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Dakota Prairie  
Grasslands

THE HISTORY OF THE  
DAKOTA PRAIRIE GRASSLANDS:  
AN OVERVIEW  
2011



By Thomas J Turck MS, RPA



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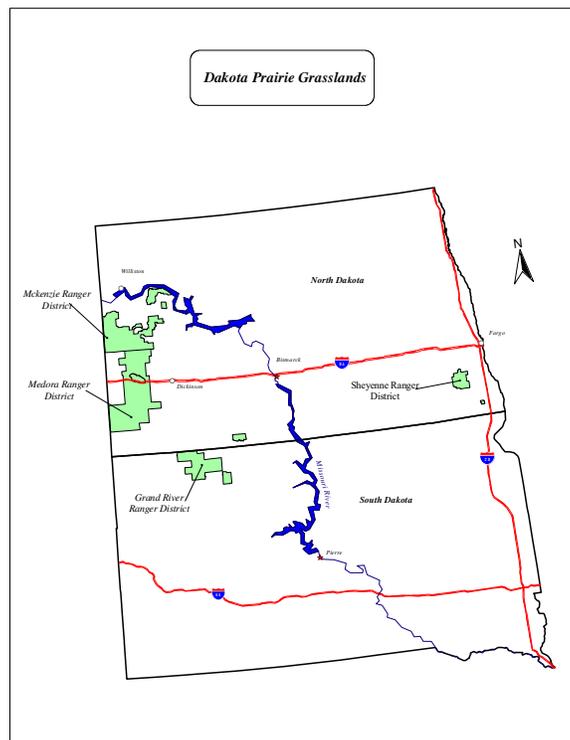
# The History of the Dakota Prairie Grasslands: An Overview

## Purpose, Need and Scope

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The purpose of this Historic Overview is to provide a synthesis of historic resources on the Dakota Prairie Grasslands for professional researchers, management and other interested parties. One of the objectives of Goal 2b, of the 2001 *Land and Resource Management Plan of the Dakota Prairie Grasslands*, is to “Within 10 years, update prehistoric, ethnographic and historic overviews.” In addition, the *National Heritage Program Managed to Standard* (FSM 2362.3) requires, “a synthesis of known cultural resources, traditionally known as a Cultural Resource Overview.” This document fulfills the historic overview portion of the requirement.

This historical study focuses primarily on the period from around 1700 to 1950. An exception is the US Forest Service Administration section that contains information about the present. Some historic sites mentioned are outside the Dakota Prairie Grasslands (DPG), but important to the history of the region. Geographically, the document covers the grasslands of North Dakota and parts of northwestern South Dakota. A main focal point however is the Little Missouri River Basin that witnessed the presence of many important historic figures, historic events and contains the majority of historic sites including, Military Activity, Railroad, Cattle Ranchers, Medora, Theodore Roosevelt and Elkhorn Ranch and the Dakota National Forest. In addition, the document contains a rather detailed account of the 1930s Dust Bowl Era and Denbigh Experimental Forest, both essential elements in the history of the DPG.



### DAKOTA PRAIRIE GRASSLANDS

## Environment and Landscape

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### **Grand River/Cedar River National Grasslands**

The Grand River and Cedar River national grasslands include approximately 160,931 acres of National Forest System (NFS) lands. Part of this area extends across the Standing Rock Reservation in North Dakota and South Dakota. The climate for the Grand/Cedar Geographic Area is semi-arid Continental. Summers are warm and winters very cold with most of the 15 to 17 inches of precipitation falling in late spring and early summer. The average winter temperature is 19 degrees F and a summer average of 83 degrees. Blizzards generally occur several times each winter, and hail often accompanies thunderstorms in the summer. Major drainages are the Cedar River, Grand River and Black Horse Butte Creek the main tributary of the Grand River.

Trees and shrubs include, green ash, American elm, box elder, silver sagebrush, threadleaf sedge, buffalo berry, serviceberry, snowberry, chokecherry, and wild plum. Homesteaders planted much of these types of vegetation as shelterbelts or windbreaks during the drought years of the 1930s. Grasses are a mix of western wheatgrass, green needlegrass, blue grama, needle-and-thread, and crested wheatgrass. Level stretches to rolling hills with isolated occurrences of badlands and rock outcrops characterize the topography of this area. Butte escarpments are locations of both natural and historic resources. Elevation ranges between 2,325 feet and 2,915 feet above sea level.

### **Little Missouri National Grasslands**

#### ***Badlands***

This region consists of 573,700 acres of NFS lands with 189,900 acres on McKenzie Ranger District and 383,800 acres on the Medora Ranger District. The climate is semi-arid Continental. Precipitation is erratic, but averages about 15 inches per year, with about half falling from May through July. Short but intense thunderstorms, sometimes accompanied by hail, are a frequent occurrence between April and September. Periods of drought critically affect vegetation growth during the spring and summer months.

Drought cycles are typical, some lasting as long as 10 to 15 years. Yearly temperatures range between a minus 35 degrees and 100 degrees F. Snowfall averages about 30 inches per year, but winds usually create deep accumulations of snow in draws. Several creeks drain into the Little Missouri River, which eventually flows into the Missouri River.

Dominant vegetation includes riparian cottonwood forests along the Little Missouri River and hardwood draws of green ash and chokecherry. Dwarf juniper and creeping cedar, terraces of wolfberry and silver sage vegetate the rock lands, whereas savannas contain ponderosa pine and green needlegrass. Additionally upland breaks of big sage and skunk brush are present, as well as river breaks of Rocky Mountain juniper and silver sage, and toe slopes of western wheatgrass and prickly pear. Western wheatgrass and needle-and thread grass grow in the uplands and the rolling grasslands contain western wheatgrass and prairie June grass.

Western North Dakota lies within the Missouri Plateau portion of the Great Plains Province. Past geological events have shaped its present topography. The Badlands are an irregular, dissected terrain carved by cyclical erosion. Sedimentary rocks date to the Paleocene Epoch of the Tertiary Period (55 to 67 million years ago).

Before the last Ice Age, the rivers of North Dakota and eastern Montana drained northeastward to Hudson Bay. During the Ice Age, continental glaciers blocked their drainage to Hudson Bay, and the Missouri River established itself along margins of these great ice sheets. The Missouri River captured the Little Missouri and the Yellowstone rivers, after glaciers diverted their original routes.

The age of glacial materials blocking the Little Missouri's ancestral channel suggests that the Badlands began to form about 600,000 years ago. Plainly beautiful terrain sculpted into a vast panorama of tablelands, large and small buttes, conical peaks and steep-walled crested hills are characteristic of the Badlands. Bright red and pink bands of clinker are some of its most noteworthy colorful phenomena. Locally known as scoria, which is technically incorrect because scoria is associated with volcanism, the clinker actually results from the burning of lignite coal beds. The Badlands contain tortuous creek valleys and sparsely vegetated seasonal drainages that cross and re-cross the extremely inclined areas.



**BADLANDS OF THE LITTLE  
MISSOURI RIVER**  
(Courtesy of the National Park Service)

Small inclusions of rolling prairie and multi-layered exposed soils are typical of this geographic area. The region contains extensively exposed soft rock or rock-like substances such as siltstones, clay stones and shale. Other erosion-resistant rocks, such as lignite seams and scoria, are also prevalent. Largely unvegetated slopes of greater than 40 percent characterize the “True” Badlands. Butte escarpments range in elevation from around 1,800 feet near Lake Sakakawea to about 3,500 feet atop some of the more prominent buttes. The Badlands run in a north to south direction with tracts of Rolling Prairie on both sides.

### ***Rolling Prairie***

In addition to the Badlands, a Rolling Prairie landscape exists on approximately 452,600 acres of NFS lands with 311,000 acres on the McKenzie Ranger District and 141,600 acres on the Medora Ranger District. Climate of the Rolling Prairie is again semi-arid Continental. Precipitation is erratic, but averages 15 inches per year, with about half falling from May through July. Short but intense thunderstorms, sometimes accompanied by hail, are a frequent occurrence between April and September. Moisture deficits are critical during the summer months. Drought cycles are typical,

some lasting as long as 10 to 15 years. Yearly temperatures range between minus 35 degrees F to 100 degrees F. Snowfall averages about 30 inches per year, but winds, averaging about 10 miles per hour, usually prevent deep accumulations.

Tributaries empty into either the Yellowstone River or Little Missouri River, which in turn eventually drain into the Missouri River. On the northern portion of this geographic area, NFS lands lie adjacent to and drain directly into the Missouri River. Dominant vegetation includes hardwood draws of green ash and chokecherry, uplands of blue grama and little bluestem, rolling grasslands of western wheatgrass and prairie June grass, and terraces of wolfberry and silver sage.

Rolling Prairie topography ranges from nearly level to rolling hills with some inclusions of scattered buttes and Badlands landscapes. The soils are quite well developed and stable, and occur beneath a consistent mosaic of grass cover. Elevations range from about 1,800 feet above sea level near Lake Sakakawea to about 3,500 feet atop some of the more prominent buttes.

### **The Sheyenne National Grasslands**

The Sheyenne encompasses 70,300 acres in southeastern North Dakota. The Sheyenne River forms part of the northern boundary of this tall grass prairie unit and climate is Continental. Precipitation levels average about 21 inches per year. Winters can be bitterly cold, dipping below minus 20 degrees F, exacerbated by extreme wind chill factors, while summer temperatures can exceed 100 degrees.

Geological sand features date to from 10,000 to 15,000 years ago when a massive glacier covered southeastern North Dakota. As the glacier receded, the Sheyenne River funneled the glacier's melt water into the vast glacial Lake Agassiz. Grasslands resulted from the delta formed as the glacial melt water of the Sheyenne River dropped heavy sediments. Most of the region drains north into the Sheyenne River, which, in turn, empties into the Red River.

Major distinguishing features have distinct plant communities and include the following landforms. 1) Choppy sandhills vegetation consists of oak savanna interspersed with mixed grass prairie and oak woodlands. 2) Hummocky sandhills have three distinct plant communities based on topography: mixed grass prairie, tall-grass prairie and wetlands. 3) The deltaic plain primarily supports tall grass prairie types of big bluestem, Indian grass and switchgrass. 4) River terraces consist of an eastern hardwood deciduous forest dominated by American elm and basswood and rare fen wetlands occur within the river terraces. Elevations range from 980 feet to 1,080 feet.<sup>1</sup>

## Early Historic Period

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### Plains Village

Plains Village people introduced horticulture to the Northern Great Plains. Many different tribes, including the Omaha, Ponca, Iowa, Otoe and Missouria inhabited the Missouri River region or its major tributaries: the Arkansas, Platte and Kansas rivers in the central plains of Nebraska and Kansas. They lived in earthlodge villages situated on the low bluffs just above the riparian floodplains. By 1780, major groups included dispersed Hidatsa, Mandan and Arikara earthlodge villages along the Missouri River from South Dakota to central North Dakota. On the fertile riverine floodplains, women cultivated individual gardens of corn, beans, squash, sunflowers and amaranth. Females also owned the earthlodges. Although the Dakota Prairie Grasslands has no recorded earthlodge village sites, other forms of Plains Village archaeological sites are ubiquitous in central and western North Dakota.



**MANDAN VILLAGE**

(Courtesy of the State Historical Society of ND)

Men were the warriors and hunters and frequently left on trips of several weeks to hunt bison. Other tasks involved procuring stone tool material from the Knife River and other flint quarries and eagle trapping on the high bluffs above the Little Missouri River. Concealing themselves in camouflaged pits they caught both golden and bald eagles and used the bird's feathers in ceremonial functions.

Personal vision quests, possession of sacred bundles and tribal renewal ceremonies were central to the horticulturalist's religion. Individual villages had different symbolically distinguished sacred bundles that legitimized their political and economic organizations. The Plains Village chief maintained the traditional social order because he was ostensibly the descendent of the original bundle owner. Bundles passed from father to son.

Mandan men sought *xópri* (power) through a vision quest or purchase of an inherited tribal or personal bundle. Rituals such as the Mandan's *Okipa* Ceremony were as elaborate as the following nomadic group's Sundance rituals. The most important deities of the Arikara were the Chief Above and Mother Corn who held a host of powers. Shamans normally opened sacred bundles once a year, spread out the contents and then recited the moral teachings of Mother Corn. They were the religious specialists in both semi-sedentary and nomadic societies.<sup>2</sup>



**MANDAN'S *Okipa* CEREMONY**

(Source: George Catlin 1835)

## Nomadic Hunter/Gatherers

Scholars generally believe the ancestors of the Sioux slowly migrated from southern Canada into the lake regions of Minnesota. A less accepted theory, based on linguistics, proposes Siouan groups took a meandering route through the Virginias and Carolinas. Following the bison herds, they then moved west through the Cumberland Gap. Constant pressure from the Iroquois and Algonquin confederations forced the Siouan bands ever westward toward the northern forests and plains.

The Dakota, Nakota, and Lakota were a loose confederation of related bands that each spoke a variant of the Siouan language. During a series of expeditions from 1654 to 1659, French explorers made contact with these groups. The Sioux frequently fought with the Chippewa over occupation of the woodlands of northern Mississippi River territory. Because of their earlier access to European traders and firearms, Chippewa armed with muskets had superior firepower over the bow and arrow of the Sioux. In the end, they blocked the Sioux from any further expansion north and pushed them west out of the disputed territory.

Pressure from the Chippewa and other woodland tribes, as well as the attraction of buffalo hunting on the Northern Great Plains encouraged the Siouan migration west. From the area of the present Minnesota/North Dakota boarder, their western exodus gathered speed after obtaining horses and guns. A smallpox epidemic broke out among the Arikara and decimated the tribe. The Sioux move into the vacuum created by the outbreak. During their western movement, the Sioux drove other nomadic and horticultural tribes from their traditional territories; examples are the Crow and Kiowa out of the Black Hills and the Cheyenne driven from the Northern Plains. Most major battles later fought with the US Army were on lands the Sioux had taken from other tribes after 1851.



### WINTER COUNT

(Courtesy of the [opi.mt.gov](http://opi.mt.gov) G-28 Human Expressions)

The Sioux counted years by winters, thus their year represented portions of two winters. They drew pictorial representations of important events on buffalo hides. Called the Winter Count, a sequence of these illustrations painted on the hide covered several years. This was the Siouan pictorial historic record complementing the oral tradition.<sup>3</sup>

The Teton Sioux (Lakota) were the first to leave the northern woodlands and eventually settled on the west side of the Missouri River in seven bands or council fires: Ogallala, Brule, Hunkpapa, Miniconjou, Sans Arcs, Oohenonpa (Two Kettles), and Sisasapa (Blackfeet). All were nomadic hunters depending on bison for subsistence. They numbered around 18,000 by 1850.

Next to leave were the Yankton and Yanktonai (both Nakota) who established themselves between the Red River of the North and Missouri River. The latter tribe divided into the upper Yanktonai and the lower Yanktonai or Hunkpatina. Last to leave were the Santee Sioux (Dakota) who

migrated a short distance to the edge of the forest and prairies in southern Minnesota, just south and west of the Mississippi River. The Mdewakanton, Whapekute, Wahpeton and Sisseton bands made up the Santee Sioux confederacy.<sup>4</sup>

The foundation of Siouan society originates with the legend of the sacred pipe. According to the story, long ago in a time of famine, a spirit appeared in the form of a beautiful woman carrying a bundle. The bundle held the first pipe that when smoked became a prayer the higher spirits heard and responded by sending buffalo. She taught the people their fundamental lifeways and afterward turned into a white cow buffalo, disappeared over the horizon and known thereafter as White Buffalo Cow Woman.

The most basic religious concept of the Sioux groups is *waken*. No single theory exists as to the meaning of this belief, i.e. god/creator or clear distinction between good and evil; however, all sources do agree that *waken* is a powerful mysterious force found throughout the universe. These spirits reveal themselves in visions, lightning, four winds and leaders of the animal kingdom such as spirit bear, spirit buffalo etc.

A number of Plains Indian tribes including the Sioux participated in the Sun Dance. This annual religious ceremony has many names and held in the summer as different tribes gathered to hunt bison. Native Americans danced in a circle around a large pole in a specially built structure. Each tribe had their own specific dances and songs. Use of traditional drums as well as praying and fasting were common features of the Sun Dance. In some cases, the ceremony included the piercing of skin on the chest or back on men and the arms of women.<sup>5</sup>

The Sioux considered warfare an integral part of their life. According to legend, White Buffalo Cow Woman said that anything done in battle was a good deed. For a man, combat was the essential underpinning for achieving status, a status then shared by female relatives in Sioux society. Fighting the enemy was the main duty of honor in a man's life; and the Sioux considered warfare a normal state of affairs with their enemies and not a temporary relationship. Individual acts of heroism were rewarded with war honors and battle tactics focused primarily on displays of individual bravery.<sup>6</sup> Stone circles or teepee rings identify former Nomadic Hunter/Gatherer campsites.

