When Everything Old Is New Again

HERE AT BADLANDS NATIONAL PARK, WE HEARTILY ENDORSE THE IDEA that everything old is - and can be - new again. In fact, our most important park resources - fossils and geology - are variations on just this theme. Consider Badlands' fossils: timeworn bones and shells "remodeled" by minerals and, in the process, turned from bone to stone, preserving remnants of the distant past. Look again at the Badlands formations - can you see ancient floodplains, rivers and soils hardened to rock and now "remodeled" by the eroding power of wind and water to form peaks and spires, towers and pyramids? You might call it the reuse, recycle, remodel theory of nature. In this way, an object keeps the essence of its past and, at the same time, is transformed into something more durable for the future.

It's not just nature that employs this technique. We've probably all seen it in our own neighborhoods as families grow and needs change, the house that was meant to be "home" becomes "far too small" or "just not right." So - we knock out walls, add new rooms, replaster, recarpet, and Voila! everything old is new again. It's "home" once more. At Badlands National Park, our "home" - the Ben Reifel Visitor Center - long ago became too small for our family of visitors. In the fall of 2004, taking our cue from the natural processes surrounding us, we began to take the old of the Ben Reifel Visitor Center and make it new again - preserving its essence and rejuvenating it for a new era.

As the first Mission 66 building in South Dakota, the Ben Reifel Visitor Center (then called the Cedar Pass Visitor Center) was part of a new National Park Service concept. Inaugurated in 1956, Mission 66 was a ten year program to develop visitor facilities in national parks and monuments by the 50th anniversary of the National Park Service. The very idea of the visitor center originated with these Mission 66 planners. Park visitors surveyed in the 1950s expressed their desire for "more information about the sights to see." The future visitor to Badlands will be exposed to more of nature. In this way, an object keeps the essence of its past and, while the structure is preserved, the interior of the building is completely remade - new interactive exhibits, an indoor theater, and a classroom for groups. In the optimistic words of former Chief Park Naturalist John Palmer in 1959, "The coming year will see a great change take place at Badlands . . . . An adequate exhibit room will be available for our visitors. The latest development in audiovisual aids will help the visitor decide where to go and what to see . . . . The future visitor to Badlands will be exposed to more and better interpretive facilities than ever before." Although first uttered over 40 years ago, these old words become new again as we develop a recycled facility that will provide all visitors a gathering place for education, inspiration, and, well fun.

Cecilia Mitchell is a career National Park Service employee who took time off from her paid path to volunteer her time and talents during the summer of 2004 at Badlands National Park. Thank you, Cecilia!

Voila!

Visitor Notice: Visitor Center Closed for Rehabilitation During Summer, 2005

The Ben Reifel Visitor Center is closed to the public through October, 2005 as construction activities are underway. New exhibits will be installed in October and a new park film unveiled in 2006. Improvements include:

- Addition of a 100-seat indoor theater
- Fabrication of interactive exhibits
- Expansion of restroom facilities
- Enhanced visitor information desk
- Improved bookstore
- Inclusion of classroom for school groups with distance learning capabilities
- Renovation of park library, audiovisual services, and education offices
- Provision of a facility in compliance with accessibility laws for all park visitors

During summer, 2005, a temporary contact station with bookstore and restrooms is available daily, located 100 meters behind (south) of the Ben Reifel Visitor Center. Parking is located across from the contact station. Bus and RV parking is also available.

Park Film Unavailable

Due to the small size of the Contact Station, the current park movie, Buried Fossils, Living Prairie, is unavailable this summer. The bookstore is operated by our non-profit partner, Badlands Natural History Association, who has funded portions of the new exhibits and education program using proceeds from bookstore sales.

Emergency? Call 911

3 Calling All Kids! Junior Rangers!

Get out of your car and spend somme time with a ranger while you learn. Can’t make the 10:30 a.m. program? Purchase a Junior Ranger book-let at the bookstore in the Cedar Pass Contact Station. Either way, you can join the ranks of the National Park Service rangers, junior style!

3 Tribal Partnership

During summer, 2005, the White River Visitor Center is staffed by Oglala Lakota Tribal members funded by the National Park Service and employed by the Oglala Sioux Parks and Recreation Authority (OSPRA). Special programs or events are available as scheduled by OSPRA. Contact (605) 455-2878 for more information.

5 Take a Hike

Got 15 minutes? Walk the Fossil Exhibit Trail boardwalk. Want to spend 30 minutes on your feet? Consider the Door Trail. Like nature trails? The Cliff Shelf Trail is the place for you. An adventurer? The 1.5 mile Notch Trail or 5 mile one way Castle Trail may offer you exactly what you seek. Turn to page 5 for more information.
Campfires are not permitted on trails, in backcountry or designated wilderness areas. While most visitors stick to the roads, overlooks and developed areas, the Badlands Wilderness Area south of Sage Creek Primitive Campground and Conata Picnic Areas does not have water available. Open campfires are not permitted.

Cedar Pass Campground
Located near the Ben Reifel Visitor Center, Cedar Pass Campground has 96 sites. Camping fees are $10 per night per campsite. The campground is open on a first come, first served basis and has a fourteen day limit. 

