

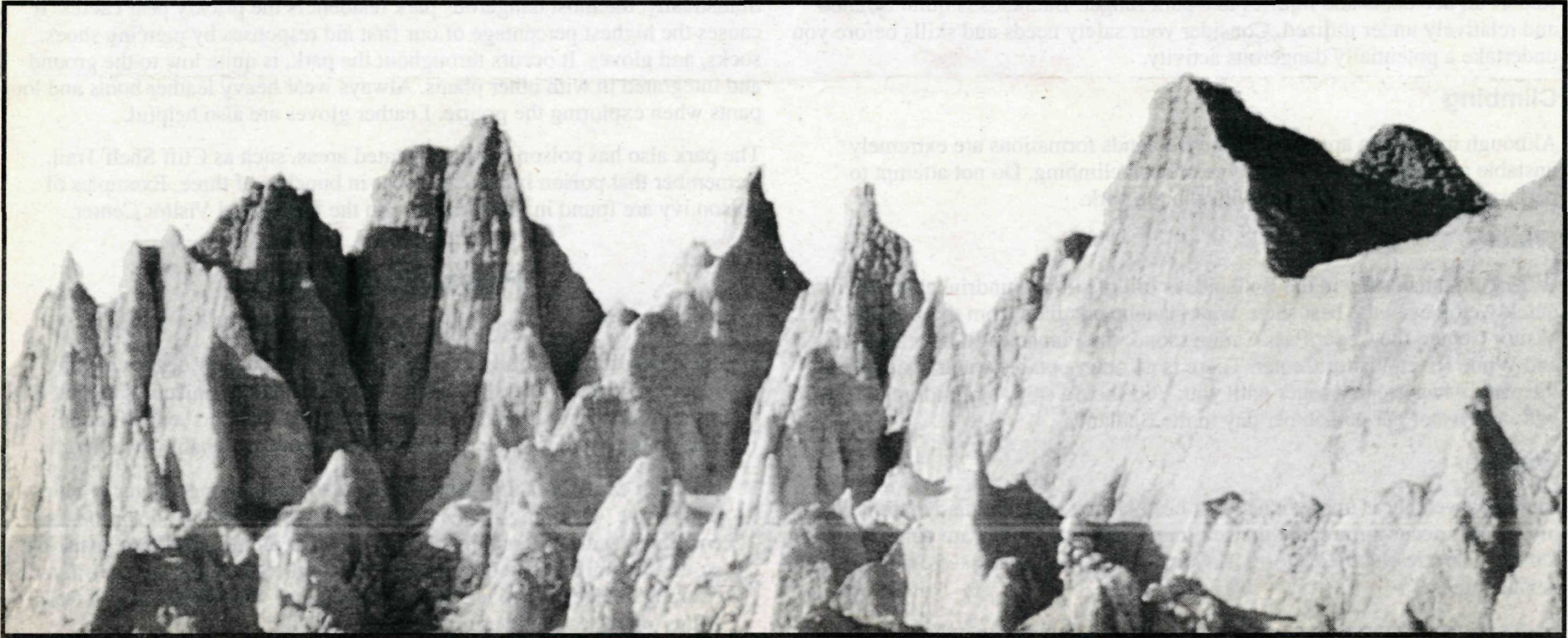
1998



# The Prairie Preamble

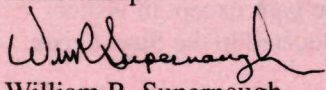


## Badlands National Park



### Welcome to the Badlands

Fossils, endangered species, Native American history, homesteading, prairie ecosystem: What do all these things have in common? They are all a part of Badlands National Park, the largest national park in the Midwest Region of the National Park Service. As superintendent, I am constantly amazed at the diversity of issues that confront my staff on a daily basis. For you, a visitor who will be exposed to the park for only a few hours or a few days, it must seem a daunting place. Take advantage of our staff of rangers and interns during your stay to better understand the complexities of our park. It's been said that a major difference between a prairie and a forest is that you have to get down on your knees to explore a prairie. This is a more subtle environment than some of our more western units, like Grand Teton and Grand Canyon. However, it is no less diverse and no less important. Please take the time to introduce yourself to the Badlands during your stay. It could become a lasting relationship.

  
William R. Supernaugh  
Superintendent

### Take Your Place In Badlands History

Badlands Natural History Association, or BNHA, was established in 1959 to promote education efforts about Badlands National Park and its resources. Since then, BNHA has contributed nearly \$1 million to the park. Some of its more notable gifts have included annual printing of this publication, The Prairie Preamble, support for the Badlands In Your Classroom Program, funding for the intern program including the John C. Clark Paleo-Education Internship and Enos Mills Nature Education Internship, and purchase of over 5,000 library books.

Sales of BNHA items in the park visitor centers result in donations to the Badlands National Park outreach efforts. Future funds and membership donations will be used to develop and install new exhibits in the Ben Reifel Visitor Center. BNHA is a nonprofit organization that has an active membership program. To become a member of BNHA, get a flyer from any park visitor center or call Executive Director Midge Johnston at (605) 433 - 5489. A membership will result in a 15% discount on all sales of BNHA materials and will also be accepted at most other National Park Service area bookstores. You will also receive a quarterly newsletter, advance invitations to workshops and special events, and a special gift for joining. Join BNHA today!

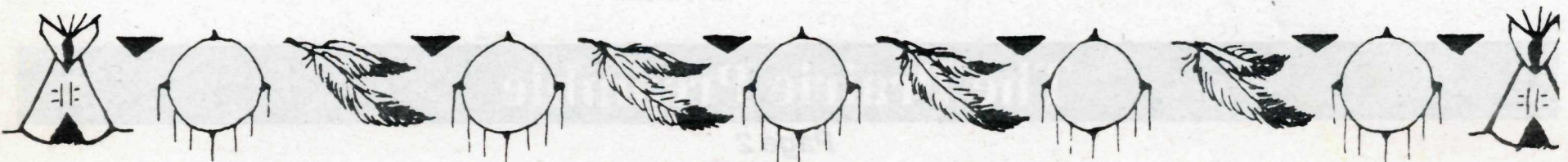
### You Are in a Special Place

Of course, the staff of every park and forest thinks their area is special. Badlands National Park was first established as a national monument in 1939 by President Franklin D. Roosevelt. The area was known to contain the richest Oligocene mammal fossil beds in the world and possessed a dramatic, "bizarrely" sculpted geologic landscape. As time passed and human use changed, we as a nation realized that the native American prairie, which once covered over 60% of the country, was rapidly disappearing. Badlands is 55% *mixed grass prairie*, the largest protected prairie in the National Park system. Although always present, an interest in the area's diverse human history has resulted in a growth in understanding about our 10,000 year human record. This record includes pre-Lakota and Oglala Lakota, trappers, soldiers, early fossil hunters, and homesteaders.

Today, Badlands National Park consists of nearly 244,000 acres that blend people and place. Over one million visitors come here each year to hike, study nature, watch wildlife, or just enjoy the quiet. In 1997, Congress initiated a new program called the *Fee Demonstration Program*. Through this program, for the first time, fees collected in national parks are kept at the collecting parks for use in improving facilities and increasing public education about park resources. When you paid your entrance fee to Badlands National Park, you contributed to our future. We will be using fee money this year to provide paleontological research and education at the Big Pig Dig, install restrooms at the Fossil Exhibit Trail and Door Trails, and improve trails and campgrounds. Fee money will also be used to start planning for a redesigned Ben Reifel Visitor Center with a formal auditorium, new exhibits, and enlarged visitor education facilities. Thank you for visiting. Please come again and again. Because this is a special place - a national park - it will always be here waiting for your return.

