similar educational facilities. Each specimen is assigned a unique number for the larger collection of which it is a part. This process of cataloguing specimens includes critical information such as where the specimen was found, when it was found, and identifies it with as much detail as possible. This process enables scientists of the future, who may have more information or improved technology, to continue to work toward solving the mysteries of the paleontological past.

When you visit the Pig Dig, you are seeing the very careful, somewhat tedious work necessary for careful science. The paleontologist's tools of choice are soft-bristled brushes, dental picks, and small trowels. You may see field specimens being "jacketed," or carefully encased in a plaster cast for transport to the storage facility to await preparation for study or display.

You can help protect paleontological resources here and anywhere you travel by following these tips:

- Leave fossils where you find them. It's tempting to pick them up and take them with you, but don't. Removing them from their context destroys much of the information critical to scientists. Context refers to where they are found geologically and in what position the fossils are found.
- Be an informed visitor. Be familiar with current issues in paleontology. Once you watch for fossils in the news, you'll find them discussed almost daily.



Badlands Geology

Deep canyons, towering spires, and flat-topped tables can all be found among Badlands buttes. Yet, despite their complex appearance, they are largely a result of two basic geologic processes: deposition and erosion.

The serrated Badlands terrain did not begin eroding until about 500,000 years ago when water began to cut down through the rock layers, carving fantastic shapes into what had been a flat floodplain. The ancient fossil soils, buried for millions of years, became exposed once again. Many of the layers are gently warped and faulted due to mountain building activities that formed the Black Hills, 70 miles to the west.

Erosion is ongoing. Every time it rains, more sediment is washed from the buttes. One day, a peak may tower above the land; the next, a storm may weaken it just enough for it to crash to the ground. While the Badlands are long lasting in human terms, they are short lived in terms of geologic time. Evidence suggests that they will erode completely away in another 500,000 years, giving them a life of one million years. Compare that to the age of the earth, which is 4.6 billion years old. Even the Rocky Mountains, considered young, started to rise only 70 million years ago. On average, Badlands buttes erode one inch each year. However, change can occur much slower or faster.

As the Badlands buttes erode, some of the sediment is washed onto the prairie below, building up its level while the rest is carried by small streams to the White, Bad, and Cheyenne Rivers. These tributaries flow into the Missouri River, which drains into the Mississippi River. Eventually, some Badlands sediments will travel as far as the Gulf of Mexico.

The Loop Road hugs the Badlands wall, a long, narrow spine of buttes that stretches 60 miles from Kadoka west towards the town of Scenic. Wind, rain, and freeze/thaw action have gradually worn down the badlands sediments, leaving the Badlands Wall behind. As erosion has continued, the wall has retreated from the three major drainages. The town of Wall, South Dakota takes its name from this feature that dominates the horizon.

A quick look at the buttes will show that the Badlands were deposited in layers. These layers formed soft, sedimentary rocks, composed of minute grains of sand, silt, and clay that have been cemented into solid form. Geologists study sedimentary rocks to determine what type of environment caused the material to accumulate. Layers similar in character are grouped into units called formations with the oldest layers at the bottom.



The lighter colored **Sharps Formation** was primarily deposited from 28 to 30 million years ago by wind and water as the climate continued to dry and cool. Volcanic eruptions to the west continued to supply ash during this time. Today, the Brule and Sharps form the more rugged peaks and canyons of the Badlands.

As the Oligocene Epoch continued, a thick layer of volcanic ash was deposited, forming the bottom layer of the Sharps Formation. This **Rockyford Ash** serves as a boundary between the Brule and Sharps.

During the Oligocene Epoch, between 30 to 34 million years ago, the tannish brown **Brule Formation** was deposited. As the climate began to dry and cool after the Eocene the forests gave way to open savannah. New mammals such as oreodonts (sheep-like, herd mammals) began to dominate. Bands of sandstone interspersed among the layers were deposited in channels and mark the course of ancient rivers that flowed from the Black Hills. Red layers found within the Brule Formation are fossil soils called paleosols.

The greyish **Chadron Formation** was deposited between 34 to 37 million years ago as a river flood plain that replaced the sea. Each time the rivers flooded, they deposited a new layer on the plain. Alligator fossils indicate that a lush, subtropical forest covered the land. However, mammal fossils dominate. The Chadron is known for large, rhinoceros-like mammals called titanotheres. The formation can be recognized because it erodes into low, minimally vegetated grey mounds.

The sea drained away with the uplift of the Black Hills and Rocky Mountains, exposing the black ocean mud to the air. Upper layers were weathered into a yellow soil, called **Yellow Mounds**. The mounds are an example of a fossil soil, or paleosol.

