

Frontier Fragments

NEWS OF YOUR NATIONAL PARK AREAS
IN NORTH DAKOTA

FREE

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VOLUME 11

THEODORE ROOSEVELT NATURE AND HISTORY ASSOCIATION

1991-1992



Little Missouri River (North Unit), Theodore Roosevelt Park

Your Park Visit...

A visit to any of the National Park System areas in North Dakota should be a memorable one, one that you should enjoy recalling. To help make your visit more enjoyable, the park staffs are ready to inform you of the wonders to be discovered and the opportunities that these areas offer both during your visit and at other times during the year.

Be sure to ask about:

- Programs and activities, such as guided walks and tours
- Trails for walking and hiking
- Opportunities to observe wildlife
- Wildflowers that may be in bloom
- Scenic views for you to photograph
- Safety tips to follow
- Park regulations

SUPERINTENDENT'S MESSAGE

Welcome to your National Park Service areas in North Dakota! Theodore Roosevelt National Park, Fort Union Trading Post National Historic Site and Knife River Indian Villages National Historic Site have been set aside by Congress as part of the National Park System.

This system includes some 357 different areas throughout the United States and its territories, encompassing such diverse sites as the White House, the Grand Canyon and the Gettysburg battlefield. The National Park Service is charged with managing all these areas for present-day visitor use while at the same time preserving and protecting them for future generations. It hasn't always been like this.

After Yellowstone was established as the world's first national park in 1872, the Army was sent in to patrol the park and protect it from damage. Cavalry troops were soon stationed in many of our western parks including Sequoia, Yosemite, and Mount Rainier. Civilian workers replaced the troops in the early 1900s but the parks remained understaffed and neglected. In 1915, a wealthy industrialist named Stephen Mather wrote a letter to the Secretary of the Interior protesting the deplorable condition of the parks. Interior Secretary Franklin Lane wrote Mather that if he was so concerned about the parks, why didn't he come to Washington and run them himself? Mather did and the rest is history. Congressional passage of the National Park Organic Act in 1916 created a National Park Service charged with administering and protecting the parks, not only for the visitors of that day, but for all who would follow.

The national park idea was born and nurtured in America. Beginning with Yellowstone and spurred on by the later establishment of the National Park Service, the many units of today's National Park System preserve the truly superlative examples of our nation's natural, cultural and historical heritage. The diamond anniversary of the National Park Service, which we are observing in 1991, affords a special opportunity to celebrate the national park idea. During the past 75 years, our National Park System has grown impressively and the idea has spread around the world.

Activities celebrating the 75th anniversary will be held throughout the summer. On August 25, National Park Service Founder's Day, there will be free admission to both units of Theodore Roosevelt National Park. Refreshments will be served at all National Park Service visitor centers in North Dakota.

The national park areas in North Dakota are rich in history and in the diversity of plant and animal life they contain. Each is a very special place. Come and stay awhile and enjoy your national parks. The people in the gray and green uniforms of the National Park Service are here to assist you with every aspect of your visit. Let us share these special places with you!

*Pete Hart, Superintendent
Theodore Roosevelt National Park*

THEODORE ROOSEVELT NATIONAL PARK

National Park Service

75th Anniversary
1916-1991

The National Park Service is celebrating its Diamond Anniversary this year. Special events will take place across the country to commemorate this milestone, to foster a better understanding of the accomplishments of this federal agency, and to show that "National Park Service professionals are rededicated to their fundamental mission as archivists of the nation's history, providers of educational and leisure time opportunities, and protectors of our vast but limited resources for future generations." Programs are being scheduled by the three North Dakota National Park Service areas to help emphasize this year-long birthday.

During the summer, park staff will present interpretive programs with the 75th anniversary and National Park Service history themes.

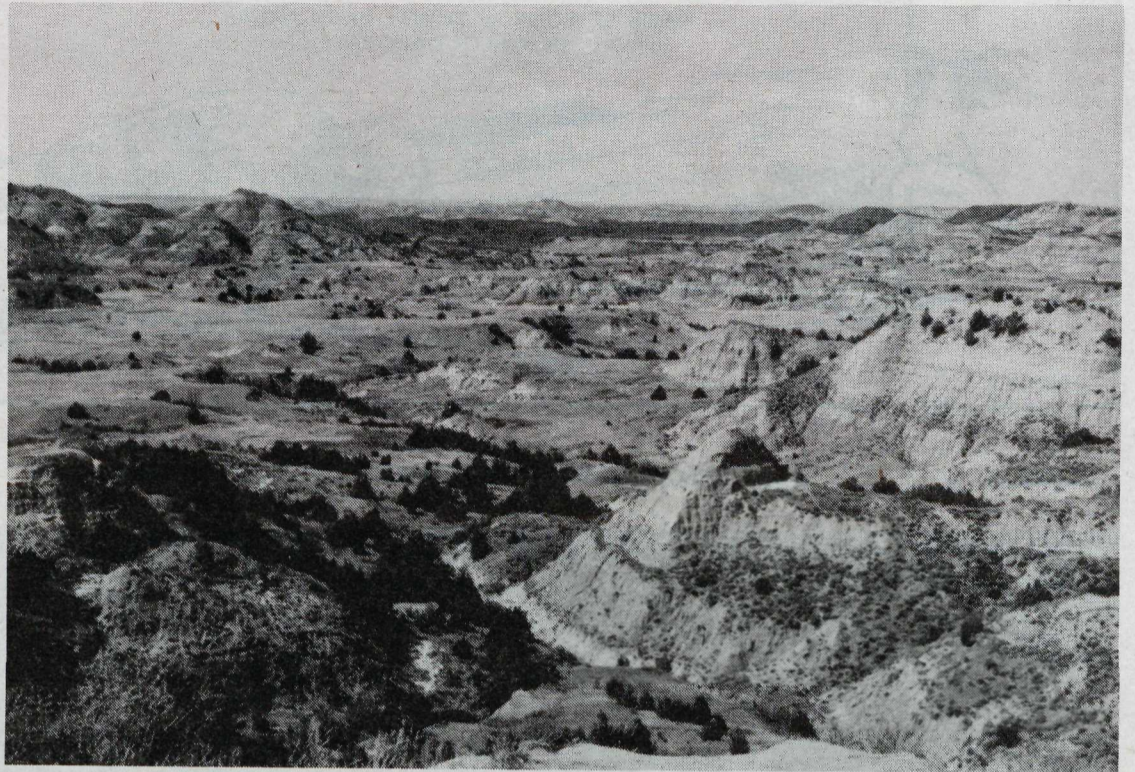
Exhibits and displays featuring the anniversary will be installed at Medora, Painted Canyon, and the North Unit.