### What's Inside?

<b>Safety &amp; Regulations</b>	<b>Page 2</b>
<b>Visitor Facilities</b>	<b>Page 3</b>
<b>Naturalist Programs</b>	<b>Page 4</b>
<b>Hiking</b>	<b>Page 5</b>
<b>Managing Park Resources</b>	<b>Pages 6 &amp; 7</b>
<b>How Can You Help?</b>	<b>Page 8</b>



# What You Must Know for Safety

Though just a short distance from Interstate 90, Badlands National Park is a rugged and special place. Please join with the National Park Service to protect this wild place by being a responsible visitor. Knowledge of natural hazards will protect you and your family from injury or loss. It will also contribute to protection of park resources. It is your responsibility to be familiar with and abide by the rules and regulations of the park. If you have any questions, contact a ranger or other member of the park staff.

## Safety and Regulations

### Accidents and Injuries

Report all accidents and injuries to a park ranger. Badlands is quite isolated and relatively under utilized. Consider your safety needs and skills before you undertake a potentially dangerous activity.

### Climbing

Although inviting in appearance, the Badlands formations are extremely unstable and unsuitable for any type of rock climbing. Do not attempt to perform technical climbing activities in the park.

### Water

Water found naturally in the Badlands is full of silt and undrinkable. It will quickly clog even the best filter. Water can be obtained from the Ben Reifel Visitor Center, the Cedar Pass Campground, the Pinnacles Ranger Station, and 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.

### Weather

Badlands weather is unpredictable, at best. 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 degrees. Sunscreen, a hat, and water are essential to avoid sunburn, dehydration, and heat stroke. It is also advisable to wear long pants.

### Wildlife

Viewing wildlife is the most popular visitor activity in national parks. However, keep the wild in wildlife. Remember that they are not pets. If an animal reacts at all to your presence, you are too close. Don't be lured in by "cute" or "tame" behavior. All wildlife – deer, prairie dogs, bison, snakes, and even birds – can cause serious injury.

Most visitors ask about the park's only poisonous snake, the **prairie rattlesnake**. Like all snakes, the prairie rattler cannot control its body temperature internally. To survive, it must seek out resting places where temperatures are between 65°F and 85°F. Perches of choice include under ledges, rocks and shrubbery or in prairie dog burrows. In the evening, they gravitate toward dark surfaces that retain warmth, such as paved trails, roads, and sidewalks. Prairie rattlers are the least aggressive of the rattlesnake family and attempt to avoid humans. Avoid surprising a prairie rattler, wear long pants and closed toe shoes and do not place your hands out of sight, such as reaching over a ledge you can't see to pull yourself up.

**Bison** can run 30 miles per hour and may weigh up to 2000 pounds. Bison injure more visitors each year than bears, wolves, and coyotes combined. Never come within 400 meters of a bison.

Unfortunately, almost as popular as viewing wildlife is feeding wildlife. Feeding park wildlife is illegal. Do not under any circumstances attempt to feed any park wildlife, including birds. The animals become aggressive with humans and dependent on us for their subsistence. They lose their natural instinct to hunt or forage. Many die during the winter months when there are few visitors. Bread, cookies, and other snack foods are not natural parts of their diets. Some animals have even been found with styrofoam and plastic in their stomachs during autopsies. Resist the temptation to feed begging animals. Give them back their self-respect and do not feed them.

### Hiking and Backpacking

Keep in mind that Badlands National Park currently has an open backcountry policy. This means that we have no permit system in place and very few established trails. While this offers a wild hiking experience, it also means that there is no registration process so that your whereabouts are known. You are truly on your own and are responsible for your own safety.

The park is also full of prairie dog towns, a critical part of the prairie ecosystem. Use care when exploring them to avoid turned ankles or contact with burrow residents. See Page 3 for Backcountry Regulations.

### Cactus and Other Plants

Statistically, the most dangerous park resident is the prickly pear cactus. It causes the highest percentage of our first aid responses by piercing shoes, socks, and gloves. It occurs throughout the park, is quite low to the ground and integrated in with other plants. Always wear heavy leather boots and long pants when exploring the prairie. Leather gloves are also helpful.

The park also has poison ivy in vegetated areas, such as Cliff Shelf Trail. Remember that poison ivy leaves occur in bunches of three. Examples of poison ivy are found in the herbarium in the Ben Reifel Visitor Center.

### Please Remember...

- ☛ **All collecting 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 the smallest rock or picking flowers is punishable by a fine.
- ☛ **No open campfires are permitted** due to the extreme danger of wild prairie fire. Camping stoves or charcoal can be used in an appropriate container, such as a grill, in campgrounds or picnic areas. Backpacking stoves or similar self-contained stoves are preferred and are the only cooking devices permitted in the backcountry. Due to the lack of trees, no gathering of wood is permitted.
- ☛ **No off road travel is allowed for any wheeled vehicle, including cars, motorcycles, and bicycles.** Travel is limited only to established roads. Bicycles are not allowed on the trails, prairie, or formations.
- ☛ **Bicyclists must wear a helmet and observe the same road travel rules that govern motorized traffic.** Remember that there is no off-road travel allowed, including trails. A map of suggested distance routes is available at the information desk of the Ben Reifel Visitor Center.
- ☛ **Horseback riding is available throughout the park except on marked trails, roads, or in developed areas.** Sage Creek Campground includes a designated horse area. A brochure on horse use is available from park staff at the Ben Reifel Visitor Center or Pinnacles Ranger Station.
- ☛ **Pets must be kept on a leash or kept under physical restraint at all times.** Pets may not be left unattended while restrained. Because of the extreme heat in the park, they should not be left in parked vehicles for more than ten minutes and should always have windows cracked for ventilation. Pets are allowed anywhere in the park except in visitor centers and the Badlands Wilderness Area, located in the Sage Creek drainage.
- ☛ **The speed limit in the park is 45 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 along side the road unless there is sufficient pavement to allow your vehicle to be completely out of the lane of traffic. Visitors frequently pull halfway off the road on curves, creating a great traffic hazard for themselves and other vehicles. Others pull off onto the prairie or flat Badland areas, damaging park resources and creating fire hazards through exposing dry grasses to the very hot underside of their vehicle.
- ☛ **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 be following. The highest statistical cause of unnatural death to park wildlife is automobiles or recreational vehicles.
- ☛ **Avoid becoming a victim.** Lock your vehicle when not in it. Keep all valuables out of sight. Put your name and address on all property of value. Report any theft or vandalism to a park ranger immediately.
- ☛ **Remember to keep your keys with you.** Response time if you do lock your keys in your vehicle may be in excess of ninety minutes.
- ☛ **Know the "health" of your vehicle.** Towing services are in the towns of Interior or Wall. Response time for towing services is typically one to three hours.

# Visitor Facilities

## Camping

### Cedar Pass Campground

Located 400 meters west of the Ben Reifel Visitor Center with 96 sites, summer 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. Amenities include cold running water, flush toilets, protected picnic tables, and trash containers. A dump station is available with a \$1.00 fee per use. Campground hosts or Rangers are on duty every day from May 25 through September 12 to assist in registration and provide information. Look for them in the afternoon and early evenings at the campground entrance booth. No open campfires are permitted.

### Group Camping - Cedar Pass Campground

Four campsites are available 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; P.O. Box 6; Interior, South Dakota 57750.

### 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 stay limit. **There is no water available.** No open campfires are permitted.

### Other Camping Regulations

Camping is restricted to established campgrounds only. It is not permitted in pull outs, picnic areas, or outside of designated campsites. Quiet hours in the campgrounds are from 10 p.m. to 6 a.m. and are strictly enforced. This includes operation of generators or other loud devices.