The oldest formation is the **Pierre Shale**, these black layers were deposited between 69 and 75 million years ago during the Cretaceous Period when a shallow, inland sea stretched across what is now the Great Plains. Sediment filtered through the seawater, forming a black mud on the sea floor that has since hardened into shale. Fossil clams, ammonites, and sea reptiles confirm the sea environment.

Scenic Views of Badlands



Badlands at night



Lightning storm



Sunrise



Storm clouds



Sunset



After a rainstorm

Horse Use in Badlands

The Badlands Wilderness Area is located in the Sage Creek drainage and consists of 64,000 acres of eroded spires and mixed grass prairie, offering the prime horseback riding terrain in the park. Although most riders confine themselves to the Wilderness Area, horseback riding is allowed anywhere in the park except on marked trails, roads, highways, and developed areas. For day ride access, vehicles and horse trailers may be parked at overlooks and parking areas. Off road driving is strictly prohibited. There are no designated riding trails in the park but topographic maps are available for purchase at the bookstore, located in the Ben Reifel Visitor Center.

- Only certified weed free hay or processed horse feed products may be brought into the park.
- Horses and pack animals are not allowed to run loose, be loose herded, or trailed.
- The tying of horses and pack animals to any living or dead feature that causes damage to the feature, vegetation, or soil is prohibited.
- Picketed horses and pack animals shall not be kept within 100 feet of trails, campsites, or water sources.
- Picket pins should be packed in. Picket pin sites must be moved frequently to prevent overgrazing or other damage to vegetation. The pins must be pulled out of the ground prior to leaving camp.
- Horse and pack animal manure must be completely removed from the campground and must be well scattered in any other grazing areas in the park.
- If a horse or pack animal is lost or dies within park boundaries, the loss must be reported as soon as possible to park staff.
- Dogs and other pets are not allowed in the Badlands Wilderness Area.

A portion of the Sage Creek Campground is designated horse use. A watering hole known as CCC Spring is located about ½ mile southwest of the campground. Hitching posts are provided. Riders must provide weed free hay or pellets for feed. Horses should not be allowed to run free or be picketed in the campground. No fires

are allowed except in contained grills. The campground limit is ten consecutive nights.

No commercial horse rental or day rides are available in Badlands National Park. Local businesses offer day rides outside the park and outfitters may offer overnight backcountry trips under a commercial use license. For more information, contact South Dakota Tourism or local chambers listed on page 2 of this paper.



How Far To...?

South Dakota Towns & Cities

Buffalo Gap	102 miles
Custer	120 miles
Deadwood	122 miles
Hermosa	122 miles
Hot Springs	148 miles
Interior	2 miles
Kadoka	26 miles
Philip	34 miles
Pine Ridge	83 miles
Rapid City	88 miles
Scenic	38 miles
Sioux Falls	349 miles
Spearfish	131 miles
Sturgis	110 miles
Wall	30 miles

National & State Parks

Minuteman Missile NHS	8 miles
Bear Butte State Park	120 miles
Custer State Park	125 miles
Devils Tower NM	197 miles
Grand Teton NP	628 miles
Jewel Cave NM	148 miles
Mount Rushmore NM	99 miles
Rocky Mountain NP	475 miles
Theodore Roosevelt NP	343 miles
Wind Cave NP	132 miles
Yellowstone NP	574 miles