Horseback riding and stock use is allowed throughout the park except on marked trails, roads, or in developed areas. The Badlands Wilderness Area south of Sage Creek Primitive Campground is popular with stock users. Hitching posts are located in the campground. A brochure on horse use is available from the Cedar Pass Contact Station.

As for hikers, water is a scarce resource in Badlands National Park. Natural water sources are often full of silt and livestock unacclimated to the local water will not drink from these sources. If you plan to spend several days in the backcountry, you will need to pack in water for your livestock as well as for yourself.

Certified weed free feed is required in the park to minimize the spread of invasive exotic plants into the prairie ecosystem. Start your horses on the weed free feed several days prior to your trip to Badlands National Park so that seeds in the digestive tract will have passed through.

At this time, no guides are licensed to provide trail rides inside the park. Several private operations do provide trail rides on surrounding private land. Inquire at the visitor center for current information on horseback rides.

Backcountry Camping
Want to walk on the wild side of Badlands National Park? How about a trip into the park’s backcountry or designated wilderness areas? While most visitors stick to the roads, overlooks and developed areas, there is more of the park to explore. Over 64,000 acres of the park have been designated by Congress as the Badlands Wilderness Area, a place to remain forever wild. The wilderness is divided into two units. The Sage Creek Unit is the largest. Located in the northwest part of the park, its boundaries follow the park boundaries to the south and west, the Sage Creek Rim Road to the north and the Conata Road to the east. The smaller Conata Unit is located south of the Badlands Loop Road between the Bigfoot Pass Picnic Area and the Conata Road. These areas are shown on the park map you received at the entrance station.

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 Sage Creek Campground for the park to maintain use figures.

• Twisted or frayed ankles are the most common serious injury sustained in Badlands National Park. Make sure you are wearing sturdy boots with good ankle support.

• 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.

• Dress for the weather forecast. Severe thunderstorms are common during the summer. So are days above 100°F. September and early October are the best backpacking months.

For more information on enjoying and protecting the park, see the Leave No Trace Information on page 4.

Sage Creek Primitive Campground
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
Open year round, the Cedar Pass Lodge is located in the Cedar Pass Campground. Full menu dining, air conditioning and central heating. The Lodge is permitted.

Cedar Pass Contact Station
Located at park headquarters, a temporary contact station is in place to serve you while the main park visitor center undergoes rehabilitation. It offers an information desk, restrooms, and a public telephone. Badlands National History Association sells postcards, books, videos, posters, and other educational materials. Open year round.

White River Visitor Center
Located on the Pine Ridge Reservation off Highway 27, this contact station is operated by the Oglala Sioux Tribe and Recreation Authority and offers a staffed information desk, park orientation movie, exhibits, restrooms, and water. Contact (605) 455-2878 for more information.

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Joe Johnsen and Pat Sampson loading a pack horse after spending a night in the Badlands Wilderness.
Your Entrance Fees at Work!

In 1999, Congress authorized national parks to retain entrance fees collected to the growing repair and maintenance backlog, for interpretation, signage, habitat restoration, facility enhancement, and resource preservation projects. Prior to 1999, entrance fees were deposited in the national treasury and distributed to other federal agencies. This change in fee collection has enabled Badlands to undertake projects that would not otherwise be funded. Badlands National Park is unique in that under a special agreement, the Oglala Sioux Tribe receives a portion of this park’s entrance fees. As a result, 40% of the fees collected stay in this park, rather than 80% as at most parks.

Using your entrance fee dollars, we have funded the following projects in the park:
- Rehabilitation and winterization of campground comfort stations to provide accessibility for mobility impairments and improve campground facilities for winter camping.
- Trail improvements park wide to improve safety and accessibility and to protect fragile resources potentially damaged by off-trail travel.
- Prepare and present programs in area schools under the Badlands In Your Classroom outreach program, which reaches nearly 10,000 students each year.
- Restoration of approximately 40 acres of native prairie, using a combination of prescribed fire, reseeding with native grass, and nonnative plant control. These control measures can effectively eradicate or reduce invasion of nonnative species and preserve one of the largest native prairie ecosystems in North America.
- Installation of restroom facilities at Pinacles, Door Trail, and Fossil Exhibit Trail.
- Compliance to construct a new sewage lagoon facility that is environmentally sound.
- Preparation and curation of fossils from the Big Pig Dig site.

Congress established the fee structure charged at our national parks. In 2006, the entrance fee for Badlands National Park will raise to $5 per passenger vehicle in an effort to continue to work toward more self-sufficient public lands.

Consumer Reports has listed the U.S. national parks as a very “best buy.” Remember your entrance receipt is good for seven days of exploration. We continue to be a bargain for your vacation.

Are you ready to climb out of that car and have some fun with a ranger? If you are between the ages of 5 and 12, you 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 cool ways to join the Junior Ranger ranks and earn your official Badlands badge.

Join us for the 10:30 a.m. Junior Ranger Program. 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 an unusual nature hike. Can you walk backwards? If you were a rabbit, where would you hide? What smells or sounds drift across the Badlands?
- 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. Imagine a time so long ago that the animals looked completely different from today and this place could have looked like Africa or Florida - or even been deep underwater!