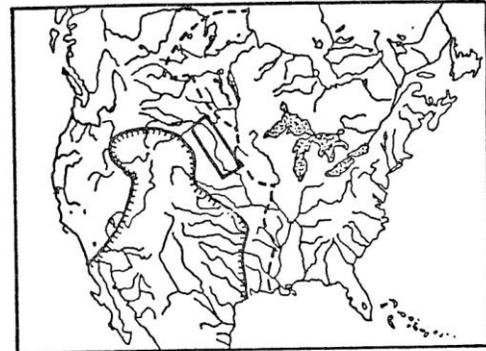
### **Biesterfeldt Site**

Biesterfeldt is a former Native American historic fortified village site located near the Sheyenne River in eastern North Dakota. Archaeologists once thought the village to be a transitional site where eastern woodland hunter/gatherers were in the process of becoming Plains nomadic bison hunters as they moved westward to Northern Great Plains. Recent excavations at Biesterfeldt by Michael Michlovic however determined Plains Village people, migrating northeastward from the Missouri River Basin, occupied the fortified village.<sup>7</sup> Biesterfeldt is near the Sheyenne National Grasslands in southeastern North Dakota.

## Trade and the Early Equestrian Period

Well-established trade networks existed among inter-tribal and intra-tribal Native American groups long before contact with Euro-Americans. From around 1000 AD, the semi-sedentary villages located on the banks of the Missouri River became important centers for the Middle Missouri trade system. Because of the paucity of edible wild plants, nomadic groups sought after the horticultural produce grown by semi-sedentary communities. They exchanged products of the hunt for maize and other cultigens to augment their meat rich diet. The majority of exchanged goods during this period were perishable foodstuffs and leather items.

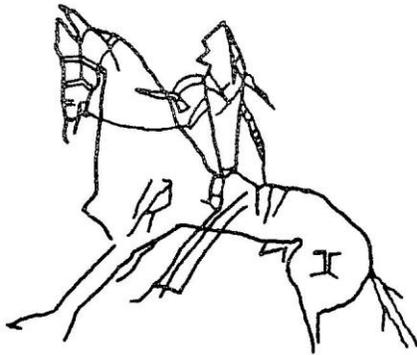
This trend continued well into the historic period on the Northern Great Plains. Around 1675, the British and French began introducing European commodities into Middle Missouri trade system. Sources came from Canada and the upper reaches of the Mississippi River. Popular trade items were metal tools, guns and ammunition, dry goods and other manufactured European products.



----- HORSE FRONTIER  
----- GUN FRONTIER  
----- MIDDLE MISSOURI SUBAREA

### HORSE AND GUN FRONTIER 1710

(Source: Secoy 1953)



### NORTH CAVE HILLS ROCK ART

(Source: Keyser and Beckes 1983)

In 1738, the French trader Pierre Gaultier de Varennes de la Verendrye and party, accompanied by the Assiniboine from central Canada, visited the Mandan villages on the Missouri River. The Assiniboine brought guns, powder and shot, kettles, axes, knives and awls. They traded with the Mandan for grains, tobacco, skins and colored plumes. He noted the Mandan were crafty traders and usually bested the Assiniboine in these exchanges. Upon his departure, Verendrye left two Frenchmen with the Mandan to learn the language.

The horse reached the Northern Great Plains around 1720 through diffusion from the southwest. The Mandan first became aware of horses around 1738 when mounted nomadic groups visited their villages. By 1775, most former pedestrian groups were fully adapted to a mobile equestrian culture. Several period North Cave Hills rock art sites found in northwestern South Dakota show warriors, horses and guns.<sup>8</sup>

## Lewis & Clark

Because of the pending US government's purchase of the Louisiana Territory from the French, in 1803, President Thomas Jefferson initiated an expedition to explore the soon to be acquired country. Captains Meriwether Lewis and William Clark organized and led the Corps of Discovery to the region, as well as points west. They first followed the Missouri Drainage system to its source near the Continental Divide and then passed overland through the Rocky Mountain chain and

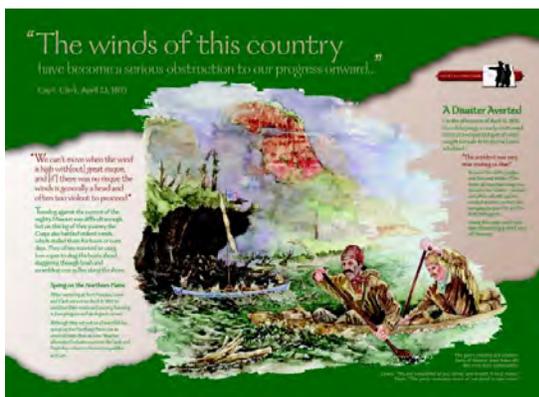
finally down the Columbia River to the Pacific Ocean. With minor deviations, the expedition returned by the same route in 1806.

After spending the 1803/1804 winter at Fort Dubois, the Corps of Discovery proceeded up the Missouri River. The small flotilla consisted of canoes, two pirogues and a keelboat. Progress was slow and laborious against the current. Occasionally they could sail, but usually the keelboat was poled and towed with a rope upstream by men walking along the riverbank. Summer temperatures hovered around 100 degrees. Prickly pear cactus, growing along the shoreline, tore up the men's moccasin clad feet. Swarms of biting insects added to the miserable conditions. Through this region, the expedition generally camped on island sandbars. Entering Sioux country, the captains sent out small shore parties to guard the flanks of the main group.

In South Dakota near the mouth of the Bad (Teton) River, the party had their first potentially violent encounter with the Teton Sioux. On 24 September 1804, Sioux chiefs were invited onboard the keelboat, some of them became insolent and they were put back ashore. The mounted and unmounted Sioux along the riverbank notched their arrows, shouldered their fusties (smooth bore trade guns), and threatened Clark's shore party at point blank range.

Called to arms, the boat crews leveled their guns and the keelboat swivel cannon at the Sioux. At this point, Black Buffalo (the Grand Chief) intervened and avoided bloodshed. Upstream the Corps encountered first an Arikara village and later Mandan and Hidatsa villages. Although their reception was somewhat mixed, the horticulturist villages were generally friendly. Canadian traders were visiting the Mandan village at the time. The Missouri River would soon freeze so the Corps built Fort Mandan and overwintered near one of the villages.

The following spring, Lewis and Clark and the Corps of Discovery continued their western journey upriver in two pirogues and six dugout canoes. Toussaint Charbonneau, an independent Canadian trader and his Shoshone wife Sakakawea had joined the expedition. Traveling against the swift current of Missouri was difficult enough, but on this leg of the journey, the Corps also battled violent winds, which stalled them for hours or even days. On their way upriver, they passed through what Clark named "*the birnt hills*" area on 17 April 1805. Shortly afterward, the party entered uncharted territory with little to guide them except a few sketches and anecdotes.



## CORPS OF DISCOVERY

(Source: Birnt Hills Interpretive Sign)

On their return journey downriver, the Corps separated. Clark and his party were in front. They passed Birnt Hills sometime before 10 August 1806. Lewis and his group were trailing. They came to the Birnt Hills/Tobacco Gardens Creek area just after noon on 11 August. While hunting, Cruzatte mistook Lewis for an elk and shot him. "I was in the act of firing on an elk a second time when a ball struck my left thye about a inch below my hip joint, missing the bone it passed through the left thye and cut the

thickness of a bullet across the hinder part of the right thye the stroke was very severe. . .” After treating Lewis, they continued downstream. The two parties rejoined on 12 August at Reunion Bay in what is now Mountrail County, North Dakota. From Reunion Bay, the Corps of Discovery proceeded downstream on the Missouri River to St. Louis and into history.<sup>9</sup>

The US Forest Service built the Birnt Hills Overlook where the Corps passed in 1805 and Lewis shot in 1806. The damming of the Missouri River and the creation of Lake Sakakawea has covered the original campsite; however, the interpretive site is on the bluffs overlooking the location. The site includes an accessible trail out to the overlook featuring high-pressure laminate interpretive signs. A three-mile loop trail connects to the main site. Birnt Hills Overlook is a heritage tourism destination in northwestern North Dakota.

## Hugh Glass

In 1822, Hugh Glass joined General William Ashley Corps of 100 men to ascend the Missouri River on a fur-trading venture. Glass soon established himself as a hard working frontiersman and fur trapper in the expedition later known as “Ashley’s One-Hundred.” The party followed the Grand River in their march westward toward the Yellowstone River. The Arikara attacked the column and wounded Glass. While out hunting alone a few days later, a sow grizzly with cubs surprised Glass and severely mauled him. Left for dead by his companions, the trapper crawled and dragged himself 100 miles south to the Cheyenne River. It took two months. Glass fashioned a crude dugout and floated down the Cheyenne River and into the Missouri River. He arrived at Fort Kiowa and safety a few days later. In all, Glass had traveled 200 miles. For this feat and others, Hugh Glass became a legendary figure in his own lifetime. Today, near the place of the grizzly attack, a Hugh Glass monument stands at Shade Hill Reservoir, 11 miles south of Lemon, South Dakota.<sup>10</sup>



**HUGH GLASS**  
(Source: Hugh Glass Mountain Man)

## Interneicine Warfare in the Badlands

The Little Missouri River Badlands of western North Dakota is the setting for several US Military/Native American encounters during the Northern Sioux War of 1862 to 1879. Viewed from a distance, early visitors initially described the Badlands with words such as grand, striking, majestic or picturesque. These impressions quickly vanished when the harsh realities of scarce water, tortuous deep ravines and steep bluffs became apparent. The Badlands name comes from the Lakota’s *Makbóšiča*, literally bad land, and the early French trappers’ *les mauvaises terres à traverser* – the Badlands to cross.<sup>11</sup>

The Hidatsa, Mandan and Arikara called the Little Missouri Country the Land of the Beginning, because of the excellent hunting along the banks. The Sioux knew the Little Missouri as the Thick Timber River in reference to the abundance of wood. Alternatively, the Cheyenne name was the

Antelope Pit River after the traps they once maintained near the Little Missouri, before their forced departure.<sup>12</sup>

Most accounts left by early travelers to the Badlands region mention vast herds of bison, and an abundance of Manitoban elk, whitetail deer, mule deer, antelope, Bighorn sheep, grizzly bear and wolves. In 1848, Irish sportsman John Palliser hunted bison between Killdeer Mountain and the Little Missouri River. Wildlife, including the grizzly bear, he found in abundance.



### **INTERNECINE WARFARE**

(Courtesy of the State Historical Society of ND)

Palliser also noted that the Badlands were on the route the mounted Sioux warriors took when they went to war with the Crow or other Plains Tribes. Indeed, because of the danger posed by the Sioux, other tribes never ventured very far into the Badlands to hunt except when facing starvation.

Some tribal people today interpret the creation of this animal refuge to early ecosystem management by Plains Indians. Flora was diverse and reasonably bountiful for the semi-arid conditions associated with the rolling Badlands topography. Buffalo grass and blue grama dominated the mid-size, mixed grass plant community. Bison herds were frequently attracted to the area because of the associated forage and availability of Little Missouri water. The Killdeer Mountain region is an ecological island of bio-diverse vegetation and animals similar to the Little Missouri. This made the area ideal for plant gathering and for hunting large game other than bison.<sup>13</sup>

## Military History

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### Minnesota Uprising and Battle of Whitestone Hill

During the early 1860s, gold strikes in Idaho and Montana territories lured adventurers, entrepreneurs and settlers further west. The Northern Plains frontier, which formerly began in Minnesota, shifted west as pioneers began to swarm to the more remote territories. Except for sporadic development along the Missouri River, the frontier leapfrogged the North Dakota portion of Dakota Territory that did not experience settlement for another quarter century.

At first the Tetons or western Sioux did little more than temporarily disrupt wagon trains traversing the Great Plains. However, in the summer of 1854, the first significant clash took place between the western Sioux and US Army on the Wyoming prairies. The short battle left Lieutenant John L. Grattan and 30 troopers dead. The following spring Colonel William S. Harney led a column of 600 soldiers in a punitive action against the Sioux. His force attacked an essentially peaceful Brule band encampment at Ash Hollow near Nebraska's Platt River. This assault destroyed the camp, killed 70 men, women, and children and put another 250 inhabitants to flight. "Ash Hollow and other early confrontations were only a harbinger of what was to come" . . .<sup>14</sup>

In late summer of 1862, along the Minnesota River in southwest Minnesota, conflict began between bands of the Santee Sioux and the US Government. An incident involving a small number of Santee warriors resulted in the deaths of white settlers. The confrontation escalated into the Minnesota or Sioux uprising when a large band of Santee Sioux led by Little Crow, ranged throughout the countryside killing soldiers and settlers as well as destroying property. This episode touched off the Great Sioux War that spread across the Dakotas into Montana and Wyoming territories.

About a month later, Major General Henry Sibley led Minnesota volunteers against Little Crow and the Santee. His campaign quelled the uprising, which ended in December of 1862. Little Crow was the titular leader of the Santee; however, the true champion of chaos in Minnesota and Dakota frontier was a Wahpekute Sioux named Inkpaduta or Red Cap. From the beginning to the Battle of the Badlands in 1864, he was present, in spirit if not always in body inspiring the warriors of the Sioux Nation.<sup>15</sup>

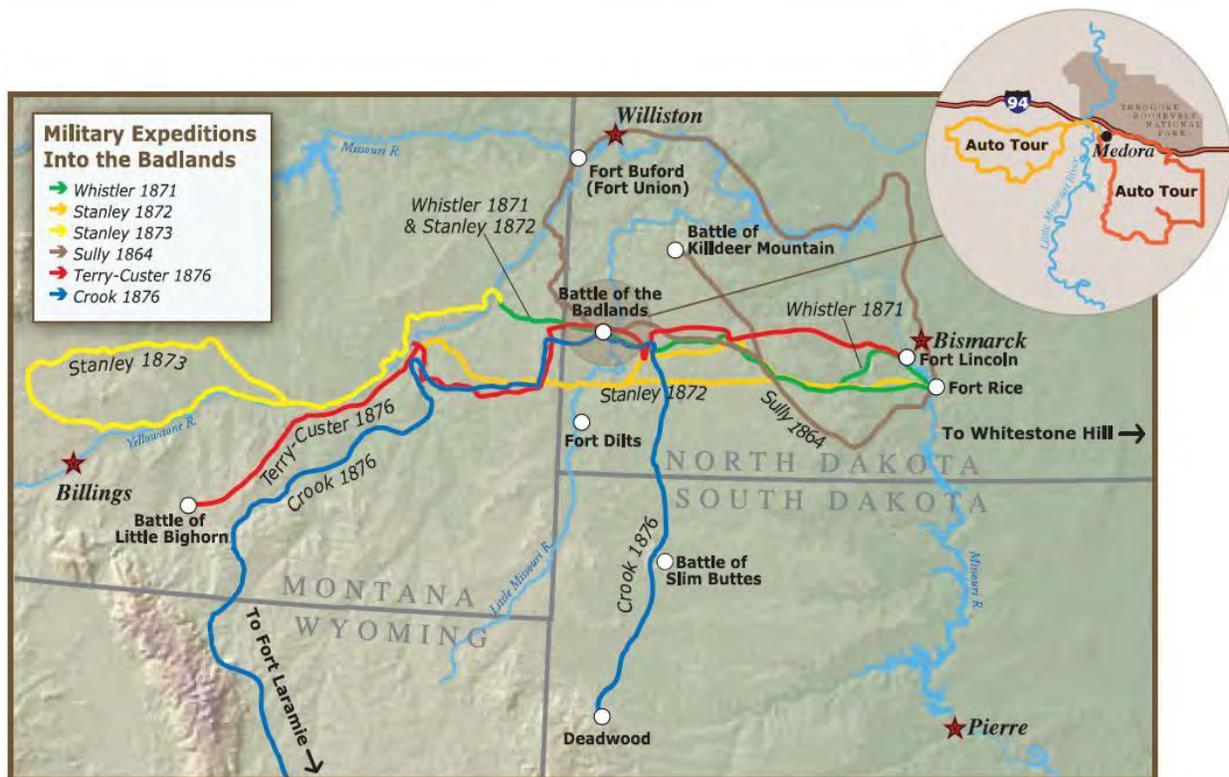
Reprisals pushed many Santee from their reservation in Minnesota into Dakota Territory, encouraging unrest among Lakota and Nakota Sioux bands. The events increased dangers to settlers migrating westward. General Sibley and Brigadier General Alfred Sully launched expeditions into Dakota Territory in 1863. Their mission was to seek further revenge on the Sioux, encourage additional settlement in the Dakotas and protect the Missouri River lifeline to the Montana gold fields. The columns engaged the Sioux several times during the 1863 campaign.