Attractions

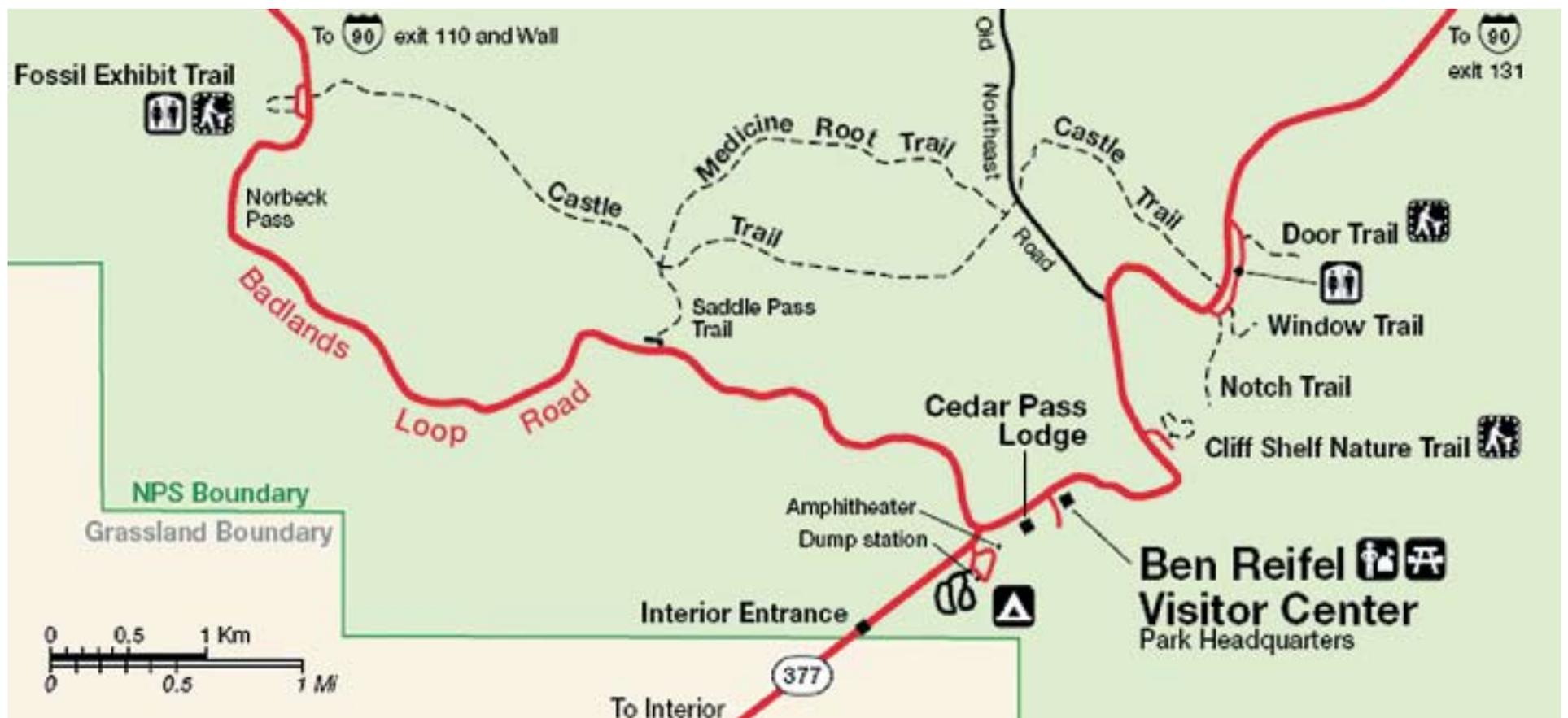
Wounded Knee via Scenic	82 miles
Wounded Knee via Kyle	67 miles
Crazy Horse Monument	114 miles

Out of State Cities

Denver, CO	490 miles
Minneapolis, MN	552 miles
Omaha, NE	458 miles



Hiking in the Park



Door Trail

.75 miles/1.2 km (round trip)

20 minutes

Easy. An accessible ¼ mile boardwalk leads through a break in the Badlands Wall known as “the Door” and to a view of the Badlands. From there, the maintained trail ends. Travel beyond this point is at your own risk. Watch for drop offs.

Window Trail

.25 miles/.40 km (round trip)

20 minutes

Easy. This short trail leads to a natural window in the Badlands Wall with a view of an intricately eroded canyon. Please stay on the trail.

Notch Trail

1.5 miles/2.4 km (round trip)

1 1/2 - 2 hours

Moderate to strenuous. After meandering through a canyon, this trail climbs a ladder and follows a ledge to “the Notch” for a dramatic view of the White River Valley. Trail begins at the south end of the Door and Window parking area. Watch for drop offs. Not recommended for anyone with a fear of heights. Treacherous during or after heavy rains.

Castle Trail

10 miles/16 km (round trip)

5 hours

Moderate. The longest trail in the park begins at the Door and Window parking area and travels five miles one way to the Fossil Exhibit Trail. Relatively level, the path passes along some Badlands formations.

Cliff Shelf

.5 miles/.8 km (round trip)

1/2 hour

Moderate. This loop trail follows boardwalks and climbs stairs through a juniper forest perched along the Badlands Wall. A small pond occasionally exists in the area and draws wildlife such as deer or bighorn sheep. Climbs approximately 200 feet in elevation. Please stay on the trail.

Saddle Pass

.25 miles/.40 km (round trip)

1/2 - 1 hour

Strenuous. This short trail climbs up the Badlands Wall to a view over the White River Valley. The trail ends where it connects with the Castle and Medicine Root Loop Trails.

Medicine Root Loop

4 miles/6.4 km (round trip)

2 hours

Moderate. This generally rolling spur trail connects with the Castle Trail near the Old Northeast Road or at the intersection of the Castle and Saddle Pass Trails. Trail users are provided the opportunity to explore the mixed grass prairie while enjoying views of the Badlands in the distance. Watch for cactus.