Founder's Day, August 25th, will be given special attention. In addition to the free fee day for both units, park history programs will be given throughout the day at all three visitor centers.

NATIONAL PARK SERVICE



In 1916, the Interior Department oversaw 14 national parks and 21 national monuments, but lacked effective, coordinated administration. In that year, Congress created a new bureau (National Park Service) to manage these areas with a two-fold purpose: "to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." Today, the number of National Park Service areas has grown to 357.



The rugged North Dakota Badlands from the Painted Canyon Visitor Center.

Major park construction is underway

Please pardon our mess! During the summer of 1991, many construction projects will take place in Theodore Roosevelt National Park. Most of the projects will repair or improve existing structures while others will add new facilities to the park. Please heed all warning signs and stay behind construction fences.

NORTH UNIT

The most exciting project is the construction of the new visitor center and ranger station for the North Unit. This 4,400 square foot building will replace a cramped double-wide trailer currently in use. While construction takes place, a temporary visitor information station will be located at the entrance to the Squaw Creek campground and picnic area.

The design of the new building was chosen so the visitor center will not obscure the beauty of the badlands. Inside, exhibits will showcase the different habitats found in the park. A sales outlet for the Theodore Roosevelt Nature and History Association and a small auditorium for viewing films and slide shows will also be located in the exhibit room. If everything goes as planned, construction should begin in mid-July and take nine to twelve months to complete.

A one-half-mile loop of the Squaw Creek Nature Trail, located in Squaw Creek campground, will be graded and asphalt surfaced to provide access for mobility impaired visitors. Located near the beginning of this trail is a small picnic shelter built by the Civilian Conservation Corps in 1936. It will be restored as originally constructed. The work will consist of stone pointing and log and rafter replacement. This fall, hazardous trees and limbs will be removed from this area and the rest of the campground.

SOUTH UNIT

The old North Unit Visitor Center will be relocated to the South Unit in June. Once there, it will be used as a resource management center and a storage facility for the park's museum and artifact collection.

The corral has been relocated at the Halliday Well horse group camp to separate the campsites from the horses and to comply with public health regulations.

Hazardous trees and limbs will also be removed from Cottonwood campground, Peaceful Valley Ranch, picnic areas, and the headquarters area.

A new one-mile loop trail will be constructed at Painted Canyon Visitor Center. The trail will provide a place for people to stretch their legs amid the scenic panorama of the badlands along I-94. A post-and-rail safety barrier will also be placed along the badlands rim.

Visitor hiking experiences on the Ridgeline, Skyline and Wind Canyon trails will be greatly improved by surface sealing, grading, water bar and step replacement and installation of benches.



SITE BULLETINS

Site bulletins available at the visitor centers provide closer looks at specific park resources.

FEES

Legislatively authorized entrance and user fees are charged at Theodore Roosevelt National Park; no fees are charged at Fort Union Trading Post NHS or Knife River Indian Villages NHS. Entrance fees are collected at Theodore Roosevelt National Park from May 1 through September 30; camping fees are charged from mid-April through October. No fees are collected during the winter months when visitor services are reduced.

The current fee schedule at Theodore Roosevelt National Park is as follows:

Short Term Entrance	Private motor vehicle	\$3.00 per vehicle
	Commercial bus	\$1.00 per person
	Two-wheeled vehicle/Pedestrian	\$1.00 per person
Annual Park Permit		\$10.00
Golden Eagle Passport		\$25.00
User Fees	Camping	\$7.00 per unit each day
	Group Camping-Squaw Creek	\$2.00 per person each day
	Group Camping-Halliday Well	\$1.00 per person each day
	Horse Camping Fee	\$0.50 per horse each day

Short term entrance fees are good for seven days and allow unlimited entry to either unit of the park during that period.

Entrance fees are not charged to persons under the age of 16 years or those who have passed their 62nd birthday. Qualifying groups are also exempt from entrance fees.

Golden Age and Golden Access Passports are free lifetime entrance permits issued to citizens or permanent residents of the United States who have passed their 62nd birthday and those medically determined to be disabled, respectively. Both passports also provide for a 50% reduction of user fees.

Persons not included in the above fee-exempt categories may elect to purchase the \$25.00 Golden Eagle Passport. Valid for the calendar year, the Golden Eagle Passport allows the holder and those accompanying her/him in a single, private, non-commercial vehicle to enter federal recreation areas at no additional charge. A \$10.00 annual park permit is also available. This park-specific pass gives the holder unlimited entry to Theodore Roosevelt National Park during the calendar year.

Additional details about park fees and the various passports can be obtained by contacting Theodore Roosevelt National Park.

BACKCOUNTRY USE

Eighty-five miles of backcountry trails in Theodore Roosevelt National Park allow the visitor to experience the same wild beauty and solitude of the badlands that captivated Theodore Roosevelt more than a century ago. Hikers and horseback parties who wish to camp overnight in the park backcountry must register at either the South or North Unit visitor center and obtain a free backcountry use permit. A backcountry guide containing a map of the park trail system, backcountry use regulations, and special considerations to make in planning your trip will accompany each permit. Park staff are available to advise you of current trail and weather conditions, to recommend travel routes, and to offer suggestions that will ensure a safe and memorable experience.

To preserve the quality of the historical scene and to protect delicate archeological sites, backcountry camping is not permitted at either Fort Union Trading Post National Historic Site or Knife River Indian Villages National Historic Site.

CHURCH SERVICE

This year marks the 41st year of operation of the Christian Ministry in the National Parks program. A Sunday morning interdenominational service is provided at the Theodore Roosevelt National Park Cottonwood Campground Amphitheater June-August by this ecumenical ministry.

PEACEFUL VALLEY TRAIL RIDES, INC.



Park trail rides depart from rustic Peaceful Valley Ranch.

Trail rides of various lengths are available at Peaceful Valley Ranch in Theodore Roosevelt National Park. Overnight trips available. Write P.O. Box 197, Medora, North Dakota 58645.