The 1863 campaign included White Stone Hill where General Sully's army made a two-pronged attack on the tipi encampment of non-Santee Sioux. US military policy did not distinguish between

tribes - friendly or not or sometimes between warriors and noncombatants. Native American leaders were Little Solder, Big Head and Two Bears. Controversy exists between tribes and historians as to whether the encounter was a battle or massacre. Even Sully called the battle a massacre. Different estimates indicate an average of around 200 Native American casualties.

At the year's end, both armies retired from the field and the Sioux returned to the James River Valley in eastern Dakota Territory. White Stone Hill was the largest Great Sioux War encounter to take place in North Dakota. This battle however occurred during the American Civil War, which nationally eclipsed White Stone Hill and other period Great Sioux War battles.<sup>16</sup> The White Stone Hill State Historic site is in southeast central North Dakota.

## The Custer Military Trail and Self Guided Auto Tour



**CUSTER MILITARY TRAIL AUTO TOUR MAP**

Remarkably preserved, in the natural setting of the Badlands of west-central North Dakota, is an exciting chapter of American history. This region functioned as a military transportation corridor for nearly the entire span of the Great Sioux War. The route presented one of the least formidable ways to traverse the rugged Badlands. Named after George Armstrong Custer because of his universal recognition associated with the 1876 - Battle of the Little Bighorn. Several other commanding officers, including Sully, Whistler, Stanley, Terry and Crook, led expeditions over portions or the entire trail between 1864 and 1876. Warfare has been endemic to this nation throughout its existence. Dakota Territory was no exception. Military sites, especially battlefields, are important because they teach us about some of the most significant events in our history and inspire us to contemplate the meaning of battle, its costs, its consequences.<sup>17</sup>

The Badlands of the Little Missouri Grasslands contains several important military sites including the Battle of the Badlands battlefield, Custer Trail, wagon ruts and campsites associated with the Great Sioux War of 1864 to 1876. To make this historic area accessible to the public, the DPG developed an 80-mile auto tour featuring seven interpretive sites. The auto tour has a direct economic benefit to the historic town of Medora - the designated tourism center for west-central North Dakota. In addition to the auto tour, a brochure and two audio CDs are available to augment the overall historical experience. We designed the Custer Military Trail Auto Tour to minimize both environmental impacts and affects to the historic resources. The route is restricted largely to improved roads with pullouts immediately adjacent. Short accessible trails lead to the interpretive sites, whereas we do not identify wagon-ruts and trails along the route.

A special feature is the Initial Rock Interpretive site where two of Custer's 7<sup>th</sup> Cavalry troopers, F. Neely and W. C. Williams, carved their names on a sandstone outcrop in 1876. The renovated historic site contained several new amenities including a new protective shelter, restroom and an accessible short loop trail with interpretive signs. The site's location is well known and vandals have continually damaged it over the years. A popular pastime was to carve graffiti, usually names and dates, on the adjacent sandstone or occasionally directly on the inscription panels. Several bullet holes also pockmark the panels. In 2000, rock art conservators removed all non-historic names. Part of the preservation strategy for Initial Rock was to bring more people interested in history to the facility. Making the site less secluded and vulnerable will help deter further vandalism. The National Park Service listed Initial Rock on the National Register of Historic Places in 1976 and in 2009 the entire area became a National Historic District of national significance.<sup>18</sup>

### **Sully's 1864 Northwest Indian Expedition**

In 1864, General Alfred Sully led the third in a series of campaigns resulting from the Minnesota Uprising. A major purpose of the 1864 Northwest Indian Expedition was to continue to inflict reprisals on the Sioux Indians involved in the Minnesota Uprising. Many soldiers under Sully's command were volunteers from Dakota Territory, Minnesota and Iowa. Different factions of the 1864 campaign met at Fort Rice, where Sully marshaled together the Northwest Indian Expedition on 18 July.

His command consisted of over 2,200 soldiers, including cavalry and mounted infantry, 70 white and Indian scouts, two artillery batteries, two companies of pioneer troops (road builders), 400 freight wagons, a beef herd and the emigrant train. Artillery consisted of 12-pound mountain howitzers (the actual guns that won the west) and six-pound smoothbore field guns. The entire expedition consisted of about 2,500 people — soldiers, scouts and civilians — and as many as 560 wagons, plus the stock. The Yankton Sioux provided 50 young men as scouts.<sup>19</sup>

His column included a civilian wagon train from Minnesota under the protection of several Minnesota volunteer units. These emigrants were determined to push on to the recently discovered gold strikes in Idaho Territory. Known as the Holmes expedition, they insisted on accompanying the soldiers and cavalry. Sully had to take them; his orders giving no choice in the matter. About 250 people traveled in 123 to 160 oxen drawn wagons. General Sully was also to establish posts in

Indian Country to protect later wagon trains going westward. He managed to construct one post that summer in Dakota Territory, Fort Rice on the Missouri River.<sup>20</sup>

The Northwest Indian Expedition marched, rode and rolled to the headwaters of Heart River. From there, Sully's expedition reached an area today called Painted Canyon and camped on the plain above the Badlands. Colonel M. T. Thomas reported that Sully took one look at the place and called it "truly hell with the fires burned out."<sup>21</sup> More recently, John Steinbeck wrote of the region,



### **BATTLE OF KILLDEER MOUNTAIN**

(Courtesy of the State Historical  
Society of ND)

“. . . I was not prepared for the Bad Lands. They deserve this name. They are like the work of an evil child. Such a place the Fallen Angels might have built as aspite to Heaven, dry and sharp, desolate and dangerous, and for me filled with foreboding.”<sup>22</sup>

### ***Killdeer Mountain Battlefield***

Sully's column then traveled northwest to engage a Sioux village in the elevated terrain the Indians called *Tabchakuty* 'the place where they kill deer.' Accounts differ. In the military version, the column surprised the Sioux village that had not posted guards, while in the Lakota account, the Indians were waiting for Sully and believing themselves invincible rode out and engaged his force.<sup>23</sup>

Fought primarily against Teton Sioux, Sitting Bull's Hunkpapa band and Santee Sioux, the Battle of Killdeer Mountains took place on 28 July. Artillery eventually tipped the balance in favor of federal forces. US Army losses consisted of four dead and ten wounded, whereas the Sioux experienced heavier casualties and withdrew to the east and south. Along the retreat route, other bands of the Lakota Sioux joined the main force. After destroying the Sioux's abandoned supplies, including thousands of pounds of dried buffalo meat, the soldiers burned their lodges. Killdeer Mountain Battlefield is a State Historic Site.<sup>24</sup>

Sully then retraced his route south to the Heart River and pursued the Sioux west. William Jackson a Blackfoot Sioux scout probably led Sully's column south to a camp known today as Sully Springs. The next day they followed Sully Creek west to the Little Missouri River Valley. Sioux harassed the column, but heavy fire from 12-pound mountain howitzers and six-pound, smooth bore field guns drove them off. On 6 August 1864, Sully bivouacked near the Little Missouri just south of the present town of Medora.<sup>25</sup>

The 12-pound mountain howitzer was a short-barreled large caliber bronze cannon that was deadly at close to medium range. The army could either disassemble these guns and carry them on pack mules or tow the howitzer behind a gun carriage. The mountain howitzer was truly “The Gun that won the West.”<sup>26</sup>

The following day they traveled three miles upstream (south) and camped on the Little Missouri River at the present day Bully Pulpit Golf Course. General Sully then sent out roadwork and foraging parties. Much of the road construction that day took place in ‘Custer Wash’, which Sully, like General Terry 12 years later, used to exit the Little Missouri Valley. Colonel Thomas described it as “a narrow gorge only wide enough for a wagon trail.”<sup>27</sup>



**MOUNTAIN HOWITZER**

(Courtesy of the National Park Service)

Sitting Bull recalled:

I smoked a war pipe, agreeing to join the Sans Arcs in fighting the soldiers and the Hunkpapa moved to the Sans Arc camp. Next day we met the soldiers at the crossing of the Little Missouri and the battle began at this point. In this badland country the whites were at a great disadvantage even though they had about 2,000 men. The wagons could barely be dragged over this flat topped butte country that was so badly cut up. There was little water, men and horses suffered greatly. Many horses and mules starved and died in these Badlands. The soldiers were scattered out for miles, retreating as fast as possible under these adverse conditions. We pushed after them all day and night and shots were exchanged whenever groups of Indians and soldiers came into contact with each other.<sup>28</sup>

### ***Battle of the Badlands***

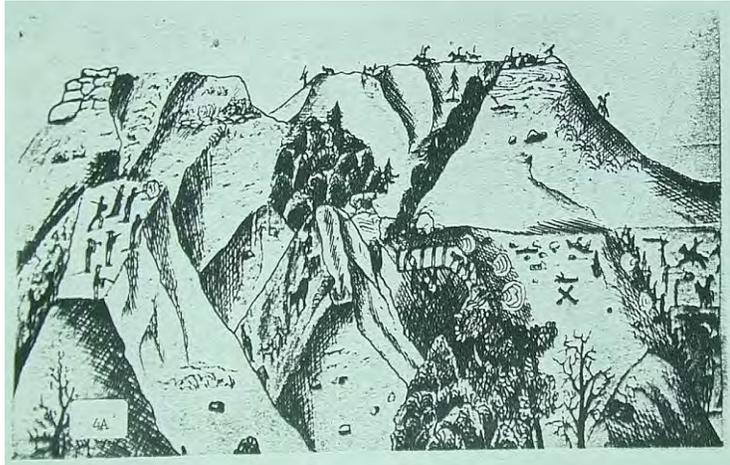
General Sully’s army decamped and began to move out the following day. Their route passed through a succession of gorges and deep ravines. The column strung out for three or four miles, when the Sioux gathered en masse and attacked. This action began a two-day running engagement called the Battle of the Little Missouri, or more commonly, the Battle of the Badlands. Sioux warriors drove the column’s advance scouts back and then struck at both flanks. Sully brought forward mountain howitzers supported by skirmishers, and cleared a path through the attacking Indians.

The column again began to move forward with skirmishers protecting the flanks and howitzers posted on either side of the trail. A running fight continued until they halted for the evening. On 8 August, a brief clash occurred late in the day, when the Sioux tried unsuccessfully to keep the expedition from the only local water source, described as a small pond or mud hole. Today Sully’s Waterhole Camp is an interpretive site.

Although eager at first, Sitting Bull lost heart for further fighting. He urged the other warriors to quit fighting and go home, but they did not listen. During the night, a shouting dialogue took place between the Indians on both sides.

One of Sully's Indian scouts yelled, "We are thirsty to death and what Indians are you?" Sitting Bull answered, "Hunkpapas, Sans Arcs, Yanktonais and others. Who are you?" "Some Indians with the soldiers" was the reply. "The soldiers were hungry and thirsty, he added, so just stay around and they will be dead." Sitting Bull declared, "You have no business with the soldiers ... now we have to kill you and you dry to death."<sup>29</sup>

The running battle resumed the following morning of 9 August. Indians attacked the troopers from all sides and Square Butte became the site of a major battle. The detachment continued to advance with skirmishing taking place at the front of the column and at the rear. After a three-hour fight, the rear-guard repelled the attack with twelve and six pound field guns. At the front, Indians massed in the drainages and behind buttes. Artillerymen fired spherical case shot



### **BATTLE OF THE BADLANDS**

(Source: Lingk 1957)

creating an airburst of shrapnel that rained down and dislodged them from entrenched positions within the drainages. The Indians called the mountain howitzer "the gun that shoots twice" because of the initial report followed by an airburst. Cavalry then moved forward and took possession of the butte. Skirmishers advanced over two miles before ordered to halt and wait for the wagon train.<sup>30</sup>

Operations on the butte extended over a very large area. A case in point is the reported discoveries of an "exploded cannonball" and "rifle cartridge casings" on a plateau at the west end of Square Butte.<sup>31</sup> Brand, a soldier in Sully's expedition, drawing of the battlefield (see above) seems to depict fighting over most if not all of the butte area.

Some of the artifacts recovered by archaeologists from the battlefield included spherical case shot, case shot fragments, a Bormann Fuse and spent Burnside cartridge cases. The latter was a transition round breaching the gap between muzzle loading and full metallic cartridges. Other artifacts, collected on the battlefield during the fieldwork include 58 caliber Springfield bullets, a Henry cartridge case, 52 Sharps carbine bullets, 50 Smith carbine bullets and a 42 Springfield cartridge case.<sup>32</sup>

Breaking off the engagement, the Sioux disappeared and for all practical purposes, this ended the Battle of the Badlands. Sully's report stated the last we saw of the Indians was a cloud of dust six to eight miles off, running as fast as they could. The Indians were better mounted. It was impossible to determine the number of Indian casualties. Sully approximated 100 to 300 killed and a larger

number wounded. Sioux estimate of their casualties are substantially lower for the battle. US losses consisted of nine-men killed and about 100 wounded.<sup>33</sup>

Afterward, Sully proceeded west out of the Badlands and had only a few other sporadic encounters with the Sioux. Continuing the trek west to the Yellowstone River, the country became extremely dry and troopers had to shoot many horses for lack of forage. On 12 August, the column reached the Yellowstone. Two steamboats (a third had sunk near Fort Union) waited with badly need supplies; however, the provisions evidently were not enough to convince Sully to continue westward to the Powder River.

Instead, on 14 August, the command started for Fort Union located less than 40 miles downstream at the confluence of the Yellowstone and Missouri. On 19 August at Fort Union, the civilian train separated from the military column and headed west toward Fort Benton. A few days later, the Northwest Indian Expedition headed downriver toward the trading post at Fort Berthold. They briefly sparred with Santee Sioux, this time near Dog Den Butte. Finally, Sully's column pointed south toward Fort Rice, arriving there on 8 September.<sup>34</sup>

### ***Fort Dilts***

Upon arrival, Sully learned that an emigrant wagon train was under siege near the Little Missouri River. For protection, the travelers built an earthen fortification consisting of three feet of mounded soil covered with pieces of sod to a height of six feet. They called the enclosure Fort Dilts after Thomas Jefferson Dilts killed during the initial fighting and buried in the ramparts. Sully dispatched 800 men and a pair of twelve-pound howitzers that relieved the besieged camp. Casualties included eleven soldiers and civilians who died in the attack. Sitting Bull was present and wounded in the thigh during this encounter.

The rescue column escorted the wagon train back to Fort Rice. Sitting Bull's representation of the 1864 event in his Winter Count shows eight short parallel lines connected by one long stroke at the bottom. This indicates eight-warriors killed in the fight. Although labeled in the reference as taking place in the Black Hills, this illustration probably represents the Fort Dilts encounter since Sully's troops were never in the Black Hills in 1864.<sup>35</sup> The Fort Dilts State Historic site is near the southern boundary of the Little Missouri National Grasslands.

### **Fort Ransom**

Established in 1867, to protect people traveling from Minnesota to Montana the historic site of Fort Ransom is in southeastern North Dakota. The 400 ft square earthen and log ramparts once contained log buildings serving as barracks, headquarters, commissary storehouses, granary, hospital, powder magazine and stables. Today the building foundations and dry moat are the only visible features. Fort Ransom functioned as a base until 1872 when the soldiers dismantled it and used the salvaged materials to build Fort Seward near the James River. By then, protection of railroad workers at the river crossing had become a higher priority than the safeguard of overland travelers.<sup>36</sup> Fort Ransom is located near the Shyenenne National Grasslands.

## **Whistler's 1871 Expedition**

Army officers negotiated tribal treaties. By the terms of the 1865 treaty, the Santee Sioux received an annual annuity, supplies and other assistance. This compensation was in return for refraining from warfare and withdrawing away from overland routes through their territory. The records show the Indians detested the overland routes and steamboat traffic, they believed were contributing to the scarcity of buffalo.

The most well known are the 1851 and 1868 Fort Laramie treaties which created the Great Sioux Reservation in present day South Dakota. Recorded oral history indicates chiefs 'touched the pen' to the treaties not in assent but to protest the terms. Soldier written accounts of the event to some extent support these contentions. Nonetheless, the government ratified the treaties and they became law.<sup>37</sup> From 1871 through 1873, surveying for the Northern Pacific Railroad (NPRR) also proceeded as planned, with the armed forces escorting railroad surveyors as they mapped routes from Bismarck to the Yellowstone River.

By 1871, commerce in the western territories beyond the Dakotas had developed considerably and planning was underway for a railway across northern Dakota Territory into Montana Territory. NPRR sent out surveyors to locate a suitable route. One expedition led by Major J. N. G. Whistler escorted railroad inspectors from Fort Rice, Dakota Territory. Passing through the Badlands, the column proceeded to the mouth of Glendive Creek on Yellowstone River in Montana Territory. Concurrently, Capt. Edward Ball led another party of surveyors east from Fort Ellis, Montana Territory (near Bozeman). They followed the Yellowstone downriver for 140 miles before returning to the fort.