Fossil Exhibit Trail

.25 miles/.40 km (round trip)

20 minutes

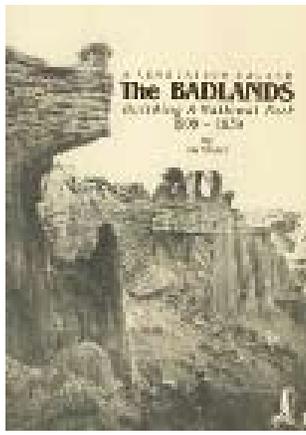
Easy. Fully accessible trail features fossil replicas and exhibits of now extinct creatures that once roamed the area.

Badlands Weather

Month	January	February	March	April	May	June	July	August	September	October	November	December
Average High Temperatures	34°F	40°F	48°F	62°F	72°F	83°F	92°F	91°F	81°F	68°F	50°F	39°F
Average Low Temperatures	11°F	16°F	24°F	36°F	46°F	56°F	62°F	61°F	51°F	39°F	26°F	17°F
Average Precipitation (inches)	0.29	0.48	0.90	1.83	2.75	3.12	1.94	1.45	1.23	0.90	0.41	0.30

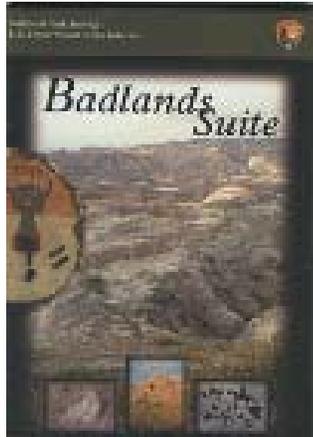
Weather warnings and forecasts for Badlands National Park and vicinity can be heard on NOAA Weather Radio 162.450 MHZ. Forecasts can also be obtained by calling 605-341-7531.

Shop Badlands Natural History Association



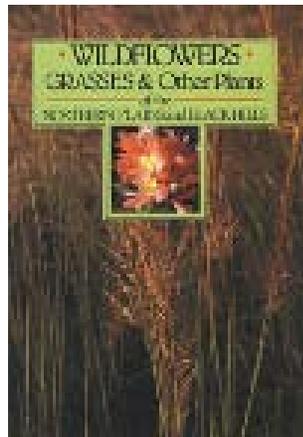
A Revelation Called the Badlands Building a National Park 1909 – 1939
Author: Jay Shuler

The National Park Service and South Dakota State archives provided the photos and history of the struggle to protect the White River Badlands as a national park. First called "Wonderland National Park," then "Teton National Park," the area was finally declared a national monument by Franklin D. Roosevelt in 1939. The story concludes with a transcription of an oral history of one of the early cabin maids at Cedar Pass Lodge, who remembers dancing to Lawrence Welk and the Hotsy Totsy Boys in the Cedar Pass Dance Hall.



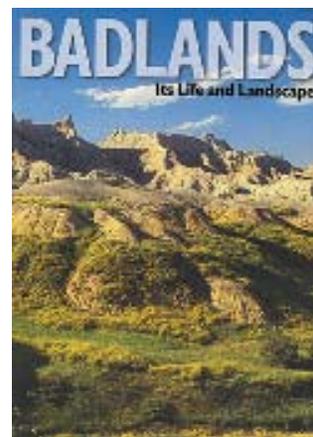
Badlands Suite
\$19.99 **
DVD includes:
Land of Stone and Light
From Field to Lab
Multiple Perspectives

This DVD takes you on a journey into the White River Badlands of South Dakota. In three different presentations, become acquainted with the people of this place – American Indians, ranchers, scientists, explorers, and naturalists – and witness how millions of years of natural processes have carved and exposed signs of past wildlife making this area the richest mammal fossil beds in the world.



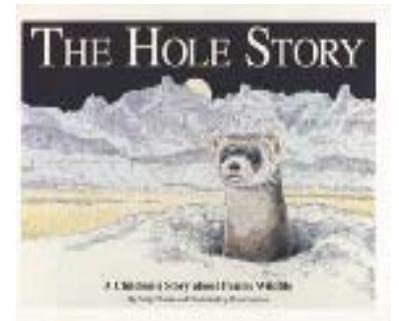
Wildflowers, Grasses, & Other Plants of the Northern Plains and Black Hills
Author: Theodore Van Bruggen
\$8.95 **

Color photographs and descriptions of over 300 plants found in Badlands National Park and the surrounding areas. Organized by plant color.