1991 VISITOR ACTIVITIES

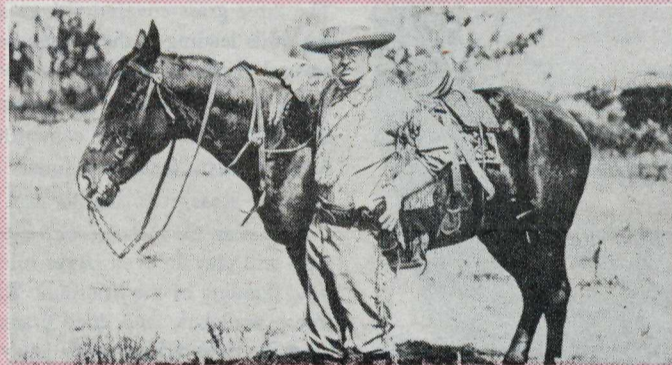
-----Theodore Roosevelt National Park -- South Unit-----

- √ **MEDORA VISITOR CENTER** -- Open daily, mid-June through Labor Day, 8:00 a.m. to 8:00 p.m. (MDT). Open daily remainder of year except Thanksgiving, Christmas and New Year's Day, 8:00 a.m. to 4:30 p.m. (MST).
- √ **PAINTED CANYON VISITOR CENTER** -- Open daily, mid-June through Labor Day, 8:00 a.m. to 8:00 p.m. (MDT); mid-April to mid-June and September through October, 8:30 a.m. to 4:30 p.m. (MDT).
- √ **MALTESE CROSS CABIN** -- Daily, 20-minute scheduled guided tours of Roosevelt's Maltese Cross Cabin, mid-June through mid-September, 8:45 a.m. to 4:30 p.m. (MDT). Self-guided tours available the rest of the year.
- √ **EVENING CAMPFIRE PROGRAMS** -- Nightly at Cottonwood campground, mid-June through mid-September. Programs begin at 9:30 p.m. (MDT) in June, earlier as the summer progresses.

Theodore Roosevelt National Park -- North Unit-----

- √ **NORTH UNIT VISITOR CENTER** -- Open daily, Memorial Day through September, 9:00 a.m. to 5:30 p.m. (CDT). Open weekends and limited weekdays the rest of the year.
- √ **EVENING CAMPFIRE PROGRAMS** -- Nightly, at Squaw Creek campground, mid-June through mid-September. Programs begin at 10:00 p.m. (CDT) in June and July, earlier as the summer progresses.
- √ **SPECIAL PROGRAMS**

August 25, all day (North and South Units) -- Founder's Day.
Programs on the history of the National Park Service.



Theodore Roosevelt, badlands rancher

Actor and interpreter Mark Klemetsrud will enliven the spirit of Theodore Roosevelt by portraying the 26th president's 1886 cowboy days in the Little Missouri River Badlands. Mr. Klemetsrud's historical character, TR - Dude on the Frontier, will make guest appearances at the Maltese Cross Cabin, now located behind the Medora Visitor Center at the entrance to the South Unit, on:

- July 4, 5, 6, 7, 20, 21
- August 3, 4

Check at park visitor centers or current activity schedules for program times.

NOTE: During the summer, naturalist-led walks, talks, children's programs and demonstrations are conducted daily in the South and North Units. Check at the visitor centers for the current activity schedule or write the Superintendent, Theodore Roosevelt National Park, Medora, North Dakota 58645 or call 701-623-4466.

√ INDICATES HANDICAPPED ACCESSIBLE

FOR YOUR SAFETY . . .

Don't let your visit be spoiled by misfortune. For your safety and for the protection of park resources, observe these park regulations and safety warnings:

- View all wildlife from a distance. Do not feed or harass wildlife.
- Be alert and watch for prairie rattlesnakes, poison ivy and prickly pear cactus.
- For walks, take an adequate supply of water, wear proper footgear and a hat, and check with rangers for other precautions. Stay away from loose, crumbly edges of cliffs. Don't drink from backcountry water sources unless you have boiled the water.
- The threat of wildfire, particularly in summer, is very real. During periods of extreme fire danger, restrictions may be placed on smoking and cookfire use. Report all observed wildfires and unsafe visitor fire practices.
- Observe traffic regulations. Use your vehicle's seat belts. The life you save could be your own!

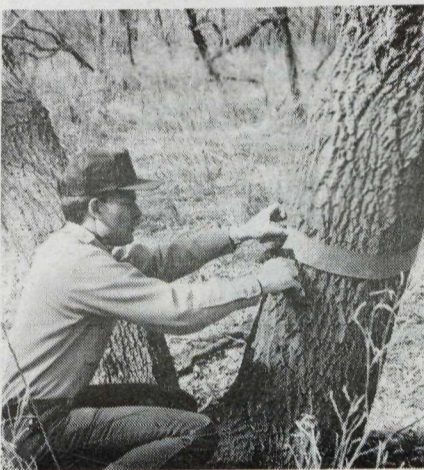
KNIFE RIVER INDIAN VILLAGES NATIONAL HISTORIC SITE

Preserving artifacts, new facilities is important task for park rangers

Park visitors drive into the parking lot noticing very few other cars, no crowds milling about, and one of the first things they say to the park ranger is, "You must get pretty lonely out here." To tell the truth, there are so many things going on that there's barely enough time to do them all!

The park, established in 1974, is presently in a major developmental phase which includes construction of new trails, new exhibits, and a new visitor center. The staff of four, which doubles in size in the summer, have worked with National Park Service designers over the past several years to determine what should be placed in these new facilities. One item will be an audio visual program about village life and the people, past and present. Filming will commence this spring on locations in the park and on the Fort Berthold Indian Reservation.

Artifact management is no easy task with the majority of the park collection temporarily housed at the University of North Dakota almost 300 miles away. It has taken three years for two full-time museum workers to catalog the 800,000 archeological artifacts recovered from the park. Information and photographs of these artifacts have been shuttling back and forth between the park and the NPS Design Center so the staff can plan the contents of the new visitor center exhibits. The new exhibits will be installed in the spring of 1992.



Park ranger applies insect trapping band to tree to determine potential insect pest population.