Some families are on a tight time budget and cannot work their schedule around the 10:30 ranger program. If you have lots of places to go and many people to see, the Junior Ranger Activity Booklet may be for you. Booklets can be purchased for $1.50 at the bookstore located in the Cedar Pass Contact Station. It will take at least 45 minutes for you to finish the puzzles and activities. Return the booklet to a ranger at the information desk and you will be awarded your badge. You can also do the booklet as your family travels through the park and mail it back to us for review. We will return your booklet signed by a park ranger 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. You may even receive your very own Junior Ranger badge for participating! Your family can collect Junior Ranger badges at over 300 national parks. Additionally, you can collect the lifelong experiences of the National Park System at nearly 400 units of this incredible public park system.

Want to continue your visit once you get back home? Send a Badlands e-postcard from the National Park Service Web Ranger Program. The address is www.nps.gov/wabrangers At Web Ranglers, you can complete online activities to learn about National Park even if you can’t visit them all.

Julie Johnsmear started her career as a volunteer intern and now serves as Badlands National Park’s education specialist. Julie’s job includes seeking gateways for education into this special place.

In 1976, Badlands National Monument entered into an agreement with the Oglala Lakota Nation to protect 122,000 acres that had been used as an aerial bombing range during World War II. This doubled the size of the Lakota Nation to protect 122,000 acres that had been used as an aerial bombing range. This area was subordinated as Badlands National Park in 1978.

Several park trails such as the Castle Trail will be improved for visitor safety and accessibility. Bulletin boards constructed with user fee money provide better safety and orientation information.

Distribution of Badlands National Park entrance fees. These figures do not include amounts collected for annual passes.

Prairie Preamble 3
BADLANDS NATIONAL PARK IS VISITED BY OVER ONE MILLION PEOPLE EACH YEAR. WHIL e individuals or our actions may seem small, collectively, we can have a dramatic impact on this landscape. When traveling in the park please know and follow the park rules and regulations and practice techniques that will leave no trace of your passing.

Plan Ahead and Prepare

Weather

Badlands weather is unpredictable, at best. Prepare for extreme weather. Heavy rain, hail and extremely high winds occur throughout the summer. Lightning strikes are common. During a severe electrical storm, stay away from exposed places, ridges, or isolated trees. Summer temperatures often exceed 100°F. Sunscreen, a hat, and water are essential to avoid sunburn, dehydration, and heat stroke. It is also advisable to wear long pants.

Water

Water found naturally in the Badlands is full of silt and undrinkable. It will quickly dog even the purest filter or purifier. Water can be obtained from the Cedar Pass Campground, the Pinnacles Road Service Station, and the White River Visitor Center. There is no other potable water available in the park. Always carry water with you. You should carry a minimum of one gallon of water per person per day in the Badlands.

Cactus and Other Plants

Seemingly sturdy, the Badlands formations are extremely unstable and unsuitable for any type of rock climbing. Do not attempt technical climbing in the park. Park regulations do permit exploration of the Badlands. However, scrambling up formations and climbing in the park is prohibited unless posted as a man-impacted feature. In other areas, scrambling up formations and climbing is allowed except for certain patterns, creating human-impacted features. In high-use areas such as the Cliff Shelf and Fossil Exhibit Trails, please stay on the established trails. Serious injuries occur as visitors become disoriented or fearful when attempting to return from off-trail adventures. Be safe. Be low impact. Stay on trails.

Off road travel is not allowed for any wheeled vehicles including cars, motorcycles, and bicycles. Travel is limited only to established roads. Bicycles are not allowed on the trails, prairie, or formations.

Rules of the Road

Motorist Warning: The speed limit in the park is 40 miles per hour unless posted otherwise. Seat belts 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 off the road unless there is sufficient pavement for your vehicle to be completely out of the lane of traffic. Do not pull onto grass. The undersides 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.

Bicyclists

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

See and be seen: wear bright colors and a helmet. A map of suggested routes is available at the information desk of the Cedar Pass Contact Station.

Dispose of Waste Properly

Please help keep the Badlands clean. Place all garbage in trash containers. If trash cans are not available, please pack out all trash. Recycling bins for metal, glass and plastic are found at the Cedar Pass Campground and other park locations. Restrooms are located at the Cedar Pass Contact Station, White River Visitor Center and Cedar Pass Campground. Pit toilets are available at other locations.

Respect Wildlife

All collecting in the park is prohibited. Removing, defacing, or destroying any plants, animals, minerals, fossils, rocks or cultural objects is illegal. It also diminishes the park’s resources and other visitors’ experiences. Taking even the smallest rock or picking flowers is punishable by a fine.

 travels are not permitted due to the extreme danger of prairie wild fires. Camp stoves or contained charcoal grills can be used in campgrounds or picnic areas. Backcountry stoves or similar art-of-hand stoves are preferred and are the only cooking devices permitted in the backcountry. Due to the lack of trees, wood gathering is not permitted.