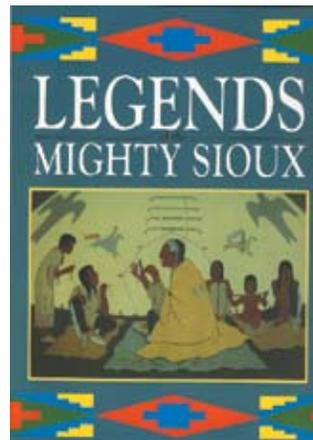
Badlands Its Life and Landscape
Author: Joy Keve Hauk
\$7.95 **

Packed with information on geology, paleontology, human history, flora, and fauna, this booklet has numerous identifying photos.



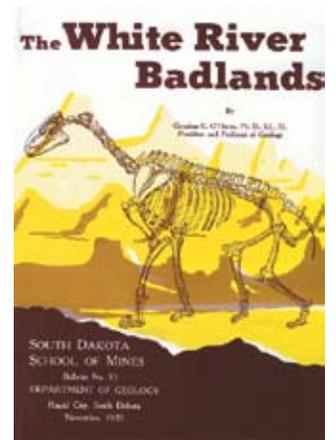
The Hole Story
Author: Sally Plumb
\$6.95 **

Wonderful illustrations accompany this children's story of life on the prairie. Learn about Kit, an endangered black-footed ferret, and his struggle to survive when he gets reintroduced to the wild in Badlands National Park.



Legends of the Mighty Sioux
\$7.95**

A compilation of forty-five legends of the famous Sioux Indians of South Dakota. All of the legends pertain to the Sioux' traditional lore, from tales told around the campfire, to legends associated with places or mountains, and battle and hunting legends. Much of the material was narrated to Project managers when the Indians were assembled for pow-wows, or at church meetings.



The White River Badlands
Author: Cleophas C. O'Harra Ph.D., LL.D., President and Professor of Geology
\$9.95 **

This is the only book in print specifically about the geology and paleontology of the White River Badlands of South Dakota at present. Originally written in 1920 by the President of the South Dakota School of Mines, it is filled with line drawings of skeletons and artist's renditions of what the creatures of the late Eocene and Oligocene who roamed the area that is now Badlands National Park might have looked like. There are also many historic photos.

****All prices are subject to change.**



Join Badlands Natural History Association

The Badlands Natural History Association, or BNHA, was established in 1959 to work in cooperation with the National Park Service in furthering its scientific, educational, historical and interpretive activities. Since then, BNHA has contributed over \$1 million to the park. Sales of BNHA items in the park visitor center results in donations to the park's education and resource management programs.

BNHA is a nonprofit organization that has an active membership program. To become a member of BNHA, complete the membership form and submit with payment of dues at the Ben Reifel Visitor Center or mail to BNHA; P.O. Box 47; Interior, South Dakota 57750. Members receive a 15% discount on all sales of BNHA merchandise and will receive a discount at most other National Park Service bookstores.

Your membership dues are used directly to enhance the experience of visitors to the area. An investment to the future, your contribution is a perpetuation of the National Park idea.

Your membership dues will be gratefully received, immediately acknowledged, and efficiently used. Your membership dues are tax-deductible.

Individual Association Membership \$25 per person per calendar year. Includes membership card allowing you a 15% discount at BNHA stores and discounts with other cooperating associations in the U.S. and special mailings through the year.

Lifetime Membership \$250 per person. Includes membership card allowing you a 15% discount at BNHA stores and discounts with other cooperating associations in the U.S. and special mailings.

Name _____

Address _____

City _____ State _____ Zip _____

Phone _____ Amount Enclosed _____

Entrance Fees

Per Vehicle Entry Private Non-Commercial Vehicle	7 Days	\$15.00
Motorcycle Flat fee	7 Days	\$10.00
Per Person Entry Bicycle, Non-Commercial Bus Passenger	7 Days	\$7.00
Badlands Park Pass Unlimited entry to Badlands NP	1 Year	\$30.00
Interagency Annual Pass Valid for entrance to designated federal fee areas	1 Year	\$80.00 (available only at interagencies)
Interagency Senior Pass 62 & Over US Citizen	Lifetime	\$10.00
Interagency Access Pass Permanently Disabled US Citizen	Lifetime	FREE
Commercial Tour Based On Seating Capacity	Sedan 25* (1-6) Van 50 (7-15) Mini-Bus 60 (16-25) Motorcoach 150 (26 & up)	\$150 \$60 \$150 \$150

* plus \$7 per person for SEDAN ONLY



Annual Pass



Access Pass



Senior Pass

INTERAGENCY PASS PROGRAM

The following passes are available at Badlands National Park:

Interagency Pass

\$80 - Valid for one year from month of purchase
This nontransferable annual pass covers the entrance fees or standard amenity fees at sites managed by the National Park Service, U.S. Forest Service, Bureau of Land Management, Bureau of Reclamation, and U.S. Fish and Wildlife Service. It does not cover camping fees, parking fees, user fees (i.e. cave tours), concession activities, or cooperating association bookstore charges.