### Backcountry Camping

- ☞ No permits are required for overnight stays in the Badlands backcountry.
- ☞ It is a good idea to 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 and along the Sage Creek Rim Road.
- ☞ No campfires are allowed.
- ☞ Pets are not permitted in Wilderness Areas.
- ☞ Campsites must be located at least .5 mile (800 meters) from a road or trail and must not be visible from a roadway.
- ☞ There is little to no water available in the backcountry. What little water there is, is not drinkable. You must carry one gallon of water per person per day.
- ☞ All refuse must be carried out. We request that you carry out all human waste as well. If it is necessary to bury human waste, dig a small hole 6 to 8 inches deep and a minimum of 100 feet from any watercourse. Waste water must be also be disposed of more than 100 feet from any watercourse.

### Always practice Leave No Trace principles.

Consider what impacts your visit will have. Climbing the buttes causes mud and rock slides and mars the surfaces of the formations. Litter is unsightly and illegal. Insure that your visit does not leave any permanent scars on Badlands National Park.

## Cedar Pass Lodge

Full menu dining, air conditioned cabins, a gift shop, restrooms, public telephone, bagged ice and recycling are available. The Lodge is open from mid-March through October. For reservations, call (605) 433 - 5460. Reservations can also be requested, along with rates, by writing Cedar Pass Lodge; P.O. Box 5; Interior, South Dakota 57750.

## Picnic Areas

Picnic tables are located around the Ben Reifel Visitor Center, as well as near the Cedar Pass Campground. Picnic areas are also established at the Journey Overlook and on the Conata Road; however, there is no water available. Remember that open campfires are not permitted anywhere in the park, including picnic areas.

## Ben Reifel Visitor Center

Located at park headquarters at Cedar Pass, the Ben Reifel Visitor Center offers a staffed information desk, park orientation movie, exhibits, park offices, restrooms, water, and a public telephone. Badlands Natural History Association operates its largest outlet which carries postcards, books, videos, posters, and other educational materials on the park and its resources. Open year round.

### Hours of Operation

April 12 to June 5	8 a.m. to 5 p.m.
June 6 to August 29	7 a.m. to 8 p.m.
August 30 to September 12	8 a.m. to 6 p.m.
September 13 to October 17	8 a.m. to 5 p.m.
October 18 until further notice	9 a.m. to 4 p.m.

## White River Visitor Center

Located on the Pine Ridge Reservation on Highway 27, White River Visitor Center offers a staffed information desk, park orientation movie, exhibits, restrooms, and water. Badlands Natural History Association operates a small outlet which includes postcards, videos, and books.

### Hours of Operation

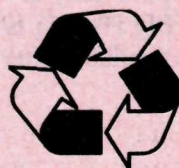
#### May 30 to August 25

Monday through Thursday	9:30 a.m. to 4:30 p.m.
Friday through Sunday	8:30 a.m. to 7:00 p.m.

## Accessibility

- ☞ The Ben Reifel Visitor Center and White River Visitor Center are both accessible to wheelchair users. The Touch Room of the Ben Reifel Center is a tactile experience for all who enjoy handling objects, such as rocks, fossils, and skins, and is appropriate for the visually impaired.
- ☞ The Fossil Exhibit Trail and the Window Trail are both accessible to wheelchair users.
- ☞ The Cedar Pass Campground has three 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 lodging facilities, meet accessibility standards.
- ☞ *Buried Fossils, Living Prairie*, the park's orientation film, is open captioned. Several summer ranger programs, such as the Fossil Talk, are accessible to wheelchair users. Others include adaptations for visual or hearing impaired visitors.
- ☞ A complete listing of accessible facilities is available from the information desk of the Ben Reifel Visitor Center.

## Reduce, Reuse, Recycle



You can recycle your glass, plastics, metal cans, and cardboard in collection bins located adjacent to Cedar Pass Lodge. In 1997, Badlands National Park recycled 56 cubic yards of cardboard, 9000 pounds of glass, 1800 pounds of plastic, and 4200 pounds of metal cans.

We have been working to creatively reuse items in the park. You may see some adaptations, particularly in the Ben Reifel Visitor Center. In our offices, we have greatly increased our use of electronic technology to reduce the use of paper. We have also worked to make our buildings more energy efficient to reduce our consumption of fuels and electricity.

And about those park brochures . . . . Obtaining a park brochure and taking one of each free handout is a common practice. However, they are extremely expensive to produce. Each national park only receives a limited number of full color brochures. If we seem a bit stingy with them, consider why you want one and what you will do with it after you leave the park. If you are a scrapbook keeper, it's fine to have one good copy for this purpose. But do you really need one for every person in the car or on the bus? The brochure is intended to provide a map for drivers and very basic, timeless information on park resources. If it will fall to the floor of your vehicle or never see the light of day again, leave it for someone else. You can return brochures at the visitor centers or entrance stations for reuse by other visitors. A bookmark will be given to each visitor who returns a brochure to a park visitor center or entrance station.

# 1998 Naturalist Programs and Special Activities

## 1998 Summer Naturalist Programs

Education programs will begin on Friday, June 12 and last through September 1. They are available on a daily basis. A reduced schedule will be available from September 2 through 10. The Pig Dig closes in mid-August. Special programs will be posted at the Ben Reifel Visitor Center from May 10 through June 11. Check at the Visitor Center for more information.

Some programs are presented at overlooks throughout the park. These overlooks are identified in the park brochure you received at the gate. You can also find them by watching for the small, green mile markers located along the side of the 240 Loop Road.

Our 1998 staff is made up of permanent and seasonal park rangers, as well as interns from universities across the country. Interns will wear the patch of their sponsoring organization. If you would like to contribute to our internship program or would like more information, write Internship Coordinator; Badlands National Park; P.O. Box 6; Interior, South Dakota 57750.

### 8 a.m. Evolving Prairie Walk

Meet a staff member in front of the Ben Reifel Visitor Center for this easy, 1 mile walk across the prairie into badlands formations. The walk's topic will vary according to the ranger's expertise and may include geology, ecology, or human history. Wear a hat and closed-toe shoes. Bring water and a jacket.

### 9:00 a.m. Geology Talk

Meet an intern at the Changing Scenes Overlook, located on the 240 Loop Road between mile markers 22 and 23, approximately 8 miles southeast of the Pinnacles Entrance, for a 20 minute talk on the formation of the White River Badlands. Wheelchair accessible.

### 10:30 a.m. Fossil Talk

A Badlands tradition, the Fossil Talk is presented at the Fossil Exhibit Trail, 5 miles northwest of the Ben Reifel Visitor Center on the 240 Loop Road. Featuring examples of several Badland's fossils, this 20 minute talk explores the importance of protecting our fossil resources. Wheelchair accessible.

### 11:30 a.m. History Talk

The Badlands are steeped in a rich human history beginning with early native American bison hunters through the Lakota, to early fossil hunters, and homesteaders. Learn more about the diverse human past of this landscape by meeting a ranger at the Journey Overlook, located between mile markers 12 and 13, approximately 8 miles northwest of the Ben Reifel Visitor Center. Wheelchair accessible.

### 12:30 p.m. Children's Program

Calling all visitors between 7 and 12! Meet a park ranger or intern at the Cedar Pass Campground Amphitheater, 400 yards west of the Ben Reifel Visitor Center, for a 45 minute adventure into an aspect of the Badlands. Wear closed-toe shoes and bring a hat. It may be a walk or another activity. Parents: Because the program is age appropriate, we ask that you consider the age limitations for this program.

### 1:00 p.m. What Paleontologists Do

Badlands National Park was initially set aside because of its rich deposits of early mammal fossils. An intern stationed at the Big Pig Dig, located across the road from the Conata Picnic Area, will give a 20 minute talk on field paleontology and the importance of studying the fossil past. To find the site, turn off the Loop Road approximately 7 miles southeast of the Pinnacles Entrance and park at the picnic area. Walk approximately 100 yards to the Big Pig Dig.