Campsites

Campsites are for use by guests only. Camping is prohibited in the Badlands.

Travel and Camp on Durable Surfaces

Travel extensively and accidentally contaminate archeological sites. Do not collect artifacts.

All vehicles and bicycles must travel on designated roads, and sidewalks. Prairie rattlers are the least aggressive of the rattlesnake family and attempt to avoid humans. Wear long pants and closed toe shoes, and do not place your hands out of sight, such as reaching over a ledge to pull yourself up. Snakes do not have ears. They sense, rather than “hear,” you coming through the vibrations you create on the ground and surrounding vegetation.

Unfortunately, almost as popular as viewing wildlife is feeding wildlife. Feeding park wildlife is illegal. Please do not feed any park animals, including birds. Wildlife can become aggressive with humans and dependent on us for their subsistence. They lose their natural instinct to hunt or forage. Most human food is high in sodium, which leads to rapid dehydration and eventual death. Some animals have even been found with styrofoam and plastic in their stomachs during autopsies. Resist temptation. Don’t feed beggars.

Travel at or below the speed limit to protect wildlife. Deer frequently travel in herds of two to ten. If you see one crossing the road, expect more to follow. The most frequent cause of unnatural death to park wildlife is automobiles or recreational vehicles.

Be Considerate of Other Visitors

Pets are allowed only on paved or gravel roads and in developed areas such as campgrounds and must be kept on a leash at all times. They are not allowed on trails or in public buildings.

Respect other visitors and the quality of their experience. Let nature’s sounds prevail. Avoid loud voices or noises.

Leaves No Trace

Prairie Preamble

Prairie Preamble

Prairie Preamble
Hiking in the Park

Hiking in the North Unit

FOR A CLOSER LOOK AT THE BADLANDS, CONSIDER TAKING A HIKE. THE ENTIRE PARK IS OPEN TO hiking, however, in high use areas, please stay on the trails. All of the developed trails start from parking areas within five miles of the Cedar Pass Contact Station. If you are interested in backpacking overnight, see page 2 and ask at the Contact Station for a backpacking bulletin.

In planning your hike, consider past, present and forecasted weather. Trails can vary from slick and impassable to dry and dusty or even dry on top and muddy and slick underneath. Always carry water even if you are taking only a short walk. Remember that collecting is not permitted. Help to protect your park by leaving rocks, plants, fossils, and artifacts where you find them. If you find something that you think is especially significant, leave it in place and report it at the Cedar Pass Contact Station.

Hiking in the South Unit

The South Unit of Badlands National Park is located on the Pine Ridge Reservation. Its 122,000 acres are co-managed by the National Park Service and the Oglala Sioux Tribe and were once used by the U.S. Air Force as an aerial bombing range. Today, the area remains littered with unexploded ordnance. The South Unit is generally roadless. Paths that are found are likely in poor condition or privately used tracks for managing livestock. You must receive permission to cross private land, even by foot. See article on page 3.

Hiking Trails in the North Unit

In the North Unit, hiking trails are found are likely in poor condition or privately used tracks for managing livestock. You must receive permission to cross private land, even by foot. See article on page 3.

Pet Owners:

Please keep your pet on a leash not longer than 6 feet (or in a cage) at all times. Pets are not allowed on trails, off roads, away from developed campsites or in public buildings. Never leave them unattended at any time. Remember, summer heat is deadly! Do NOT leave your pet alone in a vehicle for even just a few minutes. The temperature in your vehicle can quickly rise to over 150°F. Pets are permitted off roads in the Buffalo Gap National Grasslands and in the Black Hills National Forest.

<table>
<thead>
<tr>
<th>Trail</th>
<th>Round Trip (mi/km)</th>
<th>Trip (avg. time)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Door Trail</td>
<td>.75/47</td>
<td>20 minutes</td>
<td>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.</td>
</tr>
<tr>
<td>Window Trail</td>
<td>.25/16</td>
<td>20 minutes</td>
<td>Easy. This short trail leads to a natural window in the Badlands Wall with a view of an intricately eroded canyon. Please stay on trail.</td>
</tr>
<tr>
<td>Notch Trail</td>
<td>1.5/93</td>
<td>1½ - 2 hours</td>
<td>Moderate to Strenuous. After meandering through a canyon, this trail climbs a steep ladder and follows a ledge to “the Notch” for a dramatic view of the White River Valley. Park near 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.</td>
</tr>
<tr>
<td>Castle Trail</td>
<td>10/6.2</td>
<td>5 hours</td>
<td>Moderate. The longest trail in the park begins at the Door and Window Parking area and travels 5 miles one way to the Fossil Exhibit Trail. Relatively level, the path passes along some Badlands formations.</td>
</tr>
<tr>
<td>Cliff Shelf Nature Trail</td>
<td>.5/31</td>
<td>¼ hour</td>
<td>Moderate. This loop trail follows boardwalks and climbs stairs through a juniper forest perched above 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 trail.</td>
</tr>
<tr>
<td>Saddle Pass</td>
<td>.25/16</td>
<td>¼ - 1 hour</td>
<td>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.</td>
</tr>
<tr>
<td>Medicine Root Loop</td>
<td>4/2.5</td>
<td>2 hours</td>
<td>Moderate. This gently 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. Watch for cactus.</td>
</tr>
<tr>
<td>Fossil Exhibit Trail</td>
<td>.25/16</td>
<td>20 minutes</td>
<td>Easy. This fully accessible trail features fossil replicas and exhibits on now extinct creatures that once roamed the area.</td>
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Badlands Weather