Whistler's command consisted of seven infantry companies including artillerists with two Gatling guns, 30 Indian scouts, and an unspecified number of quartermaster employees with a 104-wagon supply train. The entire group numbered about 600 men. They left Fort Rice on 9 September 1871 and were in the field for just over a month. They received an issue of rations for 60 days and carried an ample supply of forage in wagons for stock.<sup>38</sup>

Frank L. Anders was born at Fort Lincoln in the early 1900s. He spent decades retracing the Custer Trail and other military routes across North Dakota. Anders suggests that Whistler on his westward journey entered the Badlands and reached the Little Missouri via the same route followed later by Terry and Custer in 1876. Whistler traveled along Davis Creek downstream from its head to its mouth on the Little Missouri River.

According to Lieutenant Malcolm McArthur's 1876 diary entry, Whistler camped in the Little Missouri Valley at the creek's mouth. McArthur, who later accompanied Terry's 1876 expedition, said Terry bivouacked near the same place. From the mouth of Davis Creek, Whistler marched about six miles down (north) the Little Missouri River to its confluence with Andrew's Creek. He then headed west, ascending Andrew's Creek to its head. From there Whistler struck out overland to the mouth of Glendive Creek on the Yellowstone.

Whistler realized that the six-mile route along the Little Missouri presented considerable problems for railroad construction, maintenance and operation. Bridges were necessary and a shifting river and bad river bottoms would present additional challenges to railroad construction. On his return trip, Whistler explored an alternate route that brought him to the Little Missouri River opposite the mouth of Davis Creek.

Contemporaries called this route Whistler's Cutoff. In the Badlands, the cutoff coincided with a part of Sully's 1864 trail west of the Little Missouri River, and later Terry's 1876 route from the Little Missouri to the Snow Camp. After the column crossed the Little Missouri, Whistler ascended Davis Creek on his way back to Fort Rice.<sup>39</sup>

NPRR surveyors reported the column passed over exceedingly rough country entirely unsuitable for a railroad. They eventually built the railroad elsewhere. Nonetheless, while Sully blazed the Badlands portion west of the Little Missouri River, Whistler on his return trip added the Davis Creek leg to the Custer Trail historic route.

### **Stanley's 1872 and 1873 Expeditions**

In 1872, Colonel David Stanley continued the government's role in aiding future settlement and commercial development. Again staging expeditions out of two forts, Colonel Stanley proceeded west from Fort Rice on 1 August 1872 and Major Eugene Baker led a party east after leaving Fort Ellis. In addition to the 47 NPRR surveyors, the column consisted of "about 600 infantry and a battery of two Gatling guns and one brass 12 pounder."<sup>40</sup> Similar to Whistler's earlier foray, the Stanley expedition passed through the Badlands to the Yellowstone River en route to the mouth of Powder River.

On several occasions, Indians skirmished with Stanley's command. Most likely, a portion of his west bound route through the Badlands passed south of the Custer Trail. Fred Grant, a member of the party and earlier participant in Custer's 1874 Black Hills Expedition, noted in his journal that they struck Stanley's 1872 trail near Box Elder Creek and followed it to the headwaters of Heart River.

Stanley traversed the Custer Trail on his return (eastbound) from the Yellowstone. He entered the Badlands at its western rim and followed Whistler's Cutoff to the Little Missouri River. From there he traversed Davis Creek to the eastern escarpment of the Badlands before returning to Fort Rice on 15 October.<sup>41</sup>

Northern Pacific officials were dissatisfied with the results of the 1872 expedition. Primarily because Major Baker's command from Fort Ellis never linked up with Stanley's column near the mouth of Powder River. Baker made it only as far down the Yellowstone as Pompey's Pillar before Indian intimidation caused a halt. Civilian surveyors concluded Baker's escort insufficient to go further so they returned to Fort Ellis.

Consequently, the route between Pompey's Pillar and Powder River was un-surveyed, which resulted in the need for 1873 expedition. Rather than two separate detachments, both the armed

forces and the railroad decided on a single large expedition. Led by Colonel Stanley, it left Fort Rice on 20 June. Stanley's command consisted of 79 officers, 1,451 enlisted men, 27 Indian scouts and 353 civilians, the latter made of 320 teamsters but including 26 surveyors and five-scientists for 1,910 men. Soldiers came from 10 companies of the 7<sup>th</sup> Cavalry. The expedition also included 275 wagons and ambulances, 2,321 mules and horses, two wrought iron Ordnance Rifles with a 3-inch bore, and a 700 head beef herd. Wagonloads ranged from 4,000 to 5,280 pounds. Stanley's command included Lieutenant Colonel Custer leading the 7<sup>th</sup> Cavalry.<sup>42</sup>

According to Stanley, his westbound journey followed Whistler's 1871 route. The column entered the Badlands near the head of Davis Creek, descended the creek to the Little Missouri, and camped on the Little Missouri at the creek's mouth. Stanley's report does not specify whether his command marched over "Whistler's Cutoff" or moved down the Little Missouri and up Andrews Creek as Whistler did while westbound in 1871. Anders noted that Stanley did negotiate the Badlands using Davis Creek to the Little Missouri. From the Little Missouri westbound however, Anders does not map Stanley's route over "Whistler's Cutoff" or mention an Andrews Creek route.<sup>43</sup>

On the other hand, Anders, in a letter to R. G. Cartwright,<sup>44</sup> said that Stanley did use "Whistler's Cutoff" while en route westbound for the Yellowstone. In 1873, it appears Stanley used at least one leg of Andrews Creek and not Whistler's Cutoff. Capt. Bourke, who was with Crook in 1876, reported that they followed Stanley's 1873 trail emerging into the Little Missouri Valley from Andrews Creek. On 25 September, the expedition arrived back at Fort Abraham Lincoln. Soldiers built the fort that spring on Missouri River just south of present-day Mandan, North Dakota.<sup>45</sup>

An expedition led by Lieutenant Colonel George Armstrong Custer in 1874, was to ascertain the suitability of establishing a garrison in the Black Hills, but they also discovered gold. Almost immediately, prospectors, adventurers and various other characters swarmed into the region in violation of the Fort Laramie Treaty. Instead of enforcing reservation treaty rights, President Ulysses S. Grant chose to confront the Sioux who had not signed the treaty and were roaming on the unceded land.

Using attacks on settlers beyond Indian borders as a pretext, President Grant had the Bureau of Indian Affairs issue an ultimatum to certain bands of nomadic Lakota Sioux to go peacefully or by force to the Great Sioux Reservation by 31 January 1876. The US subsequently initiated (or provoked) hostile events as a matter of policy.<sup>46</sup>

### **Terry and Custer's 1876 Centennial Campaign**

The government initiated the Centennial Campaign of 1876 to enforce President Grant's ultimatum. General Alfred Terry led the expedition, which included Lieutenant Colonel Custer and the 7<sup>th</sup> Cavalry, west from Fort Abraham Lincoln along the route through the Badlands of Dakota Territory. Terry's command proceeded westward across the rolling prairie, camping at several locations along the way. General Terry's force consisted of 50 officers, 968 enlisted men plus elements of the 6th, 17th, and 20th infantries, 190 civilian employees, 45 Indian scouts and interpreters, a wagon train, a pack train (mules) and a beef herd.<sup>47</sup> (This document uses Anders and Chorne's numbering system to identify the different military camps in the Badlands)

Sergeant John Ryan recalled that the wagon train consisted of “about 150 teams loaded with stock forage, ammunition and rations.” Accompanying General Terry was a platoon of Gatling guns, but no howitzers.<sup>48</sup> Chief Engineer Lieutenant E. Maguire reported, “I was furnished with a four mule ambulance for the transportation of my instruments and men. To the wheels of the ambulance were attached the odometers.”<sup>49</sup>

The column reached the Badlands on 27 May. Terry reported in his diary he had found Stanley’s trail. Shortly after entering the Badlands, the soldiers made camp. General Terry, in a 30 May 1876 letter to a sister, noted that the Davis Creek “pass” was the only one wagons could negotiate, and that they “encamped in the pass.”<sup>50</sup> This is Anders and Chorne’s: Camp 11 starting from Fort Abraham Lincoln. Lieutenant Edward Godfrey wrote that they “went down Davis Creek and camped about 2-miles from the entrance to the Bad Lands.”<sup>51</sup> Bismarck Tribune correspondent Mark Kellogg recorded their descent “down a steep Butte whose base is at the East entrance to the Bad Lands.”<sup>52</sup>

On 28 - 29 May, the ‘line of march’ proceeded along the north fork of Davis Creek, then down the creek’s main channel to its junction with the Little Missouri River. Davis Creek along its mid-course was (and is) very torturous, snaking from steep wall to steep wall in a deep, narrow valley. Passage required the construction of numerous crossings, which slowed their advance to the Little Missouri River. Camp 12, otherwise known as the Davis Creek bivouac located about 6.5 miles east of Little Missouri River.<sup>53</sup>

The construction of more creek crossings continued on 29 May, however due to a less torturous creek channel the going was considerably easier. Most of the command reached the Little Missouri about 9:30 in the morning; the wagon train came in about an hour later. A number of men recorded the difficulty of this journey, making it clear that the Davis Creek Valley was the route for at least the main part of Terry and Custer’s command.

Because of the arduous two-day journey through the Davis Creek corridor, Terry remained in Camp 13 on the Little Missouri for two nights. It was not until the morning of 31 May that the entire outfit crossed the river and pushed westward. Initially, the column ascended the drainage before reaching the uplands above the river. Lieutenant Godfrey called it a “gorge” about two miles in length. Lieutenant Maguire recorded its length as about a half mile and called it a “small creek” which led to the bluffs.

Both Godfrey and Maguire mentioned that one or two wagons overturned during this difficult passage. Anders described the drainage as the Custer Washout, also used by several other expeditions. No doubt, Terry made use of the existing roadwork, perhaps with repairs and improvements, so arduously carved into the wash by Sully’s pioneers.



### **CUSTER'S WASHOUT IN BACKGROUND**

Newspaper reporter Kellogg wrote of the 31 May advance as a difficult passage over very torturous country. Godfrey recorded the same, noting that “a very circuitous route” took the command a number of miles out of its way. The trail, according to Godfrey, was the same one used by Whistler on his return leg in 1871. Kellogg recorded that (at least part of) the route was along Whistler’s Cutoff.

Terry noted in his diary that the column at some point strayed from the trail and had to turn back and reexamine the ground. Clearly, Terry used an established trail of Whistler and Stanley, as evidenced by Terry calling it Stanley’s trail. Passage of multiple recorded expeditions over part or the entire route gives a time range of 1864 to 1876 for the trail. Army expeditions regularly mapped the routes they used, and made notes about the grass, water, topography, and so on; these records were used by subsequent expeditions, in this case Custer and Terry.

Despite the rough going, Camp 14 (the fourth and last in the Badlands) was reached about 2:30 PM. Called Custer’s Snow Camp because the men awoke on 1 June to a blanket of snow. A heavy rain, which began in the afternoon of 31 May, had turned to snow overnight - six inches according to General Terry. Terry noted in his diary that the Snow Camp was on “one of the forks of Andrews Creek” and the stream ran “through” the encampment.<sup>54</sup>

One of DeWolf’s entries indicates the command camped on both sides of Andrews Creek. On the afternoon of 2 June, Terry ordered the wagons to move in position for a next-day departure. He further noted that “some of the wagons [moved] across on this [his] side of a ravine to be ready for tomorrow . . .”<sup>55</sup>

Terry himself reported that the wagons were originally “parked on the east [more likely Terry meant south] bank of the small stream which flows through our camp.” Lieutenant Maguire recalled that the column descended a difficult ravine into an open valley where they camped on a stream. This was, as Terry noted, a fork of Andrew’s Creek, and as Reynolds wrote in his diary, “the creek, called

Andrew's today, runs into the Little Missouri." Reynolds also mentioned that the Snow Camp was located "2 miles northeast of the east [S]entinel Butte."<sup>56</sup>

East Sentinel Butte of the 19<sup>th</sup> century is now Square Butte. (The east butte variously referred to in English as Flattop Butte, Soldier Butte, Table Butte, Gun Sight Butte, Chewed Nose Butte, and probably more. Sentinel Butte of today is situated about seven miles west of Square Butte. In the 19<sup>th</sup> century, travelers referred to it as West Sentinel Butte. The approximate translation of Sentinel and Square buttes from the native American language is "two buttes which stand facing each other," hence the earlier name of east Sentinel for today's Square Butte.<sup>57</sup>

The traditional location of Custer's Snow Camp places it 2.5 miles north of east Sentinel Butte. Maguire wrote that the precipitation on 3 June caused the tributary of Andrew's Creek to swell to quite important dimensions. For the most part, Terry's army used existing trails blazed earlier by Sully, Whistler, and Stanley." Terry's column along with Custer and the 7<sup>th</sup> Cavalry moved westward to the Yellowstone River taking the expedition beyond the Badlands.<sup>58</sup>

Continuing west, Terry crossed into Montana to the Yellowstone River, which he then followed to the Tongue River. At this location in late June, he rendezvoused with a force led by Colonel John Gibbon who had come from Fort Ellis near present day Bozeman Montana. On 22 June, the 7<sup>th</sup> Cavalry departed Terry's force on the Yellowstone River and proceeded south on Rosebud Creek. Custer's maneuvers were part of a plan to entrap the Sioux near the Little Bighorn River.

As Terry's 1876 expeditionary force moved west, General George Crook, with over 2,000 soldiers and 200 Indian scouts came north from Fort Fetterman, Wyoming. On 17 June, Crook's forces engaged the Sioux and Cheyenne on the Rosebud River. This was shortly after Sitting Bull's Sundance vision that revealed soldiers falling upside down into the Sioux camp. With no clear victory on either side, Crook withdrew to wait for reinforcements.

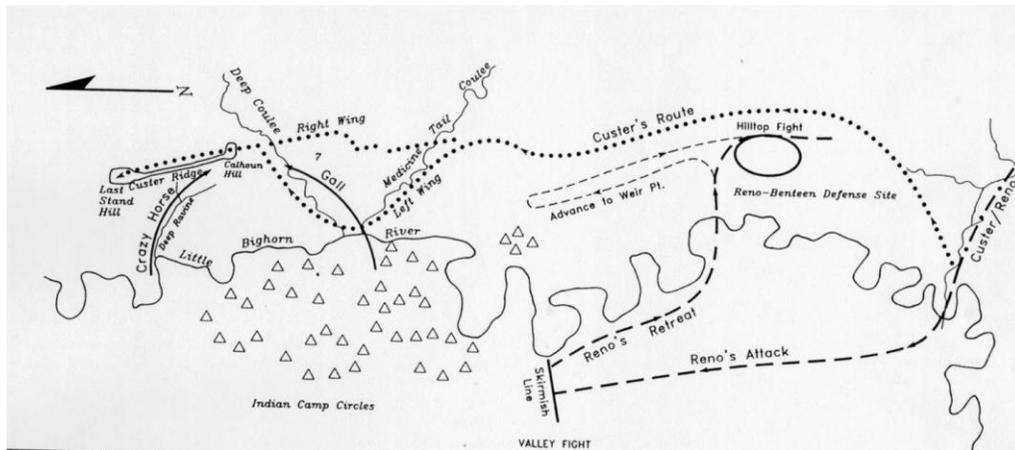
Terry and Gibbon's columns proceeded up the Bighorn and Little Bighorn rivers to prevent the tribes from escaping to the north. General Crook's was to block the southern escape route. Unknown to the others, Crook's column stopped after briefly engaging the Sioux at Rosebud Creek. Custer moved the 7<sup>th</sup> Cavalry between the Rosebud and the Little Bighorn rivers. From 'Crow's Nest', the next morning, they observed indications of a nearby hostile encampment.

The camp of Crazy Horse (Sioux), Gall (Sioux) and Two Moon (Cheyenne) was in the Little Bighorn Valley. How much Custer knew about the size of the force he was facing is a much-debated issue. Around noon on 25 June, Custer pressed forward the attack. Twelve companies of the 7<sup>th</sup> Cavalry descended into the broken country east of the Little Bighorn River. He ordered one company to stay with the pack train, and Captain Fredrick Benteen, senior captain in command, to take three companies and foray to the southwest. Custer and the remaining eight companies followed a tributary of the Little Bighorn today known as Reno Creek.

A few miles from the river, they halted, and Custer ordered Captain Reno to take three companies and attack the Sioux and Cheyenne's southern flank. Reno followed the creek for several miles before fording the river. The large teepee village was located on the floodplain on the west side of

the river. Reno's battalion proceeded several miles north to make the attack. Custer, meanwhile, had followed Reno on the other side of the creek and ascended the high bluffs. Much of the encampment, later estimated to contain 10,000 men, women and children, still lay hidden from view. Custer's command now consisted of five companies.

The Battle of the Little Bighorn began with the 'Valley Fight', where Reno initiated hostilities on south end of the village. His approach first caused confusion. Mounted warriors rode furiously about but they were out of range. Their numbers continued to grow and Reno ordered his men to dismount. Retiring their horses in the nearby woodland, the soldiers formed a skirmish line in the open.