Interagency Senior Pass

\$10 - Valid for holder's lifetime
This nontransferable passport allows lifetime entrance to all National Park Service, U.S. Forest Service areas, U.S. Fish and Wildlife Service, Bureau of Reclamation, and Bureau of Land Management areas. It also entitles the bearer to a 50% discount on camping fees in federal campgrounds. It cannot be used at concession facilities or cooperating association bookstores. Identification must be provided at time of purchase.

Interagency Access Pass

Free - Valid for holder's lifetime
This nontransferable pass allows lifetime entrance to all National Park Service, U.S. Forest Service, U.S. Fish and Wildlife Service, Bureau of Reclamation, and Bureau of Land Management areas to United States citizens or permanent residents who are blind or permanently disabled. It also entitles the bearer to a 50% discount on camping fees in federal campgrounds. It cannot be used at concession facilities or cooperating association bookstores.

Your Entrance Fees At Work

Badlands National Park is a designated Federal Recreation Fee Area. Fees collected at Badlands directly benefit this park and other units of the National Park Service. Fees paid at Badlands are unique in that under special agreement fees are split with the Oglala Sioux Tribe.

Some of the projects that have been funded by fees at Badlands include:

- Upgraded comfort stations in the Cedar Pass Campground.
- Park-wide trail improvements.
- New exhibits and park film at the Ben Reifel Visitor Center.

- Installation of restroom facilities at overlook areas.
- Support for the Big Pig Dig operation.
- Modernization of park bison corrals.
- Support for reintroduction of bighorn sheep and black-footed ferret within the park.

In 2007, the National Park Service introduced new passes that may be used at many federal recreational areas. To purchase one of these passes please speak with a fee collector at an entrance station when entering or exiting the park.

Exploring the South Unit

In 1976, Badlands National Monument entered into an agreement with the Oglala Lakota Nation to co-manage and protect 122,000 acres that had been used as an aerial bombing range during World War II. This doubled the size of the Monument and led Congress to redesignate the area as Badlands National Park in 1978. The new Badlands National Park was now subdivided into two units: the North Unit, consisting of park land north of Highway 44, and the South Unit, park land south of Highway 44.

The South Unit contains many sites sacred to the Oglala Lakota and other American Indian cultures. Please show respect by not touching or removing objects tied to trees and shrubs. All artifacts must be left in place. Remember to practice Leave No Trace principles at all times in the Stronghold District.

The White River Visitor Center was opened in 1978 and has remained open during the summer months to provide orientation to the South Unit and Pine Ridge Indian Reservation.

Due to the quantity of unexploded ordnance that continues to litter the areas used for bombing practice, a multi-agency

task force is working toward clearing the South Unit of these devices. Please contact a ranger if you find an unexploded ordnance. Cellular phones can detonate these devices.

The South Unit remains largely undeveloped and lacks access points, such as roads and trails. The South Unit is a protected natural area and is not managed as a four-wheel-drive recreation area. Travelers must remain on existing primitive road tracks. Do not leave these tracks. We encourage anyone interested in backcountry hiking or camping in the South Unit to notify the ranger at the White River Visitor Center to ensure your safety and that you are not trespassing on private lands. Explorers must often cross private land to access the public land. Always obtain permission from landowners for vehicular or foot access before setting out for Cuny Table, Stronghold Table, and Palmer Creek. A list of land owners is available at the White River Visitor Center. Be prepared with alternative destinations if land owners do not grant permission to cross their property. Hikers in the South Unit must be experienced map readers. Plan on a minimum of two days to hike in and out of the remote Palmer Creek area.

Become a Junior Ranger!



Are you ready to climb out of that car and have some fun with a ranger? Children ages 2 and older can become a Badlands National Park Junior Ranger! Junior Rangers are kids like you - national park explorers, fun seekers, and concerned citizens. There are two ways to become a Junior Ranger and earn your official Badlands badge.

Join us for the 10:30 a.m. Junior Ranger Program (June - August). Meet at the Cedar Pass Campground Amphitheater for 45 minutes of laughs and learning. The program is different every day, but here are a few things you might do:

- Go on a nature hike.
- Play guessing games to learn characteristics of prairie plants and animals, then hunt around the prairie for tracks and signs.
- See Badlands fossils and discover what paleontologists do.