Interns are available at the Big Pig Dig from 10 a.m. to 3:30 p.m. daily to answer questions about the site and field paleontology. The Big Pig Dig is closed for the season by late August so programs will not be available after August 15.

### 2:00 p.m. Fossil Talk

A repeat of the 10:30 a.m. Fossil Talk. Meet at the Fossil Exhibit Trail, located 5 miles northwest of the Ben Reifel Visitor Center on the 240 Loop Road. Wheelchair accessible.

### 3:00 p.m. Prairie Dog Town Walk

The lives of prairie dogs and the endangered black-footed ferret are intertwined. The ferrets cannot exist without prairie dogs. Less than 2% of the prairie dog populations present in 1900 still remain. Explore a very large, active prairie dog town by meeting a ranger at Roberts Prairie Dog Town for a 45 minute walk. The dog town is located 5 miles west on the Sage Creek Rim Road, which turns off 1 mile south of the Pinnacles Entrance. Wear closed-toe shoes and a hat. Bring water and a jacket. If the prairie dog town is muddy, a talk will be given at the pull out, rather than a walk.

### 4:00 p.m. Wildlife Talk

Known for its prehistoric wildlife, Badlands National Park has become the site of several reintroductions of native species: bighorn sheep, bison, and black-footed ferrets. Meet a staff member at the Cliff Shelf Trail for a 20 minute discussion on an aspect of the park's wildlife. Topic will vary according to the interest of the staff member. Wheelchair accessible.

### 6:00 p.m. Evening Walk

A repeat of the 8:00 a.m. walk. Meet a staff member in front of the Ben Reifel Visitor Center for an easy, 1 mile exploration of prairie and badlands formations. Wear closed-toe shoes and a hat. Bring water and a jacket.

### 9:00 p.m. Evening Program

Each evening, a park ranger will give a 40 minute slide presentation on some aspect of Badlands National Park. Beginning with a 10 minute mini-talk, the slide program will begin at 9:10 p.m. Wheelchair accessible. The Evening Program will end in time for you to take part in the Night Prowl!

### 10:00 p.m. Night Prowl

Explore the Badlands at night and enjoy our famous clear night skies. Meet a park ranger in front of the Ben Reifel Visitor Center to be led 1/2 mile across the prairie into the Badlands, where you will take a seat in a small natural amphitheater. A 30 minute talk will be given on an aspect of the park. Wear closed-toe shoes and a jacket. Bring a flashlight. Topics could be astronomy, night animals, or human history. The Night Prowl will not be presented August 14 - 21. It will be replaced for 1 week by an astronomy program given at 10:00 p.m. at the Cedar Pass Campground Amphitheater. This is the approximate period of the Perseids meteor shower.

**A Note on Program Cancellations: The White River Badlands are also famous for our dramatic lightning storms. If lightning is visible from the program location, the program will be canceled for employee and visitor safety. Programs are typically not canceled due to rain. The Prairie Dog Town Walk is changed to a talk if the area is extremely muddy.**

**Be prepared for changing weather conditions.**

## White River Visitor Center Cultural Programs

Available Fridays through Sundays from June 12 through August 25, a park ranger working at the White River Visitor Center on Pine Ridge Reservation will give a 20 minute talk or demonstration on an aspect of Lakota culture or history at 1:30 p.m. Additional short talks may be given as staff are available.

## Focus Weeks

Focus Weeks are planned and coordinated by our internship program. Each will include a special brochure and exhibit that will be available at the Ben Reifel Visitor Center. A special program will be offered at the Visitor Center at 3:00 p.m. daily. Other special activities may also be offered. All Focus Week activities will be posted at the Visitor Center. Night Sky Week will include a nightly astronomy program given at the Cedar Pass Campground Amphitheater and will replace the Night Prowl for one week.

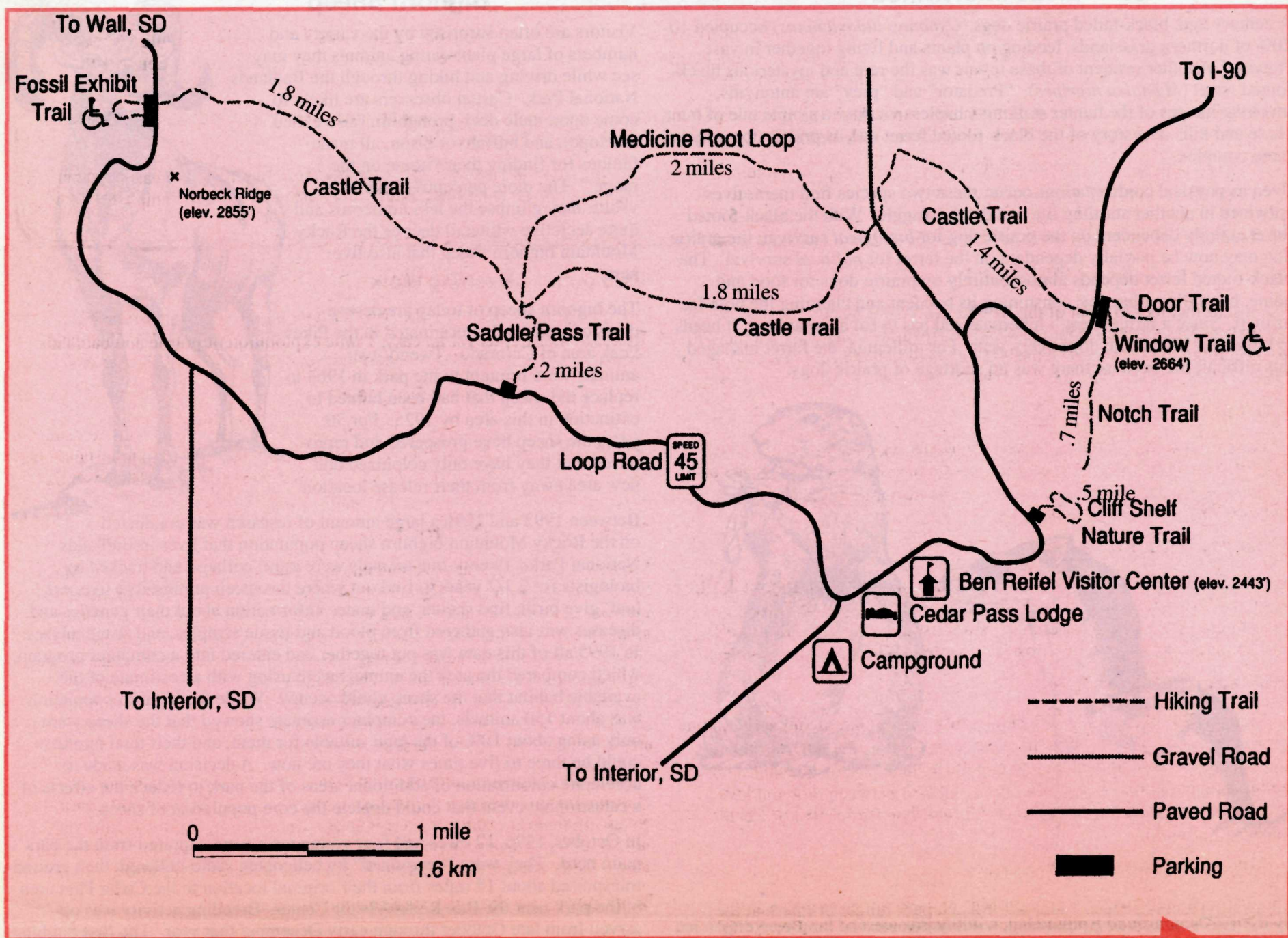
### 1998 Focus Week topics

July 19 to 25 :	Focus on Fossils
July 26 to 31 :	Focus on Ferrets and Endangered Species
August 1 to 7:	Focus on Fire and Prairie Ecology
August 8 to 12:	Focus on Archaeology
August 14 to 21:	Focus on Night Sky

## Be a Badlands Intern

Initiated in 1986, interns at Badlands National Park have contributed nearly 8000 hours toward public education and research efforts. Interns work as park volunteers and commit to 6 or 12 week periods in the park. The Badlands in Your Classroom curricula-based education outreach program is completely staffed by interns. Each year, our Focus Weeks program is planned and coordinated by these key volunteers. Interns give programs, staff the visitor centers, provide trail contacts, and work on writing and photographic projects. If you would like to apply for an intern position, write Internship Coordinator; P.O. Box 6; Interior, South Dakota 57750. Internships are available year round.