The cultural resources in the park cannot be fully enjoyed without continual management of the natural resources. The three grass-covered village sites and the trails leading to them must be mowed several times a season. Otherwise, the subtle features of the rolling terrain and the artifacts are easily camouflaged by waving grass. Once you finish mowing all these areas, it is time to start all over again!

This year, the removal of vegetation from around the village sites will play an even larger role in resource management. Periodic flooding of the Missouri River used to wash away fallen trees, branches, and dried grasses. The village Indians used what the river did not carry away. A recent study indicates that the build-up and drying of these materials over the past several years may have put the underlying artifacts at risk of being destroyed should a fire break out. By stepping up its program to reduce fire fuel levels, the park hopes to protect the artifacts as well as park neighbors.

Human activity has reduced the acreage of flood plain forests in the country. Over the past 1-1/2 years, rangers have been monitoring insect activity in the park's forest with the federal and state forest services to develop a strategy for healthy tree management. Park rangers will be out in the forest again this year, collecting insects and setting up experimental forest management areas.

All of these activities go on at the same time the park operates the current visitor center, gives programs to school children, leads guided walks for visitors, and manages the daily routines of any other business operation. Although Knife River Indian Villages isn't as heavily visited as some of the other 357 National Park Service areas, we have plenty of things to keep us busy!

---Knife River Indian Villages National Historical Site ---

1991 VISITOR ACTIVITIES

✓ **VISITOR CENTER** -- Located 3 miles north of Stanton via county road 37. Open daily, Memorial Day through Labor Day weekends, 8:00 a.m. to 8:00 p.m. (MDT); rest of year, excluding holidays, 8:00 a.m. to 4:30 p.m. (MST). No fee. A new visitor center 1/2-mile north of Stanton to replace the present one is projected to open in early to mid-1992.

✓ **RANGER ACTIVITIES** -- Guided walks to village sites or natural areas are conducted daily, June through August, at 11:00 a.m., 1:00 p.m. and 3:00 p.m. Tours given on request or by advance reservation the rest of the year. Tour destinations are posted at the visitor center. Demonstrations or talks that depict daily activities of the village inhabitants are conducted at the visitor center June through August. These may include gardening, hide tanning, tool making, song and dance and others. Programs may be requested the remainder of the year by advance arrangement.

✓ **HIKING** -- Self-guiding brochures are available at the visitor center for walks to two village sites. Additional park trails can lead hikers through prairie and woodland ecosystems. Trails are open during visitor center hours. Some trail areas are accessible to visitors using wheelchairs.

✓ **VILLAGE INDIAN TRADE DAYS**-- July 20-21, 1991; Saturday, 9:00 a.m. - 6:00 p.m. and Sunday, 9:00 a.m. - 3:00 p.m. (MDT). Volunteers and staff dressed in period costume reenact a trading encampment which many have taken place at the Knife River villages nearly two hundred years ago. Traditional skills and crafts are demonstrated.

✓ **HISTORICAL DRAMA; LEWIS AND CLARK AMONG THE EARTHLIDGE PEOPLE** -- August 17-18, 1991: 1 performance Saturday (4:00 p.m. MDT), 2 performances Sunday (1:00 p.m. and 5:00 p.m. MDT). This outdoor drama reenacts the return of the famous expedition to these villages in August 1806.

FOR MORE INFORMATION write Superintendent, Knife River Indian Villages NHS, RR1, Box 168, Stanton, ND 58571 or call (701) 745-3309.

✓ INDICATES HANDICAPPED ACCESSIBLE



Cataloguer records information on one of Knife River's 800,000 archeological artifacts.

North Dakota National Parks hold much attraction during winter

Knife River Indian Villages National Historic Site, Fort Union Trading Post National Historic Site, and Theodore Roosevelt National Park are quiet, peaceful places during the winter months. All three areas remain open even on the coldest, most blustery winter days. With fewer visitors, they are special places to visit because of their serenity.

At Knife River Indian Villages, the river bottom land between the Knife and Missouri Rivers is converted from a heavily wooded nature trail to a magical ski trail. The staff keeps nearly nine miles of cross-country ski trails groomed for public skiing throughout the winter. As you ski or walk the trails, imagine villagers sledding or playing an ancient game called Tchung-kee

(pronounced chun-ke). This widespread sport on the plains was played by men using six-foot long spear-like poles which they tossed at a doughnut-shaped stone rolled along the course. Sledding provided young villagers with an opportunity for courtship. Sleds were made of a single bison robe or of ribs lashed together with sinew.

A visit to Fort Union Trading Post in winter gives one a sense of awe and appreciation for those who brave the harsh winters on the northern Great Plains. The fort is open daily from 9:00 a.m. to 5:30 p.m. CST. Stop by to visit or arrange a group tour and experience winter life at a remote trading post.

Both the North and South Units of Theodore

Roosevelt remain open through the winter. However, when it snows, the loop section of the park road at the South Unit is closed and at the North Unit, the park road is closed at the base of Cedar Canyon. The remainder of the roads are plowed open. Exploring the park's backcountry on cross-country skis can be an exciting and rewarding experience. All hiking trails are available for cross country skiing, but none are groomed. Snowmobilers can enjoy a chilly ride on the frozen surface of the Little Missouri River. For the brave and hardy, both the Squaw Creek and Cottonwood campgrounds are open for primitive camping. No camping fees are charged once the water is turned off in mid-October.

Indian-Artisan House nearly reconstructed

The Indian-Artisan House served as a place for trading and negotiations with the Indians and as a work place for the blacksmith, tinner and gunsmith. The 21' x 60' Indian-Artisan House and its adjoining 12' x 12' trade workshop was probably one of the first structures built at the fort because of functional necessity. In 1837, the strong room was added as a precaution against the ever-increasing hostility of Indians distraught over an imported smallpox epidemic that ravaged local tribes. Between 1843 and 1851, the west end of the structure being used by the blacksmith, gunsmith and tinner was converted into an office, as shown in Rudolph Kurz's drawing of 1851.

The 1851 configuration of the Indian-Artisan House was piece-on-piece log construction. The roof was sod. The trade shop was a roofed enclosure between the Indian reception room and the south palisade. By the 1860s, the 11' x 32' strong room had been removed and the Indian-Artisan House roof had been shingled.