Complete a Junior Ranger Booklet (year round). You can pick up your free Junior

Ranger Booklet at the Ben Reifel Visitor Center. Return the booklet to a ranger when you have completed the activities and you will be awarded your badge. You can also complete the booklet as you travel through the park. Mail it back to us for review and we will return it with your Junior Ranger badge enclosed.

Parents! Junior Ranger Programs are fun for the whole family. Please attend the 10:30 a.m. Junior Ranger Program with your children. Your family can collect Junior Ranger badges at over 300 national parks.

Look for online adventures at:

www.nps.gov/webrangers.



Badlands Junior Ranger Pledge

As a Junior Ranger, I promise to help take care of National Parks and all the plants and animals that live there. I will learn more about special places like the Badlands and help teach others about nature.



Minuteman Missile

National Park Service
U.S. Department of the Interior

National Historic Site
South Dakota



Ace In The Hole

Here you will find remnants of the Cold War, including an underground launch control center and a missile silo. Minuteman missiles held the power to destroy civilization as we know it. Yet the same destructive force acted as a deterrent which kept the peace for three decades. Minuteman Missile makes it possible to revisit a time when the threat of nuclear war haunted the world.



Due to innovative solid-fuel technology, the Minuteman could be deployed in remote underground silos and launched by crews stationed at launch control centers miles away. Designed to travel over the North Pole and arrive at its target thirty minutes after the launch command was given, its 1.2 megaton warhead carried the explosive equivalent of over one million tons of dynamite.

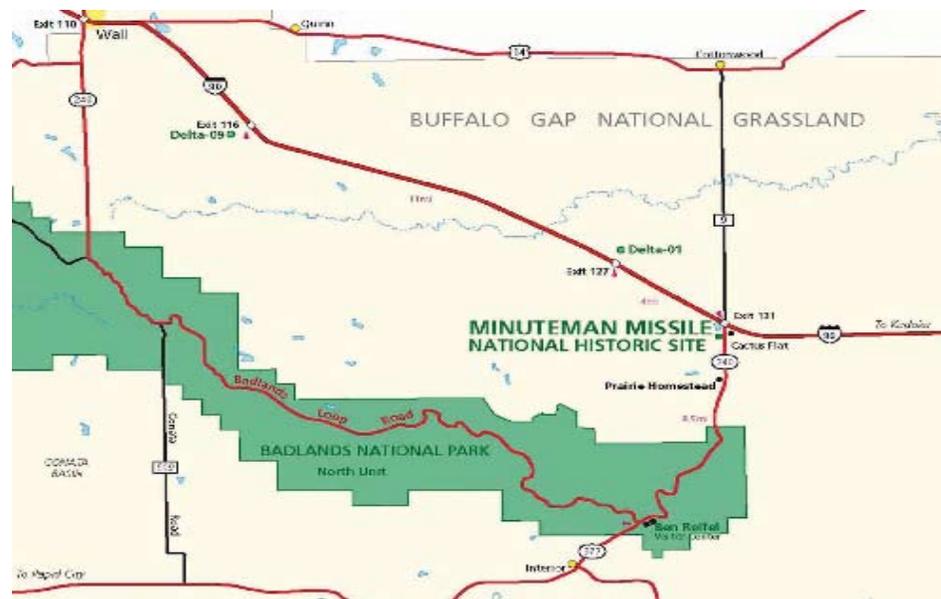


You Have Questions – We Have the “Top Secret” Answers

Because nuclear weapons sites were under tight security, most civilians developed their understanding of missiles from popular movies like *War Games* (1983) and *Dr. Strangelove Or: How I Learned to Stop Worrying and Love the Bomb* (1964). As is often the case, the “Hollywood version” of life around missiles could be misleading and inaccurate. How much of the truth do you really know?

1. Were the missiles “top secret?”
2. Were the missiles launched by pressing a red button?
3. If a missileer did not execute a launch command would their partner shoot them?
4. Did the missileers know where the missiles were going?
5. How many missileers did it take to launch the missiles?
6. Were most missiles aimed at cities?
7. Are there any Minutemans still in South Dakota?

The answers to these questions cannot be found anywhere on this page. The only place to find these answers is at Minuteman Missile National Historic Site’s visitor contact station. It is now time for you to come visit Minuteman Missile and ask a ranger these questions and learn the real truth about nuclear missiles.



Visiting Minuteman Missile

Where is Minuteman Missile National Historic Site?