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<tr>
<th>Month</th>
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<th>Average Low Temperature</th>
<th>Record High/Low</th>
<th>Average Precipitation (inches)</th>
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<tr>
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<td>72°F</td>
<td>46°F</td>
<td>102°F / 20°F</td>
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<tr>
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<td>83°F</td>
<td>56°F</td>
<td>109°F / 34°F</td>
<td>3.12</td>
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<tr>
<td>July</td>
<td>92°F</td>
<td>62°F</td>
<td>111°F / 42°F</td>
<td>1.94</td>
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<tr>
<td>August</td>
<td>91°F</td>
<td>61°F</td>
<td>110°F / 35°F</td>
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<tr>
<td>September</td>
<td>81°F</td>
<td>51°F</td>
<td>105°F / 25°F</td>
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<td>October</td>
<td>68°F</td>
<td>39°F</td>
<td>97°F / 2°F</td>
<td>0.90</td>
</tr>
</tbody>
</table>

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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.

Prairie Preamble 5
Revealing the Past from the Present

Prior to recent studies, our archeological record concerning the early inhabitants of Badlands National Park is poorly represented. With new initiatives such as the Badlands Archeological Identification Study to help the park better manage its cultural resources, we now have a more accurate perspective on the historical activity in the region for the past 10,000 years. Unfortunately, in the archeological record, nomadic peoples often leave little behind physically, thus they are poorly represented. With new information from this project, indications are that widespread and varied prehistoric and historic uses of the area occurred.

PREHISTORY

Prior to recent studies, our archeological record concerning the early inhabitants of the Badlands was limited. Evidence now indicates that prehistoric people first reached the area sometime around 15,500 BP (before present). Discoveries of large lanceolate points, hearths, roasting pits, and accumulations of large animal bones indicate these prehistoric people were primarily nomadic big game hunters. As the large game of the ice ages began to disappear, hunting practices shifted to bison. These animals were often driven off cliffs in the Badlands (called buffalo jumps) and then butchered, leaving behind scrapers, points, and piles of bones. Evidence indicates it is highly unlikely that permanent homes or villages ever developed in the Badlands. However, due to the availability of water there is indication that hunters often revisited a site in the south unit.

HISTORY

With the introduction of agriculture and ceramics from cultures in southeastern North America, permanent settlements developed along the Missouri River watershed, but groups on the plains remained primarily hunters and gatherers. These early semi-permanent agricultural settlements are the beginnings of American Indian groups that Lewis and Clark would meet on their 1804 journey to the north. French and English fur traders introduced new technologies, like firearms and metal, which enabled groups like the Lakota (or Sioux) to move into the area and displace other groups by the 1700s. Additionally, the horse was adopted by Plains peoples and rapidly changed these cultures into mounted hunters and warriors.

By the mid-1700s through the mid-1800s fur traders, mountain men and explorers ventured into the area and their accounts provide the first written records of a land that would earn the name “Badlands.” In 1832, Jedediah Smith and his fur trapping party traveled along the White River and experienced the challenges of finding water within the unforgiving landscape. During Euro-American expansion into western North America, people passed through the area but did not stay for extended periods. In 1862 the first fossil description from the Badlands was published. Scores of institutions and collectors seeking fossil riches soon arrived. Once gold was identified in the Black Hills, American Indian tribes were moved to reservations and settlement by non-Indians began. The 1862 Homestead Act encouraged settlers to move into this area. However, environmental conditions caused many to leave the area or shift from farming to ranching.

Unrest in the later portion of the 1800s led to the Indian Wars and a cultural movement among the Lakota known as the Ghost Dance religion. Stronghold Table, located in the South Unit of the park was used as a stage for Ghost Dances. The hope promised by the Ghost Dance religion along with the traditional Lakota way of life would soon be changed forever by the Wounded Knee Massacre of 1890.

In the early 1900s developments such as Cedar Pass Lodge with cabins, a gas station and a dancehall sprung up in the Badlands and provided visitors with a place to stay and play. In 1939 efforts by Ben Millard and Peter Norbeck helped establish Badlands National Monument, later expanded to a National Park in 1978. These events and many others have provided historians with an incredible amount of information to sift through.

Often, park staff and visitors report observing artifacts. Remember that cultural resources in the park are protected. If you discover any objects, leave them where found, remember the location and report your discovery to a park ranger. Researching cultural sites gives the park an opportunity to provide better protection for these resources. Knowledge helps park managers understand and tell the story of human cultures in Badlands National Park.

Aaron Kaye, Staff Interpreter at Badlands, holds a degree in anthropology and has a lifelong interest in archaeology. A second generation NPS ranger, Aaron grew up in our national parks.