Edward Denig, seated, entertaining Cree Chiefs in 1851 in Indian-Artisan House

is built against the wall by the gate, in which they used to trade through a small hole about one foot square in the wall." Hoffman (1866) described it as "a large building at Fort Union for the purpose of entertaining the Indians. Dirt floor with big opening in center of the roof so they could have a fire."

The Indian-Artisan house is in its final stages of reconstruction. The Friends of Fort Union purchased and donated the necessary logs to go with logs remaining from other construction that had been stockpiled in the fort's courtyard.

This final building in the five-year Fort Union project will have a faithful 1851 interior, and will one day be refurbished to look like a genuine trade house from the 1850s. Come visit!

Visitors to Fort Union mentioned this building in their accounts. Maximilian commented on the Indian reception room (1833): "Only the chiefs and about thirty of the principal warriors were admitted, who sat down around the apartment which was allotted to such meetings." T. Culbertson (1850) wrote: "A room . . .

---Fort Union Trading Post National Historic Site

√ **BOURGEOIS HOUSE VISITOR CENTER** -- located 25 miles southwest of Williston. Open daily, Memorial Day through mid-September, 8:00 a.m. - 8:00 p.m. (CDT). Winter operating hours are 9:00 a.m. - 5:30 p.m. (CST).

√ **FORT TOURS** -- Tours are self-guiding. Group tours may be arranged by contacting the park.

√ **SPECIAL PROGRAMS:**

June 13-16.....9th annual Fort Union Rendezvous
June 20.....25th Anniversary Open House
July 26-28.....Fort Buford Military Encampment
August 25.....NPS 75th Anniversary Celebration

FOR MORE INFORMATION write Superintendent, Fort Union Trading Post, NHS, Buford Route, Williston, ND 58801 or call 701-572-9083.

√ **INDICATES HANDICAPPED ACCESSIBLE**

Watch where you put your hands and watch your step

The prairie rattlesnake is the only poisonous species native to North Dakota. It can reach a length of five feet and is typically greenish yellow in color with darker blotches.

Snakes are found frequently at night warming themselves on the paved surfaces of roads and campgrounds. If you are walking at night, use a flashlight and watch your step! A rattler, if stepped on, usually strikes without warning. Snakes typically seek cover during the hot daylight hours of summer. Be careful when walking through brushy areas and keep your hands out of animal burrows and crevices. A good rule to remember is to never put your hands or feet into places that cannot be seen.

Other snakes found in western North Dakota include the western plains and red-sided garter snakes, western smooth

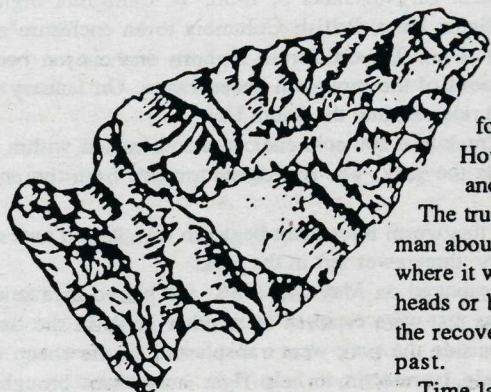
green snake, plains hognose, yellow-bellied (blue) racer, and bullsnake. Because of their similar size, coloration, and actions bullsnakes are commonly mistaken for rattlesnakes. Remember that any snake, even nonpoisonous varieties, can bite if handled. Medical attention should be given to prevent infection in case of a bite.

Federal law prohibits harming or killing snakes or any other animals in the park. If you are bitten by a snake, contact a park ranger immediately.



The prairie rattlesnake is the only poisonous species native to North Dakota.

Can I keep this arrowhead?



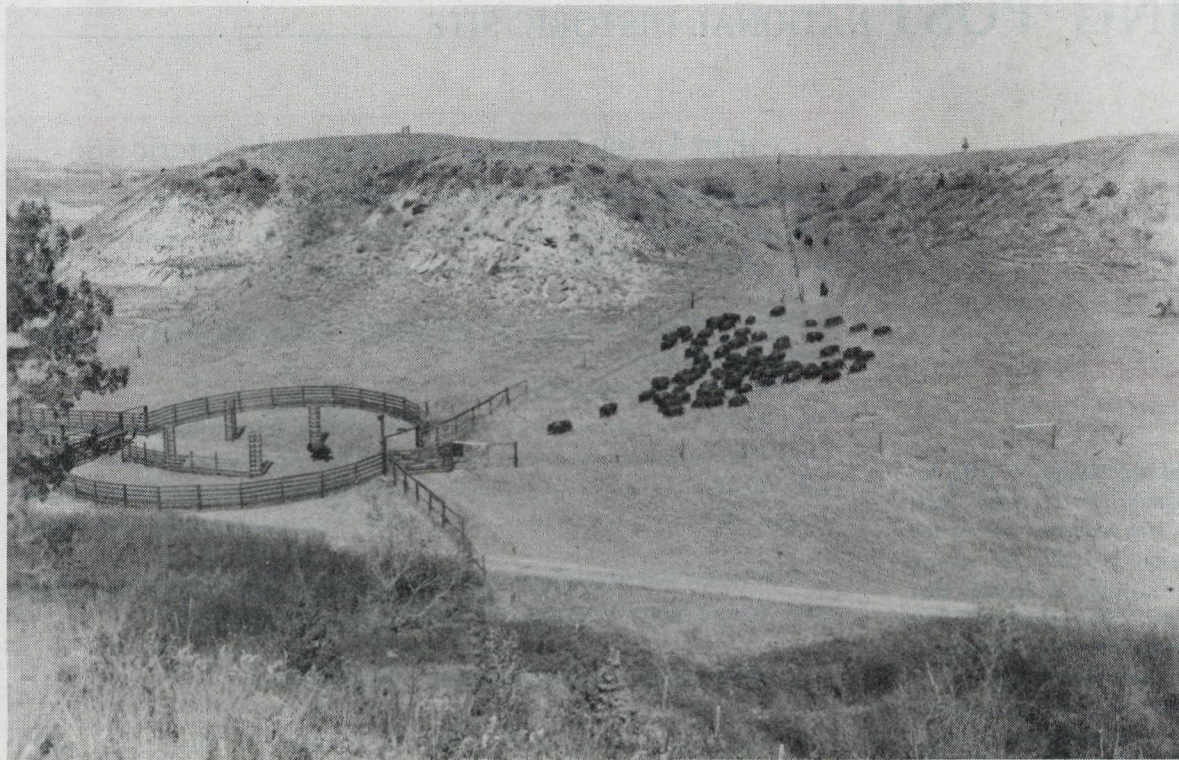
"Say ranger! Can I keep this arrowhead, square nail, bead, fossil, bullet, piece of pottery, or . . . Can my child keep a chipped stone tool? May I use a metal detector or dig for artifacts?" These questions sound innocent. However, such actions are illegal on public lands and violations can involve fines and jail terms.