# Day Hiking



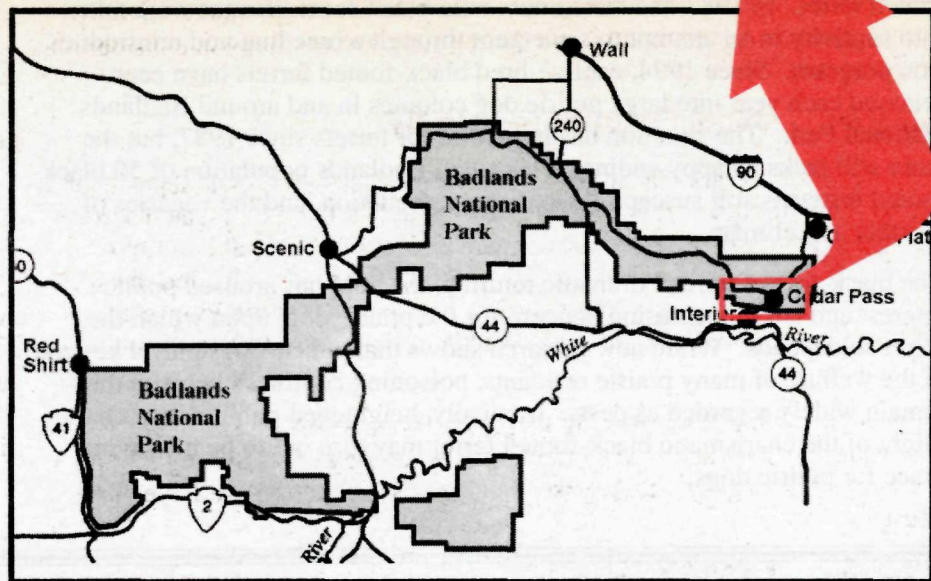
## Hiking Trails

For those who prefer a closer look at the badlands formations, consider taking a hike. The entire park is open to hikers. All of the developed trails start from parking areas within 5 miles of the Ben Reifel Visitor Center at Cedar Pass. If you are interested in backpacking overnight, see page 3 and talk to a ranger at the Visitor Center.

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. Carry water if you think you could be out for even as short as a half hour. **Remember, collecting is not allowed.** 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 to a ranger.

The **Fossil Exhibit Trail** is an easy 1/4 mile boardwalk loop. Don't miss this trail. The first recorded Badlands fossil was found in 1847. Since then, thousands of specimens have been uncovered and studied. Explore a fossil-rich landscape by walking the trail. A self guiding brochure is available at the trailhead. Wheelchair accessible.

The **Cliff Shelf Nature Trail** is a popular 1/2 mile trail through a "slump" area where increased water retention supports an oasis of green surrounded by badlands formations. A self guiding brochure is available 25 yards up the trail. The trail includes some steeper sections and boardwalk stairs. The parking lot cannot accommodate large vehicles towing other vehicles.



The **Door Trail** is a 2/3 mile round trip into the "baddest" of the Badlands, while still allowing you to view them from above. The first 100 yards to a beautiful view at "The Door" are moderately downhill and accessible to athletic or assisted people in wheelchairs. A self guiding brochure is available 100 yards up the trail at "The Door". The more rugged section takes off to your right from the viewing area. Striped posts mark the way and indicate where to stop and read the trail brochure.

The **Window Trail** is a 100 yard trail to a spectacular badlands view through a "window" or opening in the Badlands Wall. Wheelchair accessible.

The **Notch Trail** is a 1.5 mile round trip trail that takes you up a drainage, then up a 45° angle cable/wood ladder. It is not for those afraid of heights! You follow the drainage to the "Notch" for a spectacular view overlooking the Cliff Shelf area and the White River valley.

The **Castle Trail** stretches for over 5 miles through mixed grass prairie and badlands. It is fairly level and connects the Fossil Exhibit Trail and the Doors and Windows parking area. A loop is possible by connecting to either end of the **Medicine Root Trail**.

The **Saddle Pass Trail** is only .2 miles, but rises steeply 200 feet from the bottom of the badlands wall to the top, connecting to the Castle and Medicine Root Trails.

The Prairie Preamble is published with funding provided by the Badlands Natural History Association in cooperation with the National Park Service



EDITOR: Steve Thede

GRAPHIC DESIGN/LAYOUT: Marianne Mills, Steve Thede

PRINTING: Rapid City Journal, Rapid City, SD



Visit Our Web site at  
<http://www.nps.gov/bad/>

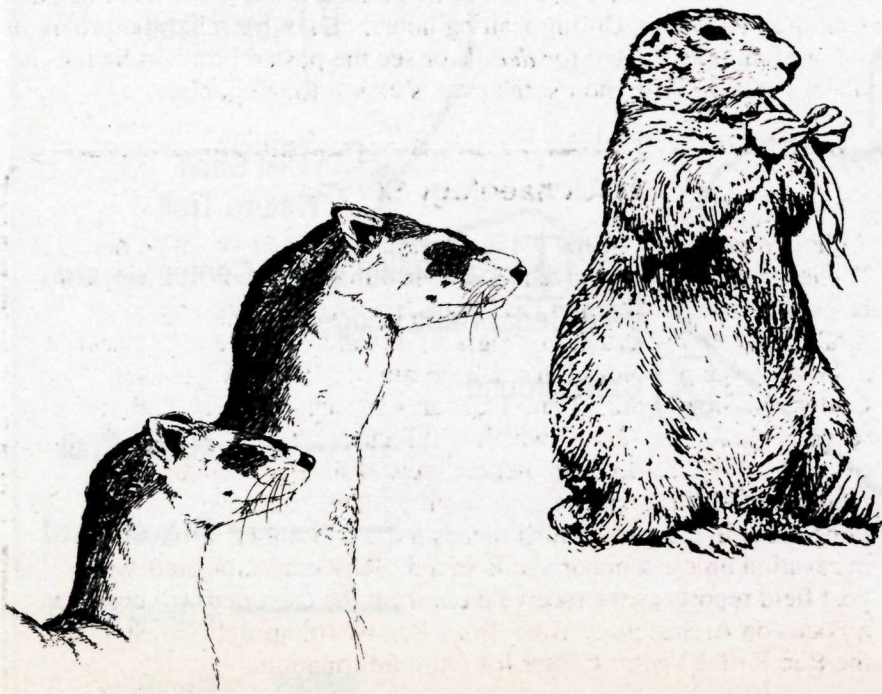
PRINTED ON RECYCLED PAPER

# Managing Park Resources

## Lives Intertwined

A century ago, black-tailed prairie dogs (*Cynomys ludovicianus*) occupied 10-20% of northern grasslands, feeding on plants and living together in vast "towns." Another resident of these towns was the rare and mysterious black-footed ferret (*Mustela nigripes*). "Predator" and "prey" are antonyms, invoking images of the hunter stalking a hapless victim - a simple tale of hunt, chase and kill. The story of the black-footed ferret and its prairie dog prey is more complex.