The Minuteman Missile National Historic Site visitor contact station is located off Interstate 90, exit 131, beside the Badlands Trading Post (BP gas station). The contact station is the starting point for all tours to the site. The contact station also includes exhibits and a park orientation video which places the Minuteman in historic context.

How do I get to the Minuteman Missile Visitor Contact Station from the Badlands?

If you are at the Badlands National Park Visitor Center take South Dakota Highway 240, 8.5 miles north towards Interstate 90. Just before reaching the interstate you will see the Badlands Trading Post (BP gas station) on the left. The Minuteman Missile Visitor Contact Station is adjacent to the Trading Post.

What are the hours for the Visitor Contact Station?

The Minuteman Missile Visitor Contact Station is open from 8 a.m. to 4:30 p.m. Monday through Friday. It is closed on weekends.

How can we see the Minuteman Missile sites?

Tours of the site are free! The two facilities which make up the site - Launch Control Facility, Delta-01 and Launch Facility Delta-09 - are given daily during the summer season at 9 a.m. and 1:30 p.m. During the fall, winter and spring seasons, one tour is given per day at 10 a.m. Tour spaces are extremely limited; it is best to make reservations in advance. Call 605-433-5552 to make reservations.

Can we see the missile silo?

Launch Facility Delta-09 (the missile silo) is open Monday through Friday mornings (Memorial Day - Labor Day) from 8-11 a.m. to all visitors. A ranger will be stationed on site to provide interpretation and answer any questions. Delta-09 is located on the south side of Interstate 90, exit 116. If you are eastbound on I-90, take exit 116 and turn right onto the county road. Follow this road until the pavement turns dirt. After ½ mile the silo will be on the right. If you are westbound on I-90, take exit 116 and turn left onto the county road. The pavement quickly turns to dirt and the silo will be on the right.

Got Kids?

Ask about our Junior Ranger Program. Our activity books are designed for ages 7 - 11 and 12 and up.

Ranger Programs



These programs run from Friday, June 1 through Saturday, August 18, 2007

 = accessible

Badlands National Park is in the Mountain Time Zone. Programs are presented at several locations throughout the park. These locations are identified in the park newspaper and park brochure. You can also find them by watching for white signs announcing programs along the Loop Road.

Geology Walk

8:30 a.m. Daily

Explore the geologic story of the White River Badlands on this 45 minute walk. Meet at the Ben Reifel Visitor Center. Wear a hat and closed-toe shoes. Terrain is varied.

Prairie Walk

5:30 p.m. Daily

Join a park ranger for this easy, 1/2 mile walk into the prairie. Meet at the Ben Reifel Visitor Center for an exploration of prairie life and landscape. Wear closed-toe shoes and bring a hat and water.

Fossil Talk

10:30 a.m., 1:30 p.m., 3:30 p.m. Daily

Explore what fossils can tell us about the story of ancient life in the Badlands and why they should be protected at this 15 - 20 minute talk. Presented at the Fossil Exhibit Trail, 5 miles northwest of the park headquarters/visitor center on the Badlands Loop Road.

Evening Program

9:00 p.m. Daily

(Starting August 1st, the evening program will be given at 8:30 p.m.)

Join a park ranger for a 40 minute presentation at the Cedar Pass Campground Amphitheater. A weekly listing of program topics is available at the Ben Reifel Visitor Center and bulletin boards throughout the park. Program will start when the sky is dark!

Junior Ranger Program

10:30 a.m. Daily

Calling all visitors between 7 and 12 years of age! Meet at the Ben Reifel Visitor Center for a 45 minute adventure into an aspect of the Badlands. Wear closed-toe shoes and a hat. It may be a walk, a game, or another activity. Attendees will be awarded a Junior Ranger badge. Parents are also welcome!

Check park bulletin boards or at the Ben Reifel Visitor Center for updated program listings and special programs and events.



Visitors: Be Alert for Construction

During the Summer of 2007, there will be work zones throughout the park for road construction and improvement, fencing projects, boardwalk and building repairs. In the fall Loop 240 at Ancient Hunters Overlook will undergo a culvert replacement that will close the road for up to one month. As we go to press, the schedule for these other activities has not been set. Please check at the entrance stations or the Ben Reifel Visitor Center and White River Visitor Center for information on closures or delays. Use caution around heavy equipment. Please observe all road warnings. Do not enter areas posted as "closed." Our goal is a safe visit for all!

Wildlife



Pictured (Top Row L to R) Black-tailed Prairie Dog, Coyote, Swift Fox, Black-billed Magpie, Prairie Rattlesnake, Bobcat (Bottom Row L to R) American Bison, Porcupine, Bighorn Sheep, Black-footed Ferret