### BATTLE OF THE LITTLE BIGHORN 1876

(Source: Scott et al 1998)

The fighting was light at first, but Indians soon began skirting the line. This tactic threatened the horses, so Reno redeployed the men into the timber. Now on the defensive, he soon recognized they were in a bad position and slowly being surrounded, so he abandoned the second location within 30 minutes. The battalion retreated to the high bluffs across the river, which they successfully defended in the Hilltop Fight until relieved the following morning.

Custer left the ridge and proceeded in columns down a short draw leading to Medicine Trail Coulee, an ephemeral tributary of the Little Bighorn River. He must have finally realized the gravity of the situation, when the northern half of the 3 1/2 mile long Indian village came into view, as they swung into Medicine Trail Coulee. Custer hastily dispatched the trumpeter John Martin with the message, "Benteen, Come on, Big Village, be quick, bring packs. P.S. bring pacs, W.W. Cooke."

Martin found Captain Benteen who ordered his units forward. They however never reached Custer, who with 260 men died in the battle. Benteen and Reno's battalions dug in expecting another attack. During the evening of June 26<sup>th</sup> the hilltop defenders watched through a rising dust cloud as masses of Indians trailed south in the direction of the Bighorn Mountains.

Many of these bands eluded the US soldiers for a few more months before reluctantly settling on reservations. Sitting Bull and his followers escaped to Canada, where they resided for five years

before returning to the reservation. The following morning, Terry and Gibbon's columns relieved the entrenched troopers. They did not pursue the Indians, because they had the more pressing task of burying the 260 soldiers who had fallen in the battle. Soldiers took the wounded to the mouth of the Bighorn River, where the steamboat *Far West*, captained by Grant Marsh, waited offshore.

Marsh pushed the steamboat to its limit, and arrived with the wounded in Bismarck just fifty-four hours later. Backtracking along the route, most of Terry's men returned to Fort Abraham Lincoln. General Crook also used portions of the trail that summer. His men entered the Badlands and followed the trail eastward, before pressing south where they engaged the Indians at the Battle of Slim Buttes in northwestern South Dakota. Due to Custer's involvement, Terry's route became known as the Custer Trail. As previously noted, however, much of the route had been established by earlier expeditions. Because of the connection with Custer and the Battle of the Little Big Horn, the Custer Trail, with associated sites, has received more attention in the literature than other military sites of the region.<sup>59</sup>

General Crook pursued American Horse and his Sioux band. The chase began in the Yellowstone region and by 3 September, Crook had reached what is now extreme western North Dakota. Lieutenant John Bourke wrote that the column reached the Little Missouri on 4 September. The command had left camp on the headwaters of Andrew's Creek and marched down the creek to the Little Missouri River. He recalled that they descended into the valley at the place where Stanley's 1873 expedition had entered it. In any case, Crook's men harvested an unintentional corn crop that grew from feed spilled in May by Terry's soldiers.<sup>60</sup>

The morning of 5 September, Crook's forces completed a 30-mile march. Bourke recalled that the command benefited greatly by the bridges which Terry's men had erected on Davis Creek. Evidently, Crook left the Badlands at or near the head of Davis Creek. Soon thereafter, the soldiers encountered Indians but there was no recorded engagement for the Badlands portion of Crook's march. Anders notes that Crook camped on 5 September somewhere near Belfield, North Dakota. Thereafter, the column swung south reaching Slim Buttes in what is now western South Dakota after three days. Crook attacked a *Minneconjou* village at Slim Buttes where he defeated the Sioux.<sup>61</sup>

This operation, along with General Nelson Miles's winter actions, induced most of the Sioux and Northern Cheyenne to surrender during the following spring and summer. In the spring of 1877, Sitting Bull led his followers into Canada and Crazy Horse and his band surrendered at Camp Robinson and settled at the Red Cloud Agency. In September 1877, a soldier bayoneted and killed Crazy Horse in a guardhouse. A representation of the incident is found in the winter count of American Horse.<sup>62</sup> Most of Crazy Horse's followers fled north to join Sitting Bull; and his death effectively marked the end of armed resistance to encroachment and large-scale military operations against the Sioux ceased.

# Western Expansion

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## Northern Pacific Railroad

As mentioned previously, the Northern Pacific Railroad (NPRR) sent out survey expeditions in 1871, 1872 and 1873 to establish a route through Dakota and Montana territories. Tribes of the Great Plains, the Sioux in particular, opposed the railroad and harried construction crews. At the time the railroad reached Bismarck in 1873, the Sioux were formidable enough to prevent further track laying to the west. Spanning the Missouri River with a railroad bridge was also a major impediment eventually surmounted by building a million dollar bridge.

Unlike the Union and Central Pacific railroads, the NPRR received no federal bond aid; however, the company received double the number of 640-acre sections as the other two railroads. In addition to a 400 hundred foot right-of-way through public lands, the Northern Pacific Act of 1864 stipulated the company would receive alternate odd sections on either side of the track, within 20 miles of the route through states and 40 miles through territories.

Railroad construction resumed in 1879 on the northern frontier after the US military forces had overcome most Sioux resistance. Indians continued to annoy the construction crews so they established armed garrisons along the route to afford protection. Later that year, soldiers constructed a small military post called the Badlands Cantonment on the west side of the Little Missouri River about  $\frac{3}{4}$  of a mile northwest of present day Medora. A garrison occupied the quarters in December. Walkerville or Hell Town, a railroad construction camp, was set up about 12 miles east of the Little Missouri River in 1880.

Because buffalo blocked the railroad tracks, knocked down telegraph poles and caused other damage, companies hired hunters to eradicate the herds near the tracks. Independent hide-hunters also helped exterminate droves of bison effectively eliminating the Plains Indians main source of food.

Soldiers moved Tribes from traditional lands onto reservations. The NPRR extended through northern Dakota Territory by 1881, and, two years later, completed approximately 2,100 miles of track from Ashland, Wisconsin to Portland, Oregon. The year 1883 also witnessed the destruction by hunters of what remained of the Great Northern Buffalo herd. Soldiers abandoned the Badlands Cantonment in March 1883. One of the last railroad shipments of buffalo hides took place from Dickinson, North Dakota in 1884.<sup>63</sup>

Earlier, railroad survey parties, commercial hunters and soldiers who had visited the Badlands noticed and reported the abundance of wildlife. After the railroad reached the Little Missouri in October 1880, local newspapers and entrepreneurs began to promote the area as a hunter's paradise. This attracted sportsmen. The Northern Pacific publicized the region in tourist brochures as Pyramid Park. Frank Moore recently completed Pyramid Park Hotel, located on the west side of the Little Missouri River, served as a hunters outfitting point. Hunting guides included, E. G. Paddock, Jack Bullion, Joseph A. Ferris and Riley Luffsey. Game laws were nonexistent and the coming of the

railroad inaugurated wholesale destruction of big game in the region. Further west, Yellowstone Park became a reality in a large part to attract tourists for the new railroad.<sup>64</sup>

## **Cattle Ranchers**

Annihilation of the vast herds of bison, the coming of the railroad, and the relentless pursuit by the US military that forced Plains Indians onto greatly reduced reservations, all contributed to the opening of thousands of acres to grazing by cattle ranchers. From the south, cattlemen began moving herds into the Dakotas in the early 1880s, and proceeded to occupy and claim land as their own private range.

Inducements included the superior forage, government's policy of free-use of open range and access to railroad shipping points. The first herds prospered and soon thousands of cattle were replacing the former bison herds on the Plains. Between 1880 and 1884, large cattle companies moved over 500,000 cattle north from Texas into Dakota Territory. During the summer of 1880 alone, ranchers herded possibly 50,000 cattle into the Little Missouri River Basin.

One of the big Texas outfits was the Continental Land and Cattle Company or Hash Knife. Owned by a corporation from St. Louis, Hash Knife came into the region in 1881. Their headquarters was near the confluence of Box Elder Creek and the Little Missouri River. The Hash Knife spread usually had 60,000 to 65,000 head of cattle and was the largest outfit north of the Black Hills. Their stock ranged over a large territory including parts of North Dakota, South Dakota, Wyoming and Montana. They abandoned the venture and left the region between 1899 and 1901.

Headquarters of the Berry-Boice Cattle Company or 777 was located west of the Little Missouri River about eight miles north of present day Marmarth. Henry Boice was the manager of the company and Bill Jones the ranch foreman. At its peak production, 777 had a herd of 25,000 to 30,000 cattle. In 1898, they drove 7,000 of them to the Eland Stockyards in Dickinson. Five-hundred to six-hundred head at a time were loaded on trains headed to the Chicago Market. Boice made close to one-million dollars on his North Dakota operation.

Tower & Gudgell or OX began ranching operations between Box Elder and Little Beaver creeks about one mile upstream from the mouth of Little Beaver Creek. George Tower was the owner and O. M. Towers, his nephew, served as ranch manager. One of the OX's foundation herds came from the Spur Ranch south of Colorado City, Colorado. Because of the harsh 1886-1887 winter, the company lost over \$250,000. By 1900, they vacated the area.

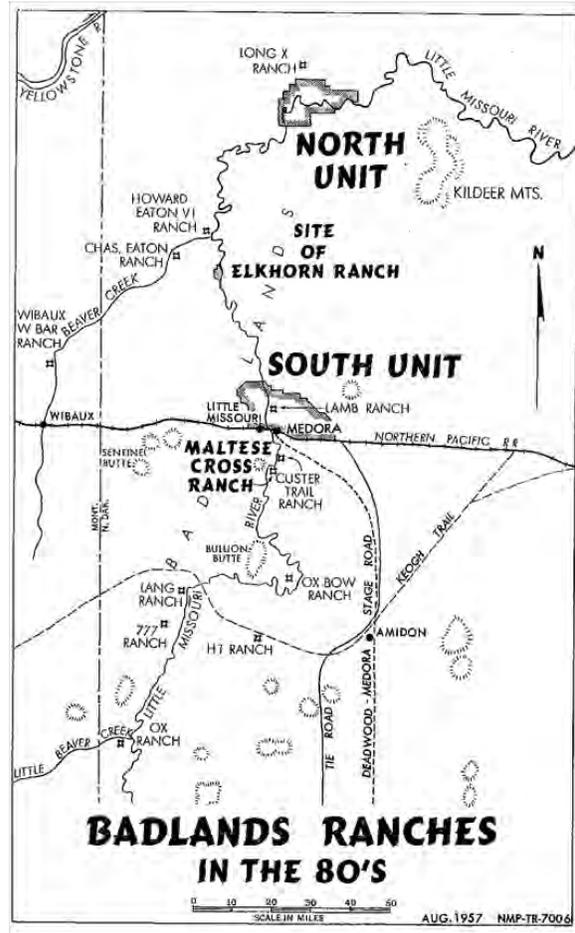
Huidekoper, a relative to a Harvard classmate of Roosevelt, formed a partnership with the Eatons called the Custer Cattle Company. Huidekoper provided the startup capital and the Eatons assumed the role of management. Unlike most ranchers who were squatters, they purchased 23,000 acres of railroad land between Deep Creek and Davis Creek that became the Logging Camp Ranch. It's headquarters was at the mouth of Davis Creek.

As the name implies, the ranch was the site of a logging operation. The original plan was to cut trees then float the logs down the Little Missouri to Medora. The timber was for railroad ties used in

the construction of the NPRR from Bismarck-west. Spring floods scattered the woodpiles along the riverbanks and very few made it downstream to Medora. Collecting the logs proved too costly, and the business venture was a failure. The railroad ended up shipping timber in from Minnesota.

Huidekoper later purchased the HT Ranch located eight miles south of Logging Camp Ranch at Deep Creek. Where in addition to cattle, he bred the finest large band of horses (4,000) ever to run in North Dakota. Thirty-five purebred Percheron mares imported from France were the foundation stock. Bred with Oregon horses and Sitting Bull's war ponies, Huidekoper called the new breed, American Horses. In addition to being fine range animals, they sold well back east for purposes such as polo and foxhunting.

Other small to medium size ranches were Pierre Wilbaux's Double Bar Ranch, the Charles Eaton Ranch and the Howard Eaton Ranch, all located on Beaver Creek. The Maltese Cross Ranch (Chimney Butte Ranch), Custer Trail Ranch and Gregor and Lincoln Lang Ranch were adjacent to the Little Missouri River. Most of the cattlemen owned little or no land. They built homes, but did not hold legal title to the property on which they grazed their herds. A typical rancher had squatter's rights to sufficient river frontage on both banks of the Little Missouri, upstream and downstream from their headquarters. They also had use of the range back to the creek heads from the riverbanks.<sup>65</sup> Some of these former ranches are now part of the Little Missouri National Grasslands.



**BADLANDS RANCHES  
MAP**

(Source: Brooks and Mattison 1983)

## Theodore Roosevelt and the Elkhorn Ranch

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Theodore Roosevelt spent some of his most formative years hunting and ranching in the Badlands and he considered Elkhorn Ranch his home in the Dakotas. It was here he witnessed environmental degradation first hand which helped form his conservation ethic. As described earlier, the Badlands is rugged country with topography dominated by seasonal drainages, buttes, patches of mixed grass prairie and the Little Missouri River.

In the early morning hours of 8 September 1883, Roosevelt arrived by train at Little Missouri Village. He spent the remainder of the night at the Pyramid Park Hotel. A major reason he came to Dakota Territory was to hunt bison and other big game. T. R. hired Joe Ferris as a hunting guide. Traveling by buckboard, they passed the Custer Trail Ranch five miles south of Little Missouri Village. Two miles further, the two stopped for the night at the Maltese Cross Ranch (the brand) also called the Chimney Butte Ranch (butte).

The next day they journeyed 40 miles further south to the Gregor and Lincoln Lang ranch located on the Little Missouri River near the mouth of Little Cannonball Creek. Lang's Ranch became the base camp for the rest of the hunting trip. After a 10-day hunt in very inclement weather conditions, Roosevelt finally killed a trophy bull bison. Returning to the Badlands the following year, he shot and killed at least one antelope, whitetail deer, mule deer, grizzly bear, elk and bighorn sheep by the beginning of winter.<sup>66</sup>

T. R. was also interested in the cattle business and had earlier purchased a partial ownership in the Teschemacher & DeBillier Cattle Company located near Cheyenne, Wyoming Territory. In the evenings after hunting, he would discuss with Gregor Lang the prospects of cattle ranching in the Badlands. In the course of the conversations, Roosevelt asked Lang to go in with him on a ranching venture as manager. Lang said he was already fully committed, but suggested the Maltese Cross Ranch might be available. Grazing rights for the Maltese Cross Ranch included four-miles of Little Missouri River frontage.

Roosevelt talked with the ranch foremen Sylvane Ferris (Joe's brother) and Bill Merrifield, and they came to a tentative agreement based on the potential availability of the ranch. Afterward the two cowboys traveled to Minnesota with a \$14,000 check from Roosevelt and purchased the Maltese Cross Ranch from the owners H. B. Wadsworth and W. A. Hawley. The acquisition included 450 short-horned cattle. Upon concluding the deal, they sent a confirmation telegram to Roosevelt.<sup>67</sup>

T. R. returned to New York in late September and almost immediately plunged back into New York politics. He was victorious in a third term reelection bid for the New York State Legislature, but failed to secure the Speaker's Chair. Still, House Republicans regarded him as their leader and the House Speaker deferred authority to him as floor leader. Roosevelt became a major political power able to select committee members and push through legislative bills.

A double tragedy struck Roosevelt that winter. On 13 February in Albany, he first received a telegram announcing the joyous news that his wife Alice had given birth to a daughter. Later in the day, Roosevelt received a second telegram informing him that both his wife and mother were dying. He returned to New York City in time to witness his mother's death from acute typhoid fever. The same afternoon, Alice, his wife, died of Brights Disease. On 14 February 1884, he drew a large cross in his diary and wrote, "The light has gone out of my life."<sup>68</sup>

Forlorn and grief stricken, Roosevelt buried himself in his work. Working at an incredible pace, he was responsible for a copious amount of signed legislation and numbers of committee reports. Roosevelt served with distinction in two positions at the same time, a State Assembly member and chair of the City of New York Investigative Committee. After they went into recess, Roosevelt, accompanied by Henry Cabot Lodge, boarded a western bound train to Chicago and attended the Eighth Republican National Convention.