The true value of an artifact is what it can tell modern man about its maker. It can tell its tale only if it is left where it was last used. Archeology is more than arrowheads or broken pottery - it is, above all, a method for the recovery, study and reconstruction of the human past.

Time lays down layers of soil and items, like sentences in a book. Like sentences, layers and artifacts

cannot be rearranged or they will become undecipherable by the archeologist, or reader. When the artifact is removed from its place in the layers of soil and from associated items, it has been stolen from all the people and from future generations. Yet each year, countless pieces of our cultural and natural history become souvenirs which are carried home and usually thrown away. The fact is that any removal or destruction, no matter how small, is depriving all of us of our heritage.

"Take Pride in America" and do not disturb any items. Please help the National Park Service protect your cultural and natural resources by reporting any destruction to a park ranger.



Scene from an early bison roundup at Theodore Roosevelt National Park.

Where the Bison Roam

Bison roundup is exhilarating time

By SARA KOENIG
Resource Management Division

Bison roundups are very much talked about at Theodore Roosevelt National Park. Most all the park employees try to juggle their schedules so they can participate. Roundups are exciting, they're hard work, and (mostly) fun. But, of course, roundups aren't staged just for fun. Bison roundups have two main purposes. First, they enable us to periodically remove enough bison to keep our populations within the size that the available habitat (the park) can sustain. Secondly, roundups help us gather information about individual bison and the herd as a whole, which is used in bison management.

Last year we conducted a bison roundup in the South Unit from October 29-November 1. It was my first roundup. On the first morning the two helicopters and horseback riders herded over 200 bison from the southeast corner of the park towards the holding pasture. We could hear the helicopters long before we saw any bison. Then, there they were, streaming over the hill, their tongues hanging out but still running after nine miles. The cinnamon-colored babies stuck right with their moms even though they looked very tired. Hearing and seeing them thunder by gave me a small glimpse of what the ancient herds must have been like when bison freely roamed the plains. By the end of the first day 325 bison were in the holding pasture.

Working individual bison involves moving smaller groups of animals from the holding pasture in the corral (easier said than done) and through a series of smaller enclosures until a single bison is isolated and then released into the squeeze chute. They jump into the chute, are stopped short by the head gate and the two people manning the chute catch them tight. Then the head gate is released and someone moves in (carefully) to catch the bison with the nose clamp to immobilize the head. Next the vet and a resource manager move in to look at its teeth in order to make an age estimate (bison gain two permanent teeth each year between the ages of 2 and 5 years), determine its sex and then feel its ear for an existing ear tag. Any untagged bison are tagged with a uniquely numbered metal tag. Female calves are vaccinated for brucellosis. If a bison is se-

lected to be culled from the herd, blood is drawn from the neck for a brucellosis test. Then the animal is released back into the park or into a holding pen to await transport. Ten bulls had to be released from the corral because they were too big or too ornery to go through our squeeze chute (which is a standard size cattle chute). At the end of four days we'd worked over 290 individual bison, sending 81 to new homes at Fort Berthold Reservation and Jamestown and kept accidents down to minor thrills and spills. All the brucellosis tests came back negative, as usual.

Working a bison in the squeeze chute, getting in close enough to pull open its lips and count its teeth and close enough to feel its ear, gave me an apprecia-

tion for just how big bison really are and made me thankful for the squeeze chute and nose clamp. Bison are the largest native terrestrial animal in North America. Full grown males (six years and older) can weigh 1,500-2,000 pounds while females, full grown at about four years, weigh 800-1,200 pounds. Even calves can be a handful at about 300 pounds. Being that close--close enough to be snorted on--is wonderfully exhilarating. The bison are so vibrant and alive, healthy and vigorous. When I watched bison run off into the park after being released, I kept thinking how lucky we are to have such magnificent, healthy creatures in Theodore Roosevelt National Park.

Bighorn Sheep relocated to promote new numbers

The Audubon bighorn sheep once dotted the slopes along the Little Missouri River and its coulees. Hunted along with other wildlife such as the bison, elk, wolf, and plains grizzly, the last known Audubon sheep in the North Dakota Badlands was killed 20 miles west of Grassy Butte in 1905 (just 100 years from the date they were recorded by Lewis and Clark during their journey through what is now North Dakota).

Since the 1940s, the North Dakota Game and Fish Department had been interested in reintroducing bighorns to North Dakota. It wasn't until 1955 that a source was located. On November 5, 1956, 18 California bighorns were transplanted from the Frazer River country west of Williams Lake, British Columbia to an enclosure on Magpie Creek north of Theodore Roosevelt National Park's South Unit. The California bighorn was chosen because, like the extinct Audubon bighorn, it inhabited the lower elevations of the mountain sheep range. On January 15, 1959, five rams were taken from the Magpie Creek enclosure and released into the South Unit.

In 1960 nine bighorns were transplanted from Magpie Creek to a 200-acre enclosure constructed within the South Unit. Some of these bighorn were later transplanted outside the park. The rest either escaped from the enclosure or were turned loose into the park by 1966.

A 1975 census showed 45 sheep in the park. However, lungworm infestation began to take its toll and soon lamb mortality rate increased to 100%. By 1986 there were only three ewes left in the park.

Using a gun net shot from a helicopter, the ewes were captured on May 24, 1986, and placed in a new 100-acre fenced enclosure within the South Unit along with two rams that were captured from other herds in the badlands. In January 1987 one of the ewes died. Two more ewes from outside the park were transplanted to the sheep enclosure. These two rams and four ewes were treated with a parasiticide, Ivermectin, to help fight lungworms brought into the area by domestic sheep. Another medication, Fenbendazole, is mixed with fermented apple pulp and given to the big-

horns each February, just prior to lambing, to reduce lungworms in the lambs.