Prairie Preamble

Plains culture dates back over 12,000 years in the Badlands area and continues today in 21st century South Dakota. Pine Ridge Reservation is home to the Oglala Lakota Nation and neighbors Badlands National Park.

Ardent enthusiasts of science, the Pig Dig is one of the most popular activities at Badlands National Park today. The Pig Dig is a paleo-exploration event where visitors will have the opportunity to participate in the discovery of prehistoric bone and fossil fossils and provide on-site education. The visitors who found the first bone of the Pig Dig did the right thing by leaving it in place and informing park staff. Since then, the site has provided a wealth of information. The Pig Dig appears be the site of an ancient watering hole where animals gathered as the environment became drier.

As more discoveries are made at the Pig Dig, scientists are able to develop a clearer picture of the past. The Pig Dig is open daily during the summer from 9:00 AM to 4:00 PM beginning on June 3. Visitors will also be able to see a reconstruction of Archaeotherium (“the big pig) on display at the site.

Restoration efforts are ongoing but early signs of success include establishment of denning sites and the birth of wild pups. If you happen to see a swift fox, please report the sighting to a staff member.

Black-footed Ferrets: After narrowly averting extinction, the federally endangered black-footed ferret once again hunts for prairie dogs in the Badlands/Conata Basin. This is the only self-sustaining wild population in the world. The survival of the species ultimately depends on how effectively its prairie dog habitat is managed. Black-footed ferrets are nocturnal and spend much of their time underground. As a result, it is highly unlikely you will see your chance to see a truly wild herd against a stunning prairie backdrop.

Big Horn Sheep: In 1964, a small band of bighorn sheep were released here. Although native to the area, they had been absent for 40 years. A combination of factors including introduced disease from domestic sheep, habitat disbursement and unreigated hunting had depopulated populations across the western U.S. Today over 60 bighorns make their home in craggy Badlands formations. You are most likely to see bighorn near Cedar Pass or Pinnaclles.

Swift Fox: Once abundant from Texas to Canada, this tiny member of the dog family has sharply declined due to predator control efforts and conversion of native prairie to agricultural land. In the Falls of 2003 and 2004, swift foxes wearing tiny radio collars were released in Badlands National Park.

Spotting wildlife like bison or bighorn sheep can be thrilling as your travel through Badlands National Park. These favorite animals are charismatic headliners but the mixed-grass prairie ecosystem is the stage that supports them. The reintroduction of once missing species represents an important step in creating this grasslands drama.

Badlands National Park protects the integrity of a complex, living system by grouping the story told by the mixed-grass prairie ecosystem with the story told by the mixed population that interacts within the larger ecological community.

Bison, also known as buffalo, are recognized as the signature animal of the Great Plains. Because of regulated hunting and habitat conversion, bison populations hit an all time low of just a few hundred animals at the turn of the 20th century. Through successful conservation efforts the bison made a comeback. Bison were reestablished at Badlands National Park in 1965. Today, approximately 900 bison graze within the Badlands Wilderness Area. Take the Sage Creek Rim Road to Roberts Prairie Dog Town and beyond for your chance to see a truly wild herd against a stunning prairie backdrop.

Visit the Pig Dig!

Excavation at the Pig Dig will continue in 2005 thanks to your entrance fees. Money from the demonstration program (see article page 3) will fund staff to excavate fossils and provide on-site education.

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Lights! Camera! Action!

SPOTTING WILDLIFE LIKE BISON OR BIGHORN

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As you explore this vast place, you may catch exciting episodes in the park story—grazing bison, bighorn sheep chasing horns, a glimpse of a rarely seen prey. These native animals would not be able to fulfill their role without the dedicated efforts of the National Park Service. Backstage, we are working hard to make sure this show never gets cancelled.

In addition her duties as education specialist, Julie Johnson serves as the Link between Natural Resource Management programs and park naturalists.
Badlands Education Intern Kevin Casey (Earlham College) carefully maps the location of various fossils before they are available to all. At Badlands, park sources need to be properly managed so posed at the surface they are at risk to actively document new fossil localities and T o properly manage the fossil resources at centuries ago. discovered and described almost two cen- dents travel from all over the world to see tories from the White River Badlands was es- paled as a National Monument to pro- s. Some of the classic localities that were first pected every year. Geology and paleontology stu- tamin and described almost two cen- turies ago.

To properly manage the fossil resources at Badlands National Park, it is important to actively document new fossil localities and to collect, prepare and curate the fossils found at those sites. Once fossils are exposed at the surface they are at risk to erosion, theft and vandalism. Fossil resources need to be properly managed so they are available to all. At Badlands, park staff work cooperatively with various museums and universities on several such projects. One of these projects includes an active quarry site where fossils are carefully excavated and later prepared for museum storage or display. The Big Pig Dig is this quarry site that is open to the public during the months of June through August. Every summer visitors are able to watch researchers carefully excavate fossil mammals that were trapped in a watering hole over 30 million years ago. Park staff are also actively prospecting and documenting new fossil sites throughout the park. It is crucial that park management have a good understanding of the fossil localities found within the park in order to make sound management decisions for the long term.