Even as physical confrontations occur, these two species find themselves entwined in another startling life and death struggle. With the black-footed ferret entirely dependent on the prairie dog for *biological* survival, the prairie dog may now be partially dependent on the ferret for *political* survival. The black-footed ferret depends almost entirely on prairie dogs for food and home, by raiding a burrow, consuming its resident and claiming the hole for its own. Since a ferret doesn't hibernate and has to eat all year long, it needs to kill about 150 prairie dogs every year. For millennia, the ferret managed this difficult life because there was no shortage of prairie dogs.



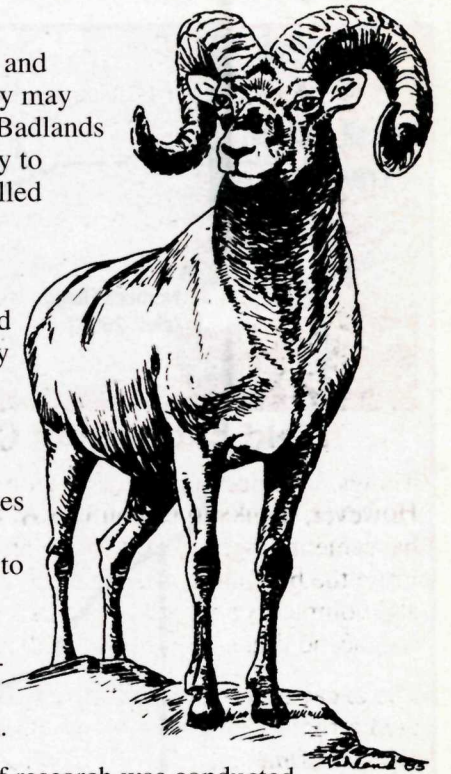
By the 1970s, prairie dog poisoning, wildlife disease and land conversion led to a 98 % reduction in prairie dog range and near extinction of the black-footed ferret. In 1987, the last known wild black-footed ferrets were taken into captivity in an attempt to save them through a breeding and reintroduction program. Since 1994, captive-bred black-footed ferrets have been released each year into large prairie dog colonies in and around Badlands National Park. The situation has improved for ferrets since 1987, but the story still lacks a happy ending. This small Badlands population of 50 black-footed ferrets is still susceptible to disease, predation, and the vagaries of weather and climate.

The black-footed ferrets' dramatic return to the wild has aroused public interest and led to increasing concern for the prairie dog, upon which the ferret so depends. While new research shows that prairie dogs play a key role in the welfare of many prairie residents, poisoning continues because they remain widely regarded as pests. Ironically, heightened public focus on the plight of the charismatic black-footed ferret may turn out to be the saving grace for prairie dogs.

## Bighorn Sheep

Visitors are often surprised by the variety and numbers of large plant-eating animals they may see while driving and hiking through the Badlands National Park. Casual observers are likely to come upon mule deer, pronghorn (also called antelope), and buffalo or bison, all made famous for finding their "home on the range." The more perceptive and lucky visitor may glimpse the less numerous and more secretive whitetail deer or the Rocky Mountain bighorn sheep that also live here.

The bighorn sheep of today are descendants of animals that originated in the Pikes Peak area of Colorado. Twenty-two animals were brought to the park in 1964 to replace the sheep that had been hunted to extinction in this area by 1925. For 30 years the sheep have prospered and reproduced, but they have only colonized one new area away from their release location.



Between 1992 and 1996 a large amount of research was conducted on the Rocky Mountain bighorn sheep population that lives in Badlands National Park. Twenty-one animals were radio-collared and tracked by biologists for 2 1/2 years to find out where the sheep preferred to live, eat, loaf, give birth, find shelter, and mate. Information about their genetics and diseases was also gathered from blood and tissue samples, and scat analyses. In 1995 all of this data was put together and entered into a computer program, which compared the area the animals were using with an estimate of the available habitat that the sheep could occupy. While the bighorn population was about 150 animals, the computer estimate showed that the sheep were only using about 10% of the land suitable for them, and their total numbers could be three to five times what they are now. A decision was made to accelerate colonization of additional areas of the park to reduce the effects of a catastrophic event that could deplete the core population of sheep.

In October, 1996, 12 ewes and four young rams were captured from the park's main herd. They were "netgunned" by helicopter, radio-collared, then ground transported about 18 miles from their original location to the Cedar Pass area of the park near the Ben Reifel Visitor Center. Breeding activity was observed from late October through early December that year. The first lambing season occurred in May, 1997, producing 10 lambs from nine ewes. May also saw the movement of three of the four young rams to the source population in the Pinnacles area of the park. By the end of the first year, disease and other as yet undetermined factors took their toll, with the present population made up of five ewes, six lambs, and two to four rams. Additional observations have also confirmed the population decline of the source population.

Monitoring will continue to assess the viability of the new band as well as to look at the effects on the source herd. Hopefully, these management actions will assure the perpetuation of one of North America's most majestic animals and provide you with greater opportunities to experience another wonder of the Badlands. If you are lucky enough to see some, watch them from a distance. If you find any animals responding to your presence, **you are too close** - so please back away. This guideline is mostly meant to protect the wildlife, but it can also apply to your health and safety.

---

## Wildfire?

What people in their right mind would strike a match and start a fire that has the potential to burn thousands of acres of Badlands National Park? Who else but the park staff! After careful detailed planning, specially trained firefighters purposely light fires under "prescribed" conditions and weather. By doing this we intend to return fire to its former prominence as a dominant force influencing the prairie ecosystem, while minimizing the chances that the fire will escape controls.

Before the 20th century, fire was part of the natural process at Badlands. Frequent low to moderate intensity fires served to maintain this prairie ecosystem. With the establishment of Badlands National Monument in 1939, nearly all fires within park boundaries were put out before they spread very far. By removing fire from the prairie, early park managers were damaging the very prairie they were attempting to protect, although they didn't realize it at the time. Without fire, the density and variety of plant species was transforming itself into a new and unnatural balance.

Research in recent years has demonstrated that prairies need fire, and park managers have changed their point of view. Present land-use patterns now disrupt the size, frequency, and intensity of fires that once spread relatively unchecked across the prairie. Park personnel substitute *prescribed fire* to play the former role of *wildland fire* to reinvigorate declining and stagnant vegetation, release nutrients back into the soil, create uneven aged vegetation communities for more diversity, control exotic plants, and reduce fuels that otherwise would accumulate to unnaturally high levels. Monitoring plots have been established to determine how well the prescribed fires, produce the desired effects.

Like the predator that keeps its prey populations in balance, fire maintains plant communities in a healthy, dynamic relationship with the rest of the prairie's limited resources. If you have the opportunity to see a burn in progress, please keep a safe distance and beware of smoke conditions that may be a hazard to driving. If you see a patchwork of black on the landscape with smooth edges, you know that we are applying the best available knowledge and techniques to maintain the natural park vegetation at its best, for all who come to visit now and in the future.

# Managing Park Resources



## Field Excavation Continues at the Pig Dig

Things have been pretty quiet around the Pig Dig during the past year or so. However, thanks to Canon U.S.A. and the National Park Service fee enhancement program, excavation at the Pig Dig is underway this summer. From the beginning of June until late August, paleontologists, park rangers, and volunteers will be uncovering the remains of fossil mammals from early Oligocene times - almost 34 million years ago.