By March 1990 the herd had only grown to nine (5 rams and 4 ewes). In order to increase propagation and to reduce inbreeding problems, the North Dakota Game and Fish Department, with assistance from park personnel, relocated several bighorn sheep in the badlands. Four rams were removed from the park and were replaced with one ram and three ewes. Management's hopes that these new transplants would invigorate the herd and produce new offspring were met with disappointment. Two lambs were born in 1990 but both died, along with three adults. Spring 1991 saw the park's bighorn population reduced to just six animals, three ewes and three rams.

These dismal figures contrast sharply with the estimated 250 bighorn sheep that currently roam the badlands areas outside the park under U.S. Forest Service and North Dakota Game and Fish management. Scientists and park resource managers have speculated that the park's small sheep enclosure lacks some necessary ingredient for sheep production, perhaps inadequate escape cover or sufficient area. The Regional Bighorn Sheep Advisory Committee has recently recommended that the bighorns be released into the larger park area and actively managed to ultimately produce viable populations of 50-70 individuals in both the North and South Units.

If the Park Service elects to follow the advisory committee's recommendation, it will take the cooperation of all the badlands bighorn sheep-managing agencies to make the program at Theodore Roosevelt a success. The chance to see bighorn sheep in the badlands is today a rare and exciting experience. Perhaps, in the not-too-distant future, visitors to the park will also be able to view these animals in their natural environment, finding the experience just as exciting but considerably less rare.



California bighorn sheep

Park study reveals

Wild horses have colorful past

Wild horses in Theodore Roosevelt National Park? Yes, indeed. About 112 animals by the latest count. Roaming free throughout the park's South Unit.

What kinds of horses are out there, where did they come from, and what has been their management history? These are the major questions that researcher Castle McLaughlin has attempted to answer in her exhaustive and recently completed study, "The History and Status of the Wild Horses of Theodore Roosevelt National Park." Much of the information in this article comes from her report.

All of the wild horses in this country are descended from feral animals that had escaped or been stolen from their original Spanish owners, who brought the first modern horses to the Americas in the mid-1600s. Aided by Native American groups eager to acquire and trade horses, expansion and dispersal of these animals from the American Southwest to Canada took less than one hundred years. By 1741, horses were reported in the Missouri and Knife River villages of the Mandan, Hidatsa and Arikara in present-day North Dakota. These earthlodge communities served as centers for a thriving Northern Plains trade economy where horses were a principal commodity, regularly exchanged for European guns and other goods. Frontier artist George Catlin describes the horses as being "...all of a small stature, of the pony order; but a very hardy and tough animal, being able to perform for the Indians a continual and essential service..."

Wild horses soon became a common feature of the plains landscape, many having been lost through herding or turned loose as worn-out stock by Indians and settlers. It was these Indian ponies, or mustangs as they were often called, that were the foundation stock for the western cow ponies and saddle horses of the Northern Plains ranching industry. Their stamina and agility well suited them for the demands of range cattle work and they were favorites of the average nineteenth century cowboy. Indeed, both Theodore Roosevelt and the Marquis de Mores admired and used the Indian type as foundation stock for saddle horses on their badlands ranches.

The Indian or "bronco" type, often crossbred, persisted well into the twentieth century. Often labeled the "common" horse because of its indeterminate breeding, it was the ranch and saddle horse of choice in early Medora. By 1930, however, mechanization of the ranching industry all but eliminated the need for the "common" horse. It was quickly replaced by more appealing breeds like the American Quarter Horse, ideally suited for the increasingly popular roping arena. The "common" type survived, largely in a wild or feral state.

McLaughlin reports that the free-roaming horse inhabiting the badlands area incorporated into the national park in 1947 consisted of both domestic and feral breeds. A large roundup in 1954 removed nearly all branded or otherwise claimed animals (150-200 head). Local rancher Tom Tescher, who has observed and recorded the park horses for forty years, states that the "good" saddle horses "were always taken in and out." The wild and undesirable "common horse" variety was left behind. Typically big-headed, rangy and oftentimes bald-faced, the diverse lineage of these wild horses has produced a colorful set of animals: roans, greys and overo paints (horses with white markings such as side spots).

In keeping with their policy of trying to eradicate non-native species in parklands, park managers at Theodore Roosevelt National Park had as their goal from 1947 to 1970 the total elimi-



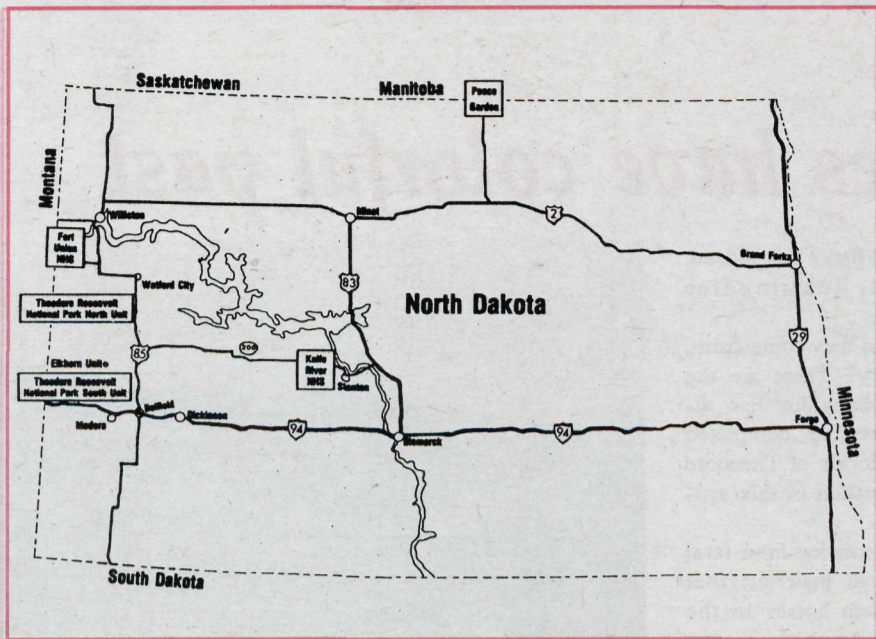
Free-roaming horses in the South Unit of Theodore Roosevelt National Park.

nation of the feral horses. They very nearly succeeded, reducing the horse population to a low of 16 animals in 1966. Strong local pressure and public opposition to removal of the horses, coupled with the discovery of historic documentation establishing the presence of wild horses in the Little Missouri Badlands during Theodore Roosevelt's day, prompted a reversal of the elimination policy. A 1970 horse management plan established a policy to protect and maintain a herd of forty horses. The animals are considered a historical demonstration, adding authenticity to the historical interpretation of the park.