Park visitors also play an important role in fossil resource protection. If you find a fossil, do not remove or damage the specimen. A fossil removed without proper documentation loses most of its scientific value. Carefully record detailed locality information. If you have a GPS unit, use that to record locality information. If you have a map, record the location of your find on the map. Carefully describe how to find the site in relation to a known trail or road. Report your find to a ranger or at the Contact Station.

Dr. Rachel Benton, park paleontologist, has worked at Badlands National Park since 1994. Dr. Benton coordinates research activities, such as the Pig Pig-Dig.

We’re Under Attack!

A National Park Service wildland fire fighter uses a drip torch to ignite a prescribed prairie fire in Badlands National Park. This fire was conducted to reduce non-native broom grasses, state, other federal agencies, and private landowners joined forces to address the issue by establishing the Badlands Weed Management Area and are working in a consolidated effort to control these invasive species through the combined use of sprayed chemicals, prescribed fires, mowing, and biocontrol (species specific insects). Within the park, weeds targeted by managers and Exotic Plant Management Teams (EPMT) include Canada thistle, Russian knapweed, and cool season exotic grasses like Kentucky bluegrass, smooth brome, and Japanese brome. Troublesome species often reproduce rapidly, monopolize limited water resources, crowd out native species, and even affect wildlife. In national parks, protecting the native environment while trying to remove an exotic species poses certain challenges and may require different techniques than those employed by private homeowners. For this reason, the park takes an integrated approach to weed management, employing one or more techniques of effective control while insuring minimal damage to the native environment. Since native prairie plants evolved with wildfire, prescribed burning throughout the park on a 5- to 10-year rotation is an important tool for controlling some species while reducing fuels and limiting the potential for catastrophic fires. Park visitors may see a combination of techniques employed by park staff and specialized crews as the park attempts to “weed out” non-native species. Even so, many non-native plants continue to invade and expand within the park, and beyond, but present and future research continues to aid in combatting and providing effective mechanisms for controlling or eliminating these exotics.

Today, and into the future, National Park Service resource managers are challenged by their mission to preserve and protect park resources from outside influences like non-native plants. Exotic plant management requires constant vigilance, good research, repeated effort, and results that may be less than those desired. If you have ever attempted to control noxious weeds, like dandelions, around your own home you probably know what a challenge it is to manage weeds. Considerable time, money, and manpower is required each year to “control” these invaders within our treasured national parks.

Aaron Kaye is a career NPS employee active in the Servicewide fire management program as well as a professional interpreter.

There Goes The Neighborhood?

Weirs: Resources in the Most Underappreciated State by the Visitor and the Hardest to Protect as a National Park Manager? The answer is our air. Unless there is visible degradation, we often take air for granted. Most factors affecting air quality occur outside the park boundaries and out of our control. This is our challenge.

Badlands National Park is fortunate to be located in a sparsely populated state of a sparsely populated community of any size is Rapid City, about 80 miles west of the park. When concerned with air quality, however, our community becomes much larger.

For example, just across the street in Nebraska, 200 miles south of park headquarters, are two large coal-fired power plants, the largest US train switching station for diesel engines, and an ethanol producing plant, all within 20 miles of each other.

Containing numerous oil wells and strip mines, next door Wyoming (about 100 miles), is home to some of the nation’s largest coal-fired power plants and many new coal-bed methane wells. We can’t forget another neighbor which is also home to coal-fired power plants, Montana, the closest one is about 400 miles. Plus, we are still not sure as to what secrets into our neighborhood from our large industrial neighbor, Denver, a couple of blocks (about 400 miles) away.

A new kid in town, the D&RG railroad just received permission by the Surface Trans-
### Guided Hikes and Walks