As delegates-at-large from New York and Massachusetts respectfully, they arrived in Chicago on 31 May 1884. The two had earlier endorsed Senator James F. Edmunds of Vermont for the Republican Presidential nomination, but the Convention selection process was in contention. The party machine, a large constituency from Pennsylvania and the West backed Senator James G. Blaine of Maine. Wall Street and the South meanwhile supported the incumbent President Chester A. Arthur. On the fourth ballot, Blaine clinched the nomination, (he later lost to Grover Cleveland in the general election). Deeply disappointed and disillusioned, Roosevelt left the convention headquarters. On the way out, he said to a reporter, "I am going cattle ranching in the Dakota for the remainder of the summer and a part of the fall."<sup>69</sup>

### **Marquis de Mores**

Roosevelt found the Little Missouri Village vanishing into oblivion when he came back to the Badlands on 9 June. A French nobleman named the Marquis de Mores arrived in the Badlands the previous year. Most commercial enterprises and community activity were now taking place in Medora, a new town de Mores founded on the east side of Little Missouri River named after his wife. The train station also moved to Medora. The Marquis planned to develop a very profitable enterprise slaughtering and processing cattle on site, and then shipping the dressed beef in refrigerator cars to Chicago. Local processing would enhance the company's revenue stream and save money through lower shipping costs. Funded largely by his wealthy aristocratic family in France and Wall Street banker father-in-law, he founded the Northern Pacific Refrigerator Car Company, both a cattle ranch and meatpacking operation. De Mores purchased railroad land to begin this enterprise.

Soon he was the major employer and a dominant force in the area. The town was now a bustling community with three hotels, two groceries, two general stores, dry-goods store, newspaper office, barbershop, laundry, blacksmith shop, freight outfitter and at least five saloons. The boomtown had 251 permanent residents and a transient population of between 50 and 100. A local newspaper called the *Bad Lands Cow Boy* promoted the area as the best cattle country in the world. Medora's growth continued throughout 1884 and 1885 and acquired a reputation as one of the wildest cow towns in

the West. The Marque also started a stagecoach line between Medora and Deadwood that ran three times a week (see map above). The first stagecoach way station south of Medora was at the confluence of Davis Creek and the Little Missouri River.<sup>70</sup>

### **Maltese Cross Ranch**

In the spring of 1884, the cattle ranching business along the Little Missouri River was in a growth stage. Following a relatively mild winter, the Maltese Cross herd had lost only 25 head out of 440 cattle and in comparison, 155 calves were born. Satisfied with the results, T. R. invested another \$26,000 to purchase 1,000 more cattle. He dispatched Ferris and Merrifield to Iowa to buy the additional livestock. Roosevelt's ranching venture was a small operation in comparison to some of the others. Berry-Boice and Towers & Gudgell had four to six times the herd. Roosevelt visited with other ranchers about the benefits of organizing. This resulted in the founding of the Little Missouri Stockmen's Association based in Medora with Roosevelt elected as the association's first president.<sup>71</sup>

The Maltese Cross Ranch was on a major trail route and had frequent callers. By accepted custom, Roosevelt treated guests to western hospitality taking time away from his activity charged days. He sought a more secluded place, away from people, where he could read, write and contemplate. Following a tip from Howard Eaton, Roosevelt reconnoitered the Little Missouri Riverine Basin north of Medora. Recalling later, he spent "barely a week in traveling north . . . before finding what was then untrodden ground, far outside the range of any of my neighbors' cattle."<sup>72</sup>

### **Elkhorn Ranch**

He paid a trapper named Henry Bennett \$400 to \$500 for a shack that included first rights to the range. Later in the summer, he discovered the remains of two dead bull elk with interlocked horns on the property. Roosevelt mused 'theirs had been a duel to the death'<sup>73</sup> and named the property the Elkhorn Ranch. He came to calling elk 'lordly' just as he had previously done with buffalo. The ranch site was on lands the United States had granted to the Northern Pacific Railway.

It was customary for the most senior ranchers to levy a \$400 tribute on newcomers to 'locate a person' on unoccupied land. Eaton and Paddock assumed the role of designated fee collectors. The old timers based the charge on the flimsiest of frontier rights and Roosevelt refused to pay the fee. Paddock, a skilled gunman circulated a rumor that Four Eyes was going to pay either in dollars-or in blood. Roosevelt personally confronted the gunman, Taken aback, Paddock said he had been misquoted. T. R. demanded and received an apology. The Marquis de Mores also sent a letter to Roosevelt claiming prior use and warned him off the land. Answering, Roosevelt said only one dead sheep was found on the property which made it open to anyone. This reply ended outside attempts at infringement on what at best was a marginal and informal land tenancy.<sup>74</sup>

Bill Sewall was a woodsman and hunting guide Roosevelt knew from various shared hunting trips in Maine. Roosevelt contemplated expanding ranching operations, and earlier that spring had interviewed Sewall in New York for a potential ranch manager position. Writing Sewall, Roosevelt said to get his affairs in order and come out to the Badlands. Sewall and his nephew Wilmot Dow took the train for Medora a few weeks later. Dow was a rugged young man in his twenties who, like Sewall, was a former hunting companion of Roosevelt.

At first the three crowded into the Maltese Cross cabin with Ferris and Merrifield. In late August, Sewall and Dow moved north and built a temporary dwelling into a side of a hill on the future site of the Elkhorn Ranch headquarters. Meanwhile Ferris and Merrifield returned from Iowa with more cattle. The Maltese Cross Ranch received the bulk of the herd, but they cut out 100 cows for the Elkhorn Ranch so Sewall and Dow had just enough cattle to practice on overwinter without becoming overwhelmed. Both woodsmen were soon busy cutting down and gathering cottonwood logs to build the ranchhouse.

One morning Roosevelt rode into the encampment, decided to help and began wielding an axe. At the end of the day, it irked him when he overheard Dow say to a cowhand, 'Well Bill, cut down fifty-three, I cut forty-nine, and the boss, he beavered down seventeen.' T. R. did not skimp on cabin materials. In addition to the cottonwood logs that went into the ranchhouse shell, the building contained 1,600 board feet of milled lumber. They hauled this material to the ranch along a 60-mile roundabout wagon road from Medora.<sup>75</sup>

Roosevelt went back to New York in the late fall and Sewall and Dow sporadically worked on the ranchhouse that winter. On returning to the Badlands the following spring of 1885, Roosevelt found the building near completion. While the two employees completed the ranchhouse and other structures, he stayed at the Maltese Cross Ranch. Later in the year, Roosevelt finished *Hunting Trips of a Ranchman*. In this volume and later writings, he reflects a certain quiet pride in the ownership of the Elkhorn and warmly describes it as his home ranchhouse.

He was delighted to see the cows and calves had survived the somewhat harsh winter of 1884-1885 with few losses. In late April, he sent Sewall, Dow and Ferris to Minnesota to help Merrifield bring back another 1,500 head. At St. Paul, they purchased wagons and provisions, obtained the cattle at Fergus Falls and Madelia, and returned shipped the cattle by rail. In mid-May, Roosevelt and his crew took part in the annual spring cattle roundup. Participants ranged up and down the Little Missouri Valley and fanned out east and west for 50 to 100 miles. Around sixty mounted horsemen coaxed reluctant cattle out of the coulees, basins, ravines and gorges. The 18 to 24 hour daily grind caused even roundup veterans to put tobacco in their eyes to stay awake. Once in an effort to head off some stray calves, T. R. immortalized himself with the locals by calling out to a cowboy 'Hasten forward quickly there!'<sup>76</sup>

Withdrawing from the roundup after 32 days, Roosevelt had proved himself the equal of any ranch hand. Newspaper reporters later noted an extraordinary physical and spiritual transformation had taken place to him during this arduous five-week period. The former anemic youth turned into a magnificent specimen of manhood - rugged, bronzed and in the peak of health. Shortly thereafter Roosevelt negotiated a contract with Sewall and Dow in which they would receive one-third of any future calves, while he retained the remainder. Roosevelt then returned to New York.

Dow also departed to Maine for a visit and in the interlude married and returned to the Elkhorn in early August with his new bride, accompanied on the train trip by Mary Sewall and her young daughter. Roosevelt spent part of the summer at his house at Sagamore Hill (National Historic Site) on Oyster Bay, Long Island. In August 1885, he boarded the *Chicago Limited* in New York and returned to the Badlands. He was 26 years old.

During his absence, the females subtly transformed the ranchhouse with splashes of color, curtains in the windows and a new air of tidiness. Six people, Roosevelt, the Sewall family and the Dow couple, now occupied the spacious eight room house. Almost immediately, Dow and Roosevelt left on a three-day elk hunt, after learning a herd was twenty-five miles north of the ranch. Elk had become scarce in the Badlands and Roosevelt did not want to neglect such a chance. Afterward, he called a second Little Missouri Stockmen's Association meeting where he was reelected association president.<sup>77</sup>



**THEODORE ROOSEVELT**

(Courtesy of the Theodore Roosevelt Collection,  
Harvard University)

In the late spring/early summer of 1885, a major drought occurred in the Badlands causing dry conditions. Roosevelt and other ranchers fought several grass fires that summer. After thousands of winter range acreage burned, cattlemen thought they recognized a pattern. Most of the fires were occurring in the 'drive country' between the ranches and cattle shipping points of Mingusville and Medora. Cattle driven across these blackened wastes starved and lost substantial amounts of weight. On delivery, they only sold as low-grade beef.

The ranchers including Roosevelt concluded local Indians were setting the fires in revenge for the earlier loss of their traditional hunting grounds.<sup>78</sup> Some or most of the fires probably occurred naturally. Lightning strikes and other incidents are frequent causes of prairie fires. Wind spreads flames rapidly across the dry grass burning large amounts of acreage in a short time. Sioux tribal elders recall ranchers blaming many later fires incorrectly on the Indians.

Returning to the east coast in mid-September, Roosevelt attended the State Republican Convention at Saratoga, New York. During this stay in the East, he went foxhunting with hounds. Although he had earlier thought fox hunting an 'effete' equestrian undertaking, Roosevelt now relished the sport and considered it as strenuous as any western activities. In addition, he met and became secretly engaged to Edith Carow. Unable to tear himself away from Edith, he spent a 'purely society winter' in the East.

In late March of 1886, Roosevelt was back in Medora. He stayed the night with Joe Ferris and his wife before proceeding the next morning to the Elkhorn Ranch where he arrived late in the evening. Ice flows on the Little Missouri had created an ice jam in front of the ranchhouse. The engorged chokepoint pushed large, broken ice chunks almost up to the doorstep. High water conditions made it impossible for a mounted rider to cross the river.

Roosevelt prepared for these occasional flooding events and had a boat available for river crossings. On the morning of 24 March, T. R. discovered someone stole the boat. Normally pursuing thieves for a \$30 boat was hardly worth the effort. Roosevelt was of a different timber; he believed criminal acts left unchecked would only encourage further illegal activities. Earlier he had fired a cowhand for making an unbranded cow part of his herd. Roosevelt believed a person who would steal for him would also steal from him. After building a scow, Roosevelt, Sewall and Dow poled and floated downriver in pursuit of the law-breakers.

Weather conditions were inhospitable. They caught up with the culprits at Beaver Creek nearly one-hundred river miles north of the Elkhorn Ranch. The Roosevelt party captured the three hardened criminals without resistance. Redhead Mike Finnegan was one of the boat thieves; he had previously been involved in several gunfights and considered the most dangerous. Short of rations, T. R.'s group and prisoners continued downstream constantly battling hazardous river conditions. On 7 April, they came upon a remote cow camp and stocked up on provisions.

The next day Roosevelt borrowed a horse and rode to a ranch in the Killdeer Mountains. He rented a covered wagon and took the prisoners overland forty-five miles to Dickinson. Meanwhile Sewall and Dow continued downriver to Mandan. Arriving in Dickinson on 11 April, he turned the prisoners over to local law enforcement. The twelve-day adventure added to the Roosevelt's growing western fame and mystique - and it became one of his favorite often told tales.<sup>79</sup>

Returning to Medora on 12 April, T. R. chaired the spring Stockmen's Association meeting. using Robert's Rules of Order, he quickly redirected any member who strayed from the subject. Afterward the ranchers loudly praised him for his efforts. Roosevelt then went to Miles City as a delegate to the Montana Stock Grower's Convention. Word of Finnegan's capture preceded him and locals treated him as a minor folk hero. For the first three weeks in May, Roosevelt stayed at the now fully functioning Elkhorn Ranch. He alternated between relaxation, intellectual rigor and hard physical activity. Roosevelt had earlier secured a commission to write a book, and now began writing the biography of Thomas Hart Benton the US Senator who encouraged western expansion.

The southern range of Dakota Territory had suffered a drought in 1885 resulting in more cattle driven north into the Little Missouri River Basin. Various estimates placed the Elkhorn and Maltese Cross herds at somewhere between 3,000 and 4,500 cattle. Census records for 1885 indicate there were 1,100 cattle and 500 calves at Elkhorn Ranch, and 2,200 cattle and 600 calves at Maltese Cross Ranch. These cattle numbers represent the peak of Roosevelt's commercial operations.<sup>80</sup> The two ranches eventually became separate functions with the Maltese Cross Ranch the center for the cattle operations, and the Elkhorn Ranch serving a less utilitarian and more aesthete purpose. Roosevelt now spent the majority his time at Elkhorn Ranch where he did most of his later writing. From the ranchhouse porch, Roosevelt describes the surroundings:

In the hot noontide hours of midsummer the broad ranch veranda, always in the shade, is almost the only spot where a man can be comfortable; but here he can sit for hours at a time, leaning back in his rocking chair, as he reads or smokes, or with half closed dreamy eyes gazes across the shallow nearly dry riverbed, to the wooded bottoms opposite, and to the plateaus lying back of them. Against the sheer white faces of the cliffs that come down without a break the dark-green treetops stand out in bold relief. In the hot, lifeless air all objects that are not nearby seem to sway and waver. There are few sounds to

break the stillness. From the upper branches of cottonwood trees overhead—whose shimmering, tremulous leaves are hardly ever quit, but if the wind stirs at all, rustle and quiver and sigh all day long—comes every now and then the soft, melancholy cooing of the morning dove, whose voice almost seems far away . . . <sup>81</sup>

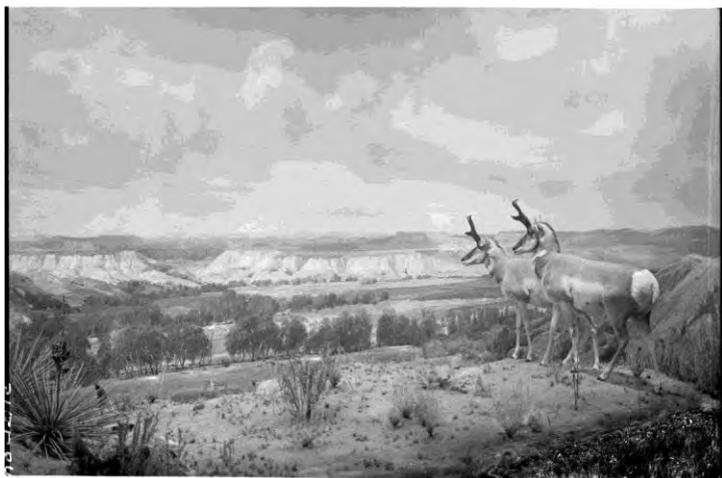
Cattle losses again were light the spring of 1886. The ranchers began the annual roundup, but the task proved to be more difficult. Dry, dusty conditions caused from overstocking the range resulted in cattle eating the grass down to the nub. Mary Sewall said, by the time the roundup reached the Elkhorn, they had amassed four to five-thousand cattle and five-hundred horses. She fed the cowboys who continually crowded into her kitchen. Roosevelt again put in his fair share of 24-hour days. “With the end of the roundup in June 1886, the Elkhorn Ranch reached its brief zenith. Large cattle herds were bellowing in the bottoms and all was bustle and dust and the shouts of cowboys - Roosevelt had his cattle ranch, hunting lodge and study mingled in a synthesis of lusty action.”<sup>82</sup>

In *Ranch Life and the Hunting Trail*, Roosevelt described the Elkhorn Ranch. This popular, portrayal became everyman’s fantasy dream of a western ranch:

My home ranch lies on both sides of the Little Missouri, the nearest ranchman above me being about twelve and the nearest below me about ten, miles distant. The general course here of the stream is northerly, but, while flowing through my ranch, it takes a great westerly reach of some three miles, walled in, as always, between chains of steep high bluffs half a mile or more apart. The stream twists down through the valley in long sweeps, leaving oval wooded bottoms, first on one side and then the other; and in an open glade among the thick-growing timber stands the long low house of hewn logs.

Just in front of the ranch veranda is a line of old cottonwoods that shade it during the fierce heats of the summer, rendering it always cool and pleasant. But a few feet beyond these trees comes the cut-off bank of the river, through whose broad, sandy bed the shallow stream winds as if lost, except when a freshet fills it from brim to brim with foaming yellow water. The bluffs that wall the river-valley curve back in semicircles, rising from the alluvial bottom generally as abrupt cliffs, but often as steep grassy slopes that lead up to the great level plateaus; and the line is broken every mile or two by the entrance of a coulee, or dry creek, whose head branches may be may be twenty miles back. Above

us, where the river comes around the bend, the valley is very narrow, and the high buttes bounding it rise, sheer and barren, into scalped hill-peaks and naked knife-blade ridges.