The excavation started in June of 1993 when two visitors from Iowa, discovered a fossilized vertebral column that had been partially exposed by recent rains. Fortunately, the two men followed the correct procedure: they left the fossil bones undisturbed and contacted a park ranger. Although fossils are common in the Badlands, the newly discovered site sparked the interest of the park staff. What was originally believed to be a four-day excavation has now lasted for over four years. Extensive excavations have uncovered a complex array of bone from *Archaeotherium*, a large pig-like mammal, ancient rhinoceroses and horses, and a small deer-like mammal called *Leptomeryx*.

Since the first field season, the South Dakota School of Mines and Technology, and Badlands National Park have worked cooperatively on the project. Two masters theses and several research reports have been generated from the site. Over 500 jackets containing over 5,000 bones have been collected. Researchers are trying to determine how and why so many different animals were buried and preserved in this particular location. Questions remain on why other common Badlands fossils such as oreodonts (sheep-like mammals), carnivores and rodents are not preserved at the site. Was there something about the site that attracted only certain types of animals? These questions

will not only be answered by looking at the arrangement of bone found at the site but also the chemistry of the sediment in which the bones were preserved. Geologists have looked at individual rock layers contained with in the site and have found that the sediments were deposited in an environment similar to the large watering holes found in Africa today. In the future, researchers will examine other Badlands fossil sites to see how they compare with the Pig Dig.

Excavating the fossils requires patience and precision. Each bone is carefully mapped and documented. Before removal, fossils are wrapped in plaster "field jackets" that keep the bones in place until they are transported to a preparation laboratory. At the lab, each bone and bone fragment is carefully removed from its plaster jacket. In fact, the majority of time dedicated to these fossils will be spent in the lab as opposed to the field. The fossils are separated from the surrounding rock, identified, and cataloged into the park museum collection. Although they will remain the property of the park, the fossils will be stored at the South Dakota School of Mines and Technology.

Park visitors may visit the Big Pig Dig by parking at the Conata Picnic Area and walking to the site. During visiting hours, ranger led talks and programs will be offered. See Page 4 for details or see the posted program listings at the visitor centers. After hours, the area is closed to the public.

## Archaeology Survey

Although protected by the National Park Service since 1939, the White River Badlands have never been subject to an archaeological resources survey. Through funding support from the agency's Cultural Resource Preservation Program, Badlands will be the subject of a three year archaeology survey beginning in 1998. Augustana College in Sioux Falls, South Dakota is the academic institution responsible for the survey, which will focus on the North Unit. With over 123,000 acres to examine, the crew will remain busy during their six week field season each summer. The survey will be sampling areas in the park, which means there will not be a full scale excavation unless a major site is found. Park education staff will post field reports as we receive them from the crew and will conduct a Focus on Archaeology Week from August 16 through 22. Stop at the Ben Reifel Visitor Center for more information.

## What's in a Name?

Where are the BISON! All I see are those *buffalo* out there. If you see a *buffalo* in the park, you are observing the same animals as the tourist next to you watching *bison*. Common usage makes these terms interchangeable, although biologists are more fussy in limiting "buffalo" to wild cattle native only to Africa and Asia.

Bison are the large dominant plant grazers in the grassland ecosystem of the northern Great Plains. Appreciative visitors use up a lot of film when they are lucky enough to see them in the park. Reintroduced in 1963 after an absence of about 100 years, a portion of the 600 animal herd can often be seen while driving along the Sage Creek Rim Road, searching with binoculars from the Pinnacles Overlook, or hiking in the Sage Creek Unit of the Badlands Wilderness.

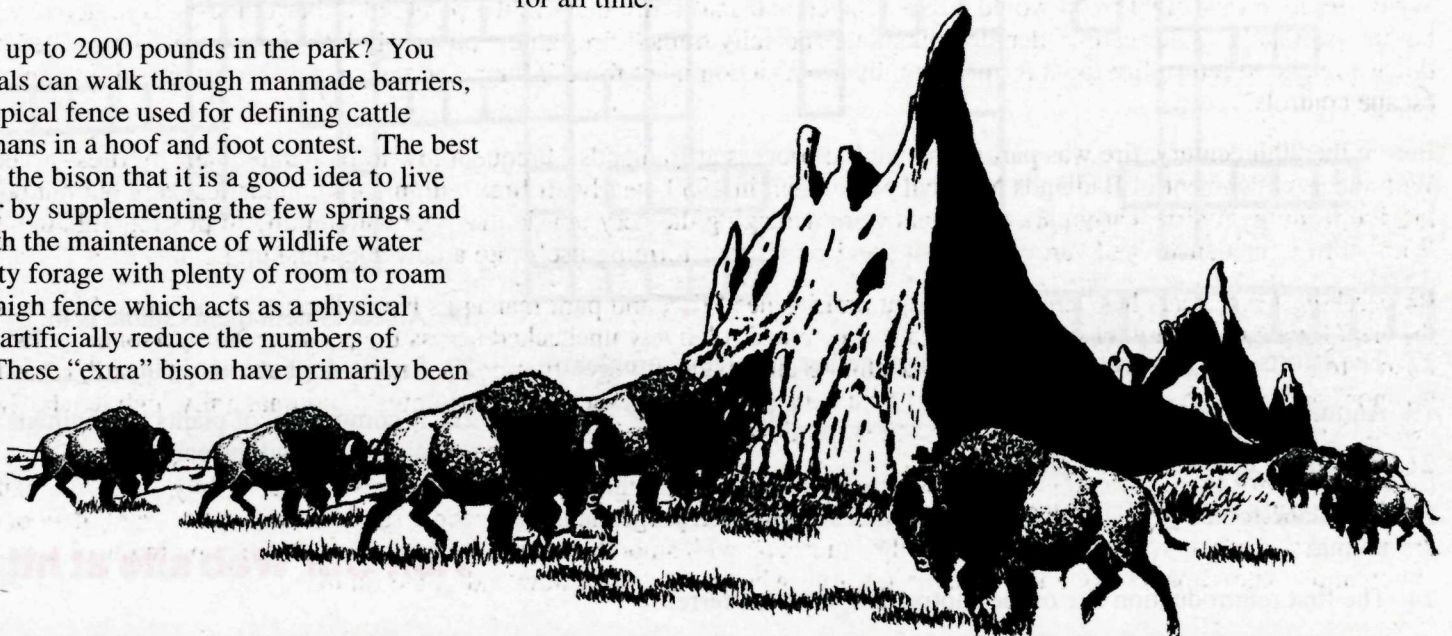
No longer free to roam millions of acres of prairie, the Badlands' bison are kept within the boundaries of the park to prevent trespass onto surrounding private and public grazing lands. This also separates them from their once infinite lunch bucket of grass and deprives them of a cool beverage from the permanent waters of the White and Cheyenne Rivers. Additionally, predators like the wolf and grizzly bear, which removed part of the weaker, older, or young animals to control population size, are no longer allowed to live in this part of the country.

How do you keep an animate mass of up to 2000 pounds in the park? You don't. These powerful and agile animals can walk through manmade barriers, climb very steep terrain, jump over typical fence used for defining cattle pastures, and quickly outdistance humans in a hoof and foot contest. The best resource managers can do is persuade the bison that it is a good idea to live here. We try to assure adequate water by supplementing the few springs and deep pools of intermittent streams with the maintenance of wildlife water impoundments. We manage for quality forage with plenty of room to roam and maintain 30 miles of seven foot high fence which acts as a physical deterrent and visual barrier. And, we artificially reduce the numbers of animals through periodic roundups. These "extra" bison have primarily been used to provide starter populations, promote genetic enrichment of other herds, and enhance cultural, economic, and religious activities on American Indian reservations.