The park's free roaming horses must be managed as a natural resource, to control population size and to protect the grassland resource. Periodic roundups are scheduled and the horses sold at auction. Proceeds from the sales are returned to the park and used for subsequent horse management activities. A horse roundup at the South Unit is tentatively scheduled for early fall 1991, timed to coincide with a bison roundup at the North Unit.

Research on the park's wild horses has not ended with the McLaughlin study. We hope the results of a recently completed Montana State University study will provide a better idea of optimum herd size and composition as well as some valuable insights into wild horse behavior. Other questions to be answered include evaluating the extent of inbreeding within the population, and determining the ecological role of the horses.





Theodore Roosevelt Nature & History Association

Theodore Roosevelt Nature and History Association was organized in 1951 by a group of interested park enthusiasts to promote and support the historical, scientific and educational activities of Theodore Roosevelt National Park. This commitment has broadened to offer support to: Fort Union Trading Post National Historic Site; Knife River Indian Villages National Historic Site; and Upper Souris National Wildlife Refuge.

The Association is a non-federal, non-profit organization governed by a volunteer board of directors. To accomplish their goals, the Association is authorized by the National Park Service to sell theme-related publications, maps and craft items. From its inception, the Association has donated more than \$250,000 from the sales receipts of these materials to the National Park Service and the U. S. Fish and Wildlife Service areas in North Dakota. Money has been used to support interpretive and visitor services activities such as trail guides, exhibits, informational handouts, funding for new publications and the printing of this paper, **Frontier Fragments**. The Association has also paid for housing volunteers, funded park librarian positions, sponsored scientific research, purchased film, and . . . the list goes on.

You are invited to join the Association. A membership fee of \$4.00 per year, \$10.00 for three years or a \$75.00 lifetime membership entitles you to a 15% discount on sales items. Memberships may be purchased at any one of the six Association sales outlets or by writing TRNHA, P. O. Box 167, Medora, ND 58645.

Each year thousands of people enjoy the outdoors on lands and waters in public ownership. These federal, state and local public lands provide for important recreational needs and public enjoyment. Public lands are managed to preserve valuable resources for future generations. This goal becomes a responsibility for each of us. How we use these lands today will determine their availability for our pleasure tomorrow.



Books-Maps-Pamphlets

Publications, maps, postcards, slide sets and posters on the National Park Service areas in North Dakota and their related natural and human history may be purchased at the outlets of the Theodore Roosevelt Nature and History Association located at the park visitor centers or by mail order from the Association. For a sales catalog, write TRNHA, P.O. Box 167, Medora, ND 58645.

Suggested readings:

- ROOSEVELT IN THE BAD LANDS \$9.95
- GEOLOGIC STORY OF THE GREAT PLAINS \$6.95
- THEODORE ROOSEVELT NATIONAL PARK, Story Behind The Scenery \$5.96
- THE RISE OF THEODORE ROOSEVELT \$10.95
- FORT UNION TRADING POST - Fur Trade Empire On The Upper Missouri \$5.95
- GOODBIRD THE INDIAN: HIS STORY \$5.95



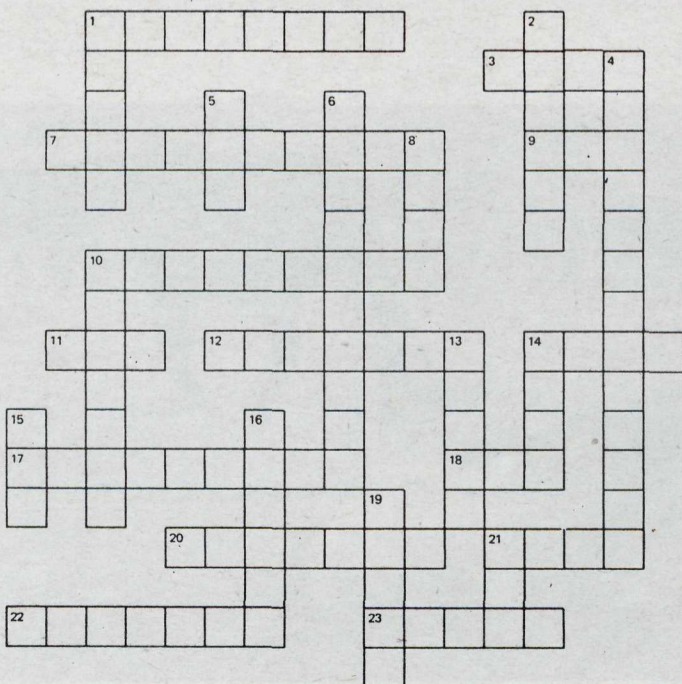
One of the sales areas offered by TRNHA. Members receive special price reductions.



REMEMBER . . .

BISON ARE WILD AND CAN BE DANGEROUS!

VIEW FROM A DISTANCE!!



ACROSS --

1. name given to this area because of its roughness
3. grown by Native Americans for food
7. Common type of poplar tree found along the river banks
9. flying mammal
10. correct name for antelope
11. male mountain sheep
12. only poisonous snake in this area
14. male elk
17. type of deer that holds its tail up while fleeing
18. in March of 1985 this animal was reintroduced to Theodore Roosevelt National Park.
20. Assiniboin, Crow, Cree, Blackfeet and Sioux
21. John Jacob Astor obtained these from the Indians
22. one of the two corner block-houses at Fort Union
23. important trade item for guns and arrows

KID'S CORNER

DOWN --

1. correct name for the buffalo
2. what a man is called who rides a horse and works cattle
4. what Yellowstone, Glacier and Theodore Roosevelt are
5. female deer
6. small rabbit common in neighborhood yards
8. direction on a river
10. grasslands are also called the
13. the Little Missouri is a
14. male deer
15. female mountain sheep
16. lived at Knife River Indian Villages
19. river near Sakakawea site
21. what village Indian games are