**ELKHORN RANCH**

(Courtesy of the American Museum of Natural History)

The other buildings stand in the same open glade with the ranchhouse, the dense growth of cottonwoods and matted, thorny underbrush making a wall all about, through which we have chopped our wagon roads and trodden out our bridle paths. The cattle have now trampled down this brush a little, but deer still lie in it, only a couple of hundred yards from the house; and from the door sometimes in the evening one can

see them peer out into the open, and make their way down, timidly and cautiously, to drink at the river. The stable, sheds, and other out-buildings, with hayricks and the pens for such cattle as we bring in during the winter, are near the house; the patch of fenced garden land is on the edge of the woods; and near the middle of the glade stands the high, circular horse corral, with a snubbing post in the center, and a wing built out from one side of the gate entrance, so that the saddle-band can be driven in without trouble. As it is very hard to work cattle where there is much brush, the large cow corral is some four miles off on an open bottom.<sup>83</sup>

A continuing drought plagued the Badlands that summer and by July, temperatures were over 120 degrees. Roosevelt returned to New York to check on the potential for a political appointment, and to inquire about the stage of publication of the Benton manuscript he earlier left at the Astor Library. Returning to Medora on 5 August, he found the summer heat had not let up. Overstocking combined with parched grasses caused the range's livestock carrying capacity to have greatly exceeded the available forage. As Roosevelt rode the range, he recognized the country had changed drastically in a relatively short period. Continually he had warned the Stockmen's Association about overgrazing and reiterated this in some of his 1886 writings:

Overstocking may cause little or no harm for two or three years, but sooner or later there comes a winter which means ruin to the ranches that have too many cattle on them; and in our country, which is even now getting crowded, it is merely a question of time as to when a winter will come that will understock the range by the summary process of killing off half of all the cattle throughout the Northwest.<sup>84</sup>

On 20 August, he attended the fall meeting of the Stockmen's Association where he was again reelected president. The next evening, partially to escape the heat, Roosevelt and Merrifield went on a hunting trip to the Coeur d'Alene Mountains in northern Idaho. Hunting guide John Willis met them at the railroad station. Roosevelt broke a mountain goat's fore leg with a rifle shot. It took two days of tracking before he finally finished off the animal.

Shortly afterwards, while in hot pursuit of a Bighorn sheep, Roosevelt almost killed himself when he failed to stop at the edge of a slate cliff and fell forty feet. Fortunately, Roosevelt landed in the crown of a pine tree and bounced downward from limb to limb to the ground. Other than being somewhat shaken he was all right. Later he bagged a second mountain goat. Although Roosevelt had slain two of North America's rarest and most difficult trophy animals, he later mused about never feeling less enthusiastic over a hunting trip.<sup>85</sup>

On 18 September 1886, T. R. and Merrifield returned to Medora. During the interlude, Sewall and Dow had decided to quit the cattle business, dejected over their inability to sell the fall cattle shipment at a profit. Prices had fallen drastically due to overproduction. Chicago slaughterhouses were offering \$10 less than the original cost to raise and transport an animal. When Roosevelt returned to the Elkhorn, the two Maine woodsmen asked if they could tender their part of the contract. Realizing the two were unhappy in the Badlands, He accepted their proposal, and the three comrades settled accounts and parted amicably.

Roosevelt did not give up. The wholesale beef market was down that year, but he reasoned the vagaries of pricing were only a temporary condition. In addition, cattle fattening was only part of the business and cattle breeding had continued to hold its own. He turned the Elkhorn herd over to

Merrifield and Ferris. Roosevelt left for New York in late September where he received the Republican nomination for New York mayor. Called the *Cowboy Candidate*, he made a good showing but lost in the general election. On 9 October, Sewall, Dow and their families left for Maine permanently vacating the Badlands.<sup>86</sup>

The following winter of 1886-1887 was disastrous for livestock. “Cattle desperate for shelter smashed their heads through ranchhouse windows.”<sup>87</sup> Snow began falling in mid-November ushering in one of the worst season of blizzards in the Badlands’ history. A late January blizzard lasted 72 hours. Men rode out on the range never to return. Children froze to death only yards from their homes, women committed suicide; cattle already weakened from the summer drought easily blew over in gale-force winds and died where they fell.

Gregory Lang recalled “when the cattle began to perish . . . Bunching up in the more sheltered corners, they refused to be chased out . . . As the snow piled up around them, many became drifted under and smothered. Others froze to death, often on their feet. . . As we visited their shelter places it was always to find a new layer going down on top of those already buried.”. . . Herds introduced from the southern ranges died first. The older range stock with their shaggier coats held out until February, but even they became maddened with hunger. Some drifted into Medora and ate the tarpaper off the sides of shacks.<sup>88</sup>

Roosevelt had married Edith Carow and honeymooned for 15 weeks in Europe, returning in late March to New York. Soon after, he headed west and arrived on 4 April in Medora, only to discover the town almost abandoned by merchants and residents. The meat packing plant had closed the previous November, because the supply of cattle had never been sufficient to make the large enterprise viable. In addition, easterners had shown a preference for corn fed beef over the rangy refrigerated meat. The Marquis de More just shrugged off an estimated one-million dollars in losses largely absorbed by his father-in-law and French relatives.

The packing plant directly or indirectly supported most of the local businesses and residents. The Oyster Grotto restaurant and Genial Jim’s Billiard Bar was closed. Bob Roberts’ Saloon had burned to the ground. The Pyramid Hotel was gone – taken by flatbed railcar to Dickinson. The *Badlands Cow Boy* newspaper also moved there. Yach Wah’s Chinese Laundry still operated for a short time longer. Less than two years later, Medora became a ghost town for the next 70 years.<sup>89</sup>

March brought the warming Chinook winds that started the spring melt and runoffs. Almost overnight, the Little Missouri became a raging torrent, carrying countless carcasses of dead cattle downriver. Lang recalled:

For days on end, tearing down with grinding ice cakes, went Death’s cattle roundup of the upper Little Missouri country. In countless valleys, gulches, washouts and coulees, the animals had vainly sought shelter from the relentless ‘Northern Furies’ on their trail. Now their carcasses were being spewed forth in untold thousands by the rushing waters, to be carried away on the crest of the foaming, turgid flood rushing down the valley. With them went our hopes.<sup>90</sup>

After riding the range in the spring of 1887, Roosevelt later wrote the land was a mere barren waste; not a green thing was visible. Bloated, blackened corpses of dead cattle littered the land. So few cattle were still alive, the Stockmen’s Association decided a general spring roundup was not worth the effort, and ranchers became responsible for searching out and gathering their own herds. Earlier

recognizing the negative affects on the environment from overgrazing, Roosevelt had implemented a more conservative stocking plan the previous year. This effectively made his losses appreciably less than the typical rancher's loss. The wooded bottomlands of his ranches also provided more shelter for cattle than the usual ranch spread. Billings County tax records show Roosevelt paid taxes on 60 percent less cattle in 1887 than the previous year.

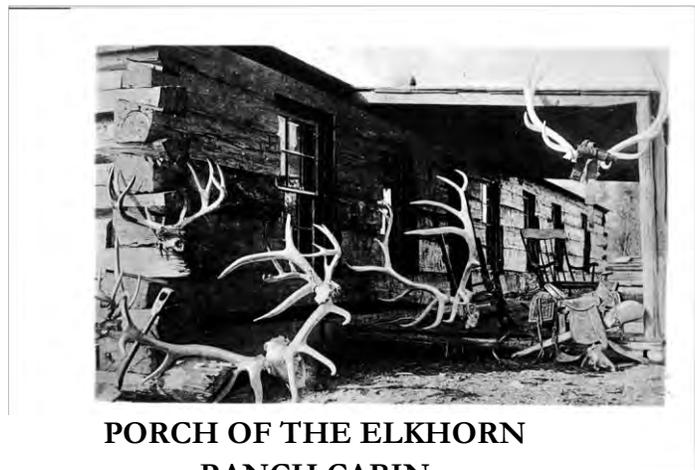
Estimates indicate ranchers lost an average of 75 percent of their herds across the Northern Plains in the winter of 1886-1887. The era of the Cattle Baron was over. Most of the big operators moved south and others just gave up. Roosevelt absorbed his losses, downsized, reorganized and continued ranching. His primary focus now turned from ranching to eastern regional politics and later the national political arena. Merrifield and his wife moved from the Maltese Cross to the Elkhorn in 1887. Although still a cattle operation, the Elkhorn Ranch served Roosevelt primarily as a late summer/fall hunting lodge and a place to entertain family and eastern guests. Merrifield continued to manage the Elkhorn until 1891, when T. R. released him from his contract. At this time, Roosevelt closed the ranchhouse.

In March 1892, Roosevelt organized the Elkhorn Stock Company in New York with Archibald D. Russell, R. H. M. Ferguson and Douglas Robinson. Roosevelt transferred \$16,500 in cattle holdings to the company in December, and later invested another \$10,200. Sylvane Ferris managed the new company. Roosevelt kept a hand in the ranch operations until 1898 when he sold the last of his holdings to Ferris. Total investment came to about \$85,000 for Roosevelt's cattle ranching ventures in the Badlands. He realized a \$3,200 profit from the Elkhorn Stock Company, but overall lost around \$20,000. Although the Badlands endeavor was not a financial success, the overall importance to his health, mental stamina, experience and the future of conservation, was priceless.<sup>91</sup>

### **Cradle of Conservation**

Roosevelt's favorite place to relax, read and ponder was on the cabin porch or *piazza* of the Elkhorn Ranch overlooking the Little Missouri River and beyond.

Although Roosevelt rounded up cattle and hunted throughout most of the Badlands country, he was most closely associated with one unit, the Elkhorn Ranch. From there, he traveled extensively in the Dakota, Montana and Idaho territories. T. R. came to recognize how fragile western lands were to the unmanaged exploitation by man: the destruction caused by logging and mining which polluted the rivers and devastated the landscape; the denuding of the prairies by overgrazing of sheep and cattle; and the decimation of game by commercial hunters and sportsmen. Roosevelt made the connection between good stewardship of the wild lands/wildlife and the preservation of our national identity. The United States lacked the long political and cultural history of other



**PORCH OF THE ELKHORN  
RANCH CABIN**

(Courtesy of the Theodore Roosevelt Collection,  
Harvard University)

nations. Roosevelt argued that citizens must rely on America's natural landscape to form the backbone of our culture. In 1893, Fredrick Jackson Turner developed a thesis that America's institutions owe much of their identity to the western frontier. Turner alarmed the nation by declaring the frontier closed, and as he predicted major changes took place in national thought as American's became aware of the diminishing natural resources.<sup>92</sup>

While there is no evidence that he [Roosevelt] was concerned at the time by the destruction of the buffalo, he was made thoroughly aware of it at once and in retrospect it undoubtedly contributed to his attitude in later years on game conservation and the problems of conservation generally.<sup>93</sup>

As mentioned previously, bison were very scarce when Roosevelt first came to the Badlands to hunt in 1883. A year later elk and plains grizzly bear were no longer present. In 1885, Roosevelt noticed bighorn and pronghorn becoming scarcer, and in 1886 observed certain migratory birds had failed to return to the Little Missouri Valley. At first he presumed that some environmental disconnects normally occurred when civilization enters the wilderness, and that nature would eventually find a new equilibrium. By 1887, Roosevelt realized hunters had denuded the Badlands of big game and many other plants and animals were facing destruction.

There were so few beaver left, after a decade of remorseless trapping that no new beaver dams had been built and the old ones were letting go, whenever this happened, ponds full of fish and wildfowl degenerated into dry, cracked-bottom creeks. Last summers overstocking, together with desperate foraging during blizzards had eroded the lush carpet of grass that once held soil in place. Sour deposits of cow dung had poisoned the roots of wild-plum tree bushes and they were no longer bearing fruit, clear springs had been trampled into filthy sloughs; large tracks of land threatened to become desert. What had once been a teeming paradise, loud with snorts and splashings and drumming hooves, was now a waste of silent hills and empty ravines.<sup>94</sup> "The only thriving native species were coyotes and wolves."<sup>95</sup>

It was not the length of time Roosevelt spent in the Badlands, but the intensity of the experience.<sup>96</sup> At this point, he realized the true plight and imminent threat to wildlife. Although he journeyed throughout the region, it was the Elkhorn Ranch where he witnessed firsthand the rapid degradation of the environment by overgrazing and implemented appropriate conservation measures by reducing his herd. Roosevelt's thoughts crystallized on the need for conservation of the environment and wildlife.

Shortly after returning to the East Coast, he began to act on these ideas. Daniel Boone and Davy Crockett were two of Roosevelt's folk heroes. Back in New York, he organized the Boone & Crockett Club. "[A]n association of amateur riflemen who, notwithstanding their devotion to the manly sport of the rifle, would work for the preservation of the large game of this country, further legislation for that purpose, and assist in enforcing existing laws."<sup>97</sup>

Membership grew to include some of the country's foremost scientists, lawyers and politicians. Through these prominent members, Roosevelt was able to wield considerable influence in Congress. Boone & Crockett committees were instrumental in creating a National Zoo; preserving Yellowstone National Park from ecological destruction; protecting groves of California's giant sequoias; and creation of the Alaskan Island Reserve for the propagation of seals, salmon and sea birds. The organization's crowning achievement was the lobbying effort that resulted in the passage

of the Forest Reserve Act of 1891. This gave the President the power to set aside any forested or partially wooded region. When Roosevelt later became President, he used the authority of this Act to sign millions of forested acres into federal protection in perpetuity. As the Boone & Crocket Club founder and club president (until 1894), he was the prime motivational force behind their conservation efforts.<sup>98</sup>

Roosevelt was a conservationist not a preservationist. He believed most of the public domain should be open to maximum sustained yield of its trees, grasses, water and other resources — but in a way that was sustainable for future generations — not for short-term gain. Only a few magnificent and fragile places should be set aside in perpetuity. Overall President Roosevelt's conservation accomplishments were legion. He doubled the number of National Parks from five to ten; set aside 51 Bird Reserves and essentially invented the National Wildlife Refuge system. T. R. signed the Newlands Reclamation Act that created the Bureau of Reclamation to recoup western lands through irrigation policies, designated 230,000,000 acres of public domain as federally protected National Forests and passed the Antiquities Act which established and protected 18 National Monuments containing historic or natural values.<sup>99</sup>

The object of government is the welfare of the people . . . Conservation means development as much as it does protection. I recognize the right and duty of this generation to develop and use the natural resources of our land; but I do not recognize the right to waste them, or to rob, by wasteful use, the generations that come after us.<sup>100</sup>

# Agriculture

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## Homesteaders

As American settlements advanced farther west in the mid to late 1800s, homesteaders plowed under increasingly large areas of virgin prairie on the Great Plains. They encountered a harsh semi-arid environment with sparse precipitation that supported only native grasses. Recurring droughts and dust storms created by hot summer winds caused economic loss and suffering to the early settlers.

Congress passed the 1862 Homestead Act, which enabled pioneers to acquire 160 acres of western land for a small filing fee and by living on the parcel for five years (a process called proving up). Through such methods, farmers and ranchers acquired nearly 550 million acres in the United States. The number of farms went from 1.5



**HISTORIC HOMESTEAD**

million in 1850 to 5.75 million by 1900. In order to serve the farmer more efficiently, Congress established the Department of Agriculture and elevated it to cabinet status in 1889.<sup>101</sup> The first North Dakota homesteaders settled along the river valleys in the eastern portion of the State, where land was fertile and timber adequate.

Railroad grants and other corporations acquired large tracts of bottomland and started 'bonanza farms' which employed many workers. After earliest pioneers took all the prime land, latecomers filed homesteads on sub-marginal land. People could parlay the Preemption Act, Timber Culture Act (tree claim) and Homestead Act into 480 acres, but a combination of a homestead and tree claim totaling 320 acres was more common. Cattlemen moved into the Dakotas from south to north, while homesteaders settled the State from east to west. At first cattlemen and sodbusters fought local range wars, but, the homesteaders ultimately persevered.

The 'Great Dakota Boom' took place between 1878 and 1890 with a thousand percent increase in population (16,000 to 191,000). Germans from southern Russia came to the Dakotas. Most left successful farms behind because they did not want to serve in the Russian army or assimilate into Russian culture. They had previously adapted to the Russian steppes and brought this knowledge with them. Other ethnic groups followed. Seeing a greater chance for success in Dakota than Norway, thousands of Norwegians immigrated to the Dakotas.