If you have the time to look more closely, you may begin to notice that bison space themselves in different ways. Mature bulls tend to be alone or only with one or two others. Small clusters of young bachelor bulls may also be seen. Cows, calves, and immature animals form the largest social groups. During mating season in July and August, bison often congregate in the largest herds. Challenges and sparring can sometimes be seen among prime bulls as they test and establish dominance, with mating as their prize.

Observing these wild bison can be an inspiring experience that is remembered for a lifetime. To assure that you have a positive memory, always be safe. Remember these animals are wild, and when approached too closely, may react unpredictably, even occasionally challenging you, even in your car or camper.

It is important to have semi-free roaming bison at Badlands so that their influence on the grassland is expressed on the landscape, helping to define the type and distribution of plant communities here. For many, viewing bison in the natural setting of Badlands National Park arouses special feelings about time, place, and our relationship with the natural world. This magnificent animal, along with all of our wildlife heritage, serves as a reminder of our individual and collective responsibility to protect and preserve what we have for all time.



## The Prairie Preamble

# How Can You Help?

Congress establishes National Parks through the efforts of the American people. However, your responsibility to a park does not stop there. Parks are our national gift to the world and must be cared for by all of us. Yes, our tax dollars support the day-to-day operations. However, less than 1% of our tax dollars actually go to the National Park Service. We rely on partnerships and grants, as well as our newly added *Fee Demonstration Program* dollars, for much of what you enjoy most about national parks.

## Donations

Badlands National Park has a donation box located in the Ben Reifel Visitor Center. In the Touch Room, there are also specific donation funds for children's programs and endangered species recovery. All donations are used to further public understanding about park resources. You may also send a donation to the park directly.

### Celebrate National Parks Day!

On August 25, 1916, a new agency was founded: the National Park Service. Ever since, the agency and its archetypical employees - the park rangers - have remained one of the proudest contributions our country has made to world heritage. Each year on August 25, entrance fees are waived at all national parks, including Badlands National Park.

A special movie, brochure, and exhibit will be available at the Ben Reifel Visitor Center on August 25, 1998. There will also be a special evening program on the importance of all national parks, featuring our park. National Parks Day activities are coordinated by our partnership with Northwestern University in Evanston, Illinois.

## Volunteerism

You can also donate your time and talents. Each year, local, national, and international volunteers contribute over 10,000 hours to Badlands National Park. Volunteer projects include public education, school programs, library and slide cataloging, trail work, research, and curatorial work. We participate in the International Student Program, which allows students from other countries to volunteer in U.S. national parks to learn more about our country and our culture. If you meet an international volunteer, please welcome them to our park and our country. Volunteers may receive housing if available.

## Be Informed

Do you follow the national parks in the news? Can you identify the national park closest to your home? Many people don't realize that there are over 370 units to the national park system in 49 states and all U.S. territories. (Only Connecticut lacks a National Park area! New Hampshire has the Appalachian Trail.) Learn as much as you can about national park issues and support us when you can. Joining park associations, such as Badlands Natural History Association, is a good way to keep in touch with distant parks.

### SERVICES NEAR THE PARK

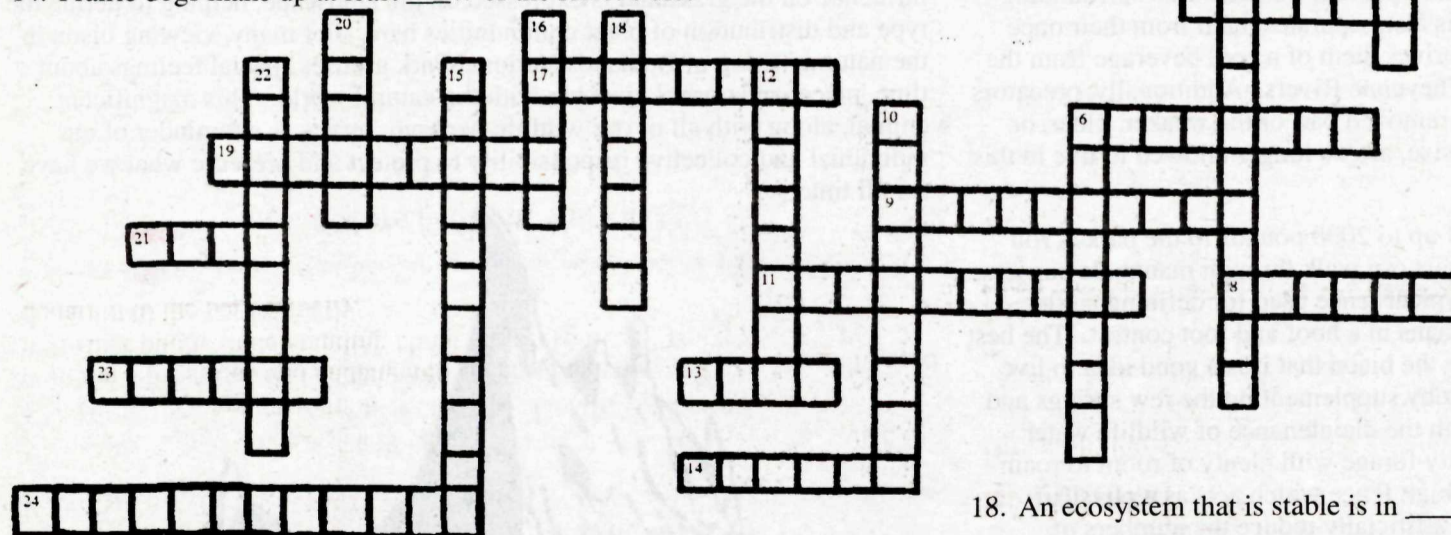
<b>Interior:</b>	Gifts, groceries, gas, LP gas, food, motels, laundromat, campgrounds.
<b>Wall:</b>	Gifts, groceries, drug store, gas, LP gas, food, motels, laundromat, campgrounds, and small-craft airport.
<b>Kadoka:</b>	Gifts, groceries, gas, LP gas, food, motels, laundromat, campground, and small-craft airport.
<b>Scenic:</b>	Groceries, gas, food, laundromat.
<b>Kyle:</b>	Groceries, gas, food, laundromat.
<b>Cactus Flat:</b>	Gas, laundromat, campground, food, motel, souvenirs, convenience items in the summer.

**In Case of Emergency, Contact A Ranger or  
Call 605-279-2525 or 911**

## Just For Kids?

### Across

2. A nationally protected area of buttes formed by erosion
4. A black-footed ferret is a relative of this family
6. An animal that preys on other animals
8. The black-footed ferret may be able to \_\_\_\_\_ to its natural home
9. The black-footed ferret's main food source
11. A condition in which an animal disappears forever
13. The black-footed ferret wears a dark \_\_\_\_ on its face
14. Prairie dogs make up at least \_\_\_\_% of the ferret's diet



17. The efforts of a group of people working together to solve a problem
19. Animals who are active at night are \_\_\_\_\_ hunters
21. An animal that is eaten by predators
23. The black-footed \_\_\_\_\_ is North America's rarest and most endangered animal
24. The first reintroduction site of the captive black-footed ferret

### Down

1. A series of links connecting predators and prey
3. Another name for the South Dakota grasslands
5. A place where things grow and live in a natural condition
6. Prairie dogs were \_\_\_\_\_ to control their numbers
7. A condition in which an animal might become extinct
10. For their safety and protection, black-footed ferrets are bred in \_\_\_\_\_
12. Individuals who own land to raise livestock
15. An area within Badlands National Park where black-footed ferrets were reintroduced
16. A means by which black-footed ferrets capture their prey
18. An ecosystem that is stable is in \_\_\_\_\_
20. Prairie dogs are annoying \_\_\_\_\_ to ranchers
22. A community of plants and animals that live together and are affected by air, water, and the earth

**Visit Our Web site at <http://www.nps.gov/bad/>**