<table>
<thead>
<tr>
<th>Hike</th>
<th>Time</th>
<th>Day</th>
<th>Notes</th>
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<tbody>
<tr>
<td>Wild Adventure Hike</td>
<td>7:30 a.m.</td>
<td>Saturday, Sunday, Monday Only, July 2 Through August 15</td>
<td>PROGRAM LIMITED TO EIGHT; MUST SIGN UP 12 HOURS IN ADVANCE</td>
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<tr>
<td>Geology Walk</td>
<td>8:30 a.m.</td>
<td>Daily</td>
<td>Learn about the geologic story of the White River Badlands on this 45 minute walk. Meet at the covered shelter near the Door Trailhead, located at the far east end of the Door/Window Parking Area.</td>
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<tr>
<td>Prairie Walk</td>
<td>8:00 a.m.</td>
<td>Daily</td>
<td>Tuesdays, Wednesdays, Thursdays, and Fridays</td>
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<tr>
<td>Prairie Walk</td>
<td>9:30 p.m.</td>
<td>Daily</td>
<td>Join a park ranger for this easy 1/2 mile walk into the prairie. Meet on the porch of the Cedar Pass Contact Station for an exploration of plants and place. Wear closed-toe shoes and bring a hat and water.</td>
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<tr>
<td>Prairie Dog Talk</td>
<td>2:00 p.m.</td>
<td>Daily</td>
<td>Meet your ranger at Roberts Prairie Dog Town for this 15 minute exploration of life in the park's largest town. This prairie dog town is located 5 miles west of the Cedar Pass Contact Station at the entrance to Cedar Pass Campground.</td>
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<tr>
<td>Geology Talk</td>
<td>10:30 a.m.</td>
<td>Daily</td>
<td>Find out how fossils can tell us the story of ancient life in the Badlands and why they should be protected at this 15-20 minute talk. Present at the Fossil Exhibit Trail, 5 miles northwest of the park headquarters/contact station on the Badlands Loop Road.</td>
</tr>
<tr>
<td>Ranger Talk</td>
<td>2:00 p.m.</td>
<td>Daily</td>
<td>Learn more about Badlands National Park at this 20 minute talk. Meet your ranger at the Cedar Pass Campground Amphitheater, located 400 meters west of the Cedar Pass Contact Station at the entrance to Cedar Pass Campground.</td>
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<tr>
<td>Evening Program</td>
<td>9:00 p.m.</td>
<td>(Starting August 1st, the evening program will be given at 8:30 p.m.)</td>
<td>Join a park ranger for a 45 minute slide presentation at the Cedar Pass Campground Amphitheater. A weekly listing of program topics is available at the Cedar Pass Contact Station, on bulletin boards throughout the park. Slides will start when the sky is dark! The evening program will end in time for you to take part in the Night Prowl!</td>
</tr>
<tr>
<td>Night Prowl</td>
<td>10:00 p.m., Saturday, Sunday, Monday Only, July 2 Through August 15</td>
<td>PROGRAM LIMITED TO EIGHT; MUST SIGN UP 12 HOURS IN ADVANCE</td>
<td>Explore the Badlands at night and enjoy our famous clear night skies. Meet your park ranger in front of Cedar Pass Lodge for a night trip into the Badlands. Those attending the Evening Program can follow their ranger from the Amphitheater to the Lodge, then continue on the Prowl. After a 450 meter walk along a drainage, explorers will arrive at a natural amphitheater for a 30 minute program. Topics could be astronomy, night animals, or folklore. Wear closed-toe shoes and a jacket. Bring a flashlight and a blanket or towel to sit on the ground.</td>
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### Ranger Programs

**Badlands National Park is in the Mountain Time Zone. Some programs are presented at overlooks or trails 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. Limited programs will be given directions to meet your ranger. Wear a hat, sturdy hiking boots, sunscreen, and long pants. Bring water, snacks, and a jacket.**

**A Word About Your Park Education Staff**

Our 2005 staff is made up of full-time and seasonal park rangers, as well as interns from universities across the country. Due to a lack of funding for paid staff, we use volunteers to operate at previous levels of services. If you would like to sponsor an education internship, please contact the Chief of Resource Education at (605) 433-5240 or badl_interpretation@nps.gov. Your contribution is a perpetuation of the National Park idea.

** BNHA is a non-profit organization that has an active membership program. To become a member of BNHA, contact the Badlands Natural History Association, 111 E. Main St., Suite 200, Rapid City, SD 57701. **

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### Talks and Illustrated Programs

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<td>7:30 a.m.</td>
<td>Wild Adventure Hike</td>
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### Special Treats

**Junior Ranger Program**

10:30 a.m. Daily | Call all visitors between 7 and 12 years of age! Meet at the shelter at the Cedar Pass Campground Amphitheater parking lot 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! |

**Night Prowl**

10:00 p.m., Daily, starting July 1 | (Starting August 1st, the Night Prowl will be given at 9:30 p.m.) | Explore the Badlands at night and enjoy our famous clear night skies. Meet your park ranger in front of Cedar Pass Lodge for a night trip into the Badlands. Those attending the Evening Program can follow their ranger from the Amphitheater to the Lodge, then continue on the Prowl. After a 450 meter walk along a drainage, explorers will arrive at a natural amphitheater for a 30 minute program. Topics could be astronomy, night animals, or folklore. Wear closed-toe shoes and a jacket. Bring a flashlight and a blanket or towel to sit on the ground. |

### Local Services

- **Badlands National Park National Park Service U.S. Department of the Interior**
- **Printing funded by the Badlands Natural History Association, a non-profit partner of Badlands National Park.**
- **The cost of printing the 2005 Preamble was $9000.**
- **Edited by Connie Wolf, Administrative Assistant, a life-long resident of Wall, SD.**
- **Printing done by Shakopee Valley Printing of Shakopee, Minnesota.**

### 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 contact station results in donations to the park’s education and resource management programs.

Program Cancellations: The Badlands are famous for dramatic lightning storms. If lightning is visible from the programs location, the program may be canceled. Please be prepared for changing weather conditions.

BNHA is a non-profit organization that has an active membership program. To become a member of BNHA, contact the Badlands Natural History Association, 111 E. Main St., Suite 200, Rapid City, SD 57701. Your membership dues will be gratefully received, immediately acknowledged and tax-deductible. Your membership dues are used to enhance the experience of visitors to the area. An investment in the future, your contribution is a perpetuation of the National Park idea.

### Membership Application Form

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