Others moved in from neighboring states. Many children of successful Illinois, Wisconsin and Iowa farmers took up land further west, because none was available at home. After 1900, the same pattern appeared in North Dakota, when descendants of eastern North Dakota settlers moved to the western part of the State. However, much of the boom was speculative, causing over-rapid development and unhealthy growth. Thousands left the North Dakota soon after they came, and those who remained faced a hard struggle just to survive and avoid bankruptcy.<sup>102</sup>

Major determinants of a successful farm were location and timing. Chances of acquiring good cropland decreased with distance west and time of arrival. Isolation was also a problem. More often than not, settlers ended up claiming parcels 20 to 100 miles from a railroad. Many had little farming experience or had previously farmed where moisture was more abundant. They soon discovered that winds blew almost constantly, winters were bitter cold and very little shelter was available. The first income for many homesteaders was not from a cash agricultural crop, but from collecting bison skeletons that littered the Plains. Every railway station was a market. Merchants gave receipts called 'buffalo bone money' that others accepted for payment of supplies. Bones brought settlers seven to ten dollars a ton. Shipped east they were ground into a phosphate fertilizer or converted to carbon by the sugar refineries.<sup>103</sup>

### **The Dakota National Forest**

Accustomed to more wooded homelands, early Great Plains settlers requested government support for tree planting projects because of the need for wood for building materials, fuel and protection from harsh winds. The formation of the Dakota National Forest was in response to this need. Located in the Little Missouri River Basin south of Medora, the aforementioned A. C. Huidekoper HT Ranch became the setting for this sivilcultural experiment. He had fenced the ranch in order to keep cattle and horses from straying off his property, but the barbed wire also partially enclosed federal land.

The government ordered him to remove the fence. In order to have continued use, Huidekoper requested the government create a national forest, which he could then continue to lease for grazing. Nothing came of the first attempts to create a national forest in the Badlands and Huidekoper realized homesteaders would soon be crowding into the township containing his ranch. Subsequently in 1906, he sold 70,000 acres to the Pabst Brewing Company of Milwaukee, turned his 3,500 horses over to the Campbell–Reid Commission Company of St. Louis and managed to sell the remaining part of his cattle herd to the nearby Short Ranch. After six months the Pabst brothers, in turn, sold the land to the Western Land and Securities Company who broke it up into small parcels and placed them on the market for homesteaders.

A large pine grove stood on the former HT Ranch, and Governor Burke of North Dakota renewed the effort to establish a forest reserve. The proposal generated enough interest that the US Forest Service sent forest inspector Richard P. Imes to make an initial study and submit a report. While the locale held little prospect for commercial logging, he reported the area was the only source of wood for 100 miles in any direction. Settlers coming into the region had most urgent needs for timber.

Forester Imes recommended the creation of a national forest staffed with a full time ranger. President Theodore Roosevelt authorized its formation.

The Dakota National Forest became a ranger district administered by the Sioux National Forest headquartered at Camp Crook, South Dakota. The forest supervisor C. A. Ballinger employed an outrider for the first two years to keep the cattle off the new forest reserve. The Forest Service called it a grazing forest with sparsely wooded areas. Settlers had free use of dead and downed timber for use in heating their sod houses. They also mined lignite coal for warmth in the winter. The coal had to cure (dry out) before it would burn properly.

In the spring of 1910, Ballinger assigned Ralph Sheriff to be the local ranger. Sheriff's first activity was to acquaint himself with the area ranchers and farmers, whom he found generally friendly and hospitable. His next task was to plan and build a ranger station on Deep Creek about a mile from Logging Camp Ranch. Limited funding necessitated doing most of the construction himself. Lumber came from the town of Bowman and construction took some time. Ranger Sheriff lived with Bob Hansen at Logging Camp Ranch, while he completed the 35 ft x 15 ft one-room building with a screened porch. Later the ranger added a barn, corral and other outbuildings. The community frequently used the ranger station for gatherings. From a ranch located 10-12 miles distant, they brought in an organ by buckboard, and moved the station furniture and stove out onto the porch. Then the festivities began.

Plans also went forward for a pine tree nursery. In April 1911, local workers prepared around thirty western yellow pine seedbeds. They installed a water tower with a hand pump beside the creek to keep the seedbeds moist. Forest assistant Arthur F. Oppel was in charge of this operation. The following spring, seedlings were ready for transplant, and forest assistant Kenneth D Swan supervised a crew of young homesteaders who planted the seedlings individually or as stringers into prepared furrows. Stocks of seedlings came from the Savenac Nursery on the Lolo National Forest in western Montana. Workers earned \$2.50 a day, at the time considered a good wage, and camped out overnight at the nursery.

With new national administrations came changes in priorities. Theodore Roosevelt's Era of Conservation was over. During World War I, the government reduced the size of many forests, restored others back to homestead entry, or simply closed down the reserves. The Dakota National Forest faith was the latter. President Woodrow Wilson abolished the Dakota National Forest on 20 July 1917. The official reason for abandonment was the high cost of administration. Other reasons were its isolated location and the limited success of the reforestation program. The forest was in existence for only eight years and eight months.<sup>104</sup> The stone foundation of the Ranger Station is all that remains of this historic site.

## Denbigh Station and Experimental Forest

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Some scientists and members of the public believed planting trees could change the semiarid plains environment to make it more conducive to growing agricultural crops. The basic theory at first had some support from professional foresters. Trees indeed did draw moisture from deep within the subsoil and through leaf evaporation passed it into the atmosphere. This moisture then condensed into water and fell as rain.

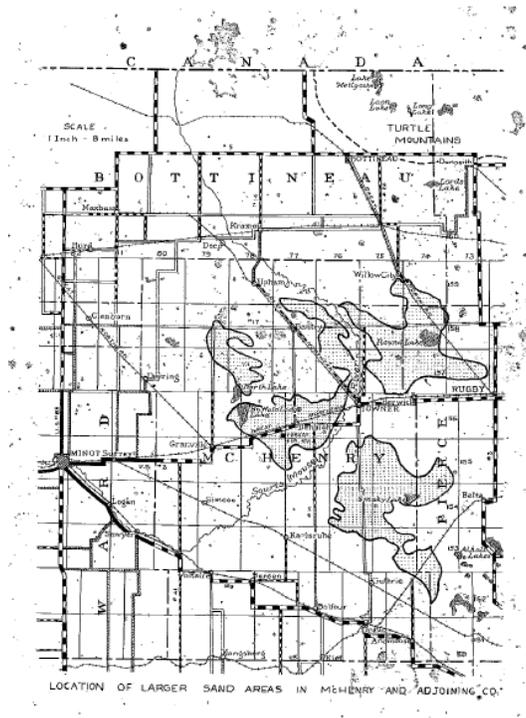
In 1873, the Timber Culture Act provided for planting trees in a portion of homesteaded acreage as a way of acquiring an additional 160 acres of land. This program was active from 1873 to 1891. In the Agriculture Appropriations Act of 1911, the Kincaid Distribution section provided for the establishment of field stations and tree plantings in the Plains region. However, both small-scale and large-scale tree planting experiments by the public and professionals were largely unsuccessful. Most trees soon died from lack of cultivation and/or irrigation.<sup>105</sup>

Not everyone gave up. Charles E. Bessey, a University of Nebraska botanist, had an idea that conifers would grow well in the Nebraska Sand Hills. From the onset ranchers, farmers and local politicians opposed the idea, because forested land would reduce acreage for grazing and agricultural production. In spite of the opposition, Bessey established four small experimental plots in the spring of 1891. The United States Department of Agriculture provided pine seedlings. Many pine trees died in the first few years; the project first waned, then abandoned and soon forgotten.

Ten years later, Bureau of Forestry chief Gifford Pincholt sent a forester reconnaissance team to the Nebraska Sand Hills for a more thorough field examination. To everyone's surprise, stands of twenty-foot pine trees were growing in the abandoned experimental plots. The dense thickets of pines shaded the forest floor and prevented most other competitive vegetation from taking root in the understory. Because of these successful experimental plots, foresters started a nursery for pine seedlings. Dating from the early 1900s, Bessey Nursery is now part of the Nebraska National Forest. Meanwhile Pincholt and now President Theodore Roosevelt created the Dismal River Forest Reserve and the Niobrara Forest Reserve. The Forest Service later conjoined these forest reserves to become the 208,902 acres Nebraska National Forest. After replanting with nursery seedlings, the mature forest became a major conservation success for the Forest Service.<sup>106</sup>

### Environment

In the Pleistocene Epoch, the Wisconsin Glacier and glacial Lake Souris covered the area of present day North Dakota. When the glacier retreated and stagnant ice melted, Lake Souris expanded and flooded the northern half of McHenry County. As the lake drained, the Souris River established a northerly route across the dry lakebed. Intense wind erosion affected broad areas of the exposed lake floor and formed dunes of fine sand. A 1930s soil survey (see below) recorded over 150,000 acres of sand in McHenry County.<sup>107</sup>



### 1932 SOILS SURVEY MAP OF MCHENRY COUNTY

The Denbigh Experimental Forest is located within this former Pleistocene lakebed. Except for two dune areas in the southwest corner, the site is relatively flat. The Forest Service chose Denbigh as the location for the experimental forest because conditions were similar to the Sand Hills area of Nebraska. Livestock grazed on deep-rooted grasses in this semi-marginal environment of the Denbigh area. Shallow rooted plants such as agricultural crops could not grow because of the drought like surface conditions and their inability to reach the water table and survive. Shrubs and trees with their deeper roots, on the other hand, could reach the water table located five to eight feet below surface. These larger plants tend to do quite well.<sup>108</sup>

#### North Dakota and McHenry County

The decade from 1910 to 1920 saw some expansion in agriculture, the number of cattle doubled, as did the size of the average farm. The end of government free land programs and wartime inflation drove land prices up. As land values increased so did the number of mortgaged farms, mortgage debt load and tenancy. Farmers dazzled by temporary high produce prices used borrowed money to buy more land at inflated prices. During this period, a growing criticism of unrestricted agriculture settlement was also taking place nationally. This disapproval by farmers was less a response to drought conditions, than the decline in market prices caused by expansion of wheat acreage during World War I.

When the bubble burst toward the end of the 1920s, many farmers could not carry the repayment burden and lost title. The worst was yet to come. Drought struck nine times between 1929 and 1939 along with grasshoppers ravaging crops. Worldwide Depression added to these difficulties and caused inhabitants of the Dakotas to suffer more than people in other states. Thousands more lost farms and one-third of the state's population was living on relief. Many residents left North Dakota.

As a result, county governments, state land departments, the Bank of North Dakota and the US Soil Conservation Service acquired title to about six million acres.<sup>109</sup>

Interest in future possibilities of planting forests on some of this abandoned led North Dakota US Senator Nye to introduce Senate Bill (No. 4553, 1931) to appropriate funds for an investigation. Other involved citizens included Congressmen Hall and Sinclair, state forester Cobb and Associate Supreme Court Justice A. M. Christianson. At the time, raising cattle had become unprofitable in McHenry County, land values had collapsed and thousands of acres reverted to the county for non-payment of taxes.<sup>110</sup>

The prairie town of Denbigh was one of the many communities to spring up along the route of Great Northern Railroad. Many the names of these small towns came from municipalities in England. Alyce Kramer Eikesdahl grandparents homesteaded just south of Denbigh. She believes the name Denbigh, ND was originally for a medieval Welsh hilltop castle and hamlet. They settled in this area because by 1900 farmers occupied the more fertile land in the Red River Valley. As a young girl, Alyce lived near Denbigh in the 1930s.

She remembered:

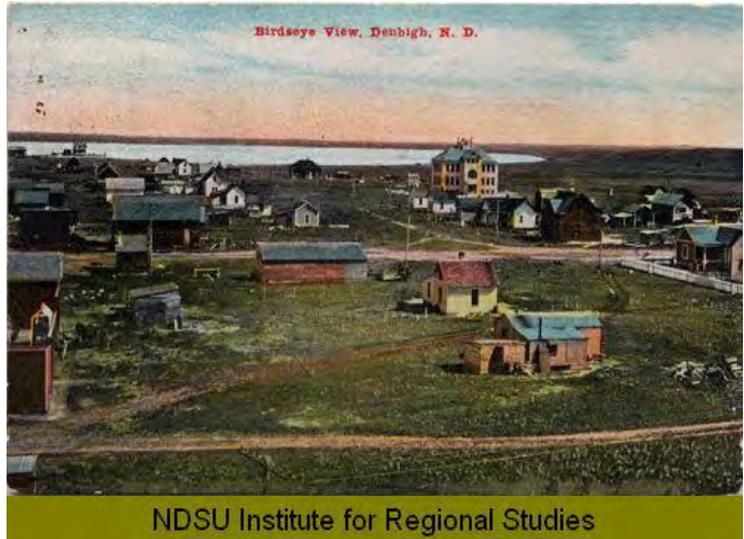
Denbigh sat almost in the middle of North Dakota and received the brunt of every disaster. Grasshoppers immediately ravaged anything green. Any garden or crops that remained withered and died from lack of rain. Pastures and hayland dried up and cattle starved or died from inhaled dust in their lungs. To add insult to injury, farm prices dropped drastically. Wheat sold for 35-cents a bushel and oats for nine-cents. Eggs brought two-cents a dozen. The government started buying up cattle to combat the situation but the price they paid, \$4.00 for calves and \$20 for cows did little to alleviate the situation. One third of the farmers lost their land to foreclosure and forced into dreaded farm auctions.<sup>111</sup>

In 1931, Congress appropriated \$15,000 for Denbigh Station to be located in the North Dakota. McHenry County was the most suitable for the similar Nebraska Sand Hills type forest planting studies. The site had rolling dune areas, flat sand plains, some swales and occasional aspen groves. Of further advantage, the government already owned much of the property. Glen Roloff stated, “McHenry County, with its many thousands of acres of sandy soils, was extremely susceptible to these worsening conditions and severe wind erosion occurred over extensive areas of the county”.<sup>112</sup>

### **Denbigh Station and Experimental Forest**

At first, the US Forest Service put senior silviculturalist Carlos G. Bates (1885–1949) in charge of the project. A ‘Behind the Scenes Forest & Forests Product Research’ biographer writes, “Bates was known for his keen mind, outstanding capabilities and versatility. While other researchers of the time excelled in one field, Bates distinguished himself in three: silvics, shelterbelt forestry and watershed management.”<sup>113</sup> He also had considerable experience in tree planting in the Plains and Sand Hill regions of Nebraska, Kansas and eastern Colorado. In a 1930 document, Bates noted: . . . reports are the result, not of Forest Service ambition to inject itself into the affairs of North Dakota, but of a strongly-felt need on the part of many prominent cities of the State for greater activity in that region in growing trees upon the treeless plains, and upon the wastelands of the State. The feeling [is] that something should be done, and that it only could be done by participation of the federal government.”<sup>114</sup>

When the federal and state agencies acquired ownership, they completely fenced off the land in Section 36. A “natural forty” was further set aside for botanical studies. That summer H. F. “Bob” Scholz examined about 1,000 acres of planted groves and windbreaks on a variety of soils in central and eastern North Dakota. His findings were helpful in guiding Denbigh’s program and the Plains Shelterbelt Project launched two years later. Forester Paul Rudolf supervised the



planting of about five acres of trees in the northeast corner of Denbigh in 1931.<sup>115</sup> The *Mouse River Farmers Press* reported,

“On Monday, April 13, the first ground was broken for a project which may eventually mean much to McHenry County, the experimental planting of five acres of fine trees in the sand hills . . . Here during the coming summer a field headquarters will be established.”<sup>116</sup>

**TOWN OF DENBIGH**  
(Courtesy of the ND State University)

Foresters obtained conifer seedlings for the project from the North Dakota State Nursery, School of Forestry at Bottineau, and Forest Service nurseries at Halsey, Nebraska and Savenac, Montana. In a September 9, 1931 letter, Bates wrote, “there was not much to see in connection with the project. The trees that had survived the summer are too small to be of interest to anyone except a professional who understands the struggle they passed through.”<sup>117</sup>

During 1932, under the direction of Bates, ground was broken for a 100,000-tree transplant nursery at Denbigh. That year, Bates turned over management to forester Sholz who oversaw the planting of about 40 acres of trees. In 1933, the State Legislature passed enabling legislation for the proposed Souris National Forest, and the Forest Reservations Commission approved the purchase. The *Mouse River Farmers Press* reported, “The area embracing [between 200,000 and] 480,000 acres lying along or near the Souris [R]iver, has been approved as a purchase unit, and will be developed by the federal government as soon as funds are made available.”<sup>118</sup>

The project did not come to fruition because rising beef prices at the time led to a concomitant increase in land values. This resulted in private owners becoming extremely reluctant to sell their land. Therefore, Congress never appropriated the funding and this led to eventually dropping the project by federal and state agencies.<sup>119</sup> Today, however, mature trees stand at Denbigh as witness to the success of this experimental project.

The Forest Service used Denbigh to learn which tree species were robust enough for the northern Great Plains states, the finest trees for shelterbelts, the most adaptable seed sources, and the best methods of site preparation, planting and care of seedlings. Foresters directed the major effort at Denbigh toward tree planting.<sup>120</sup> From 1933 until it closed in 1942, Dr. Joseph Stoeckeler (1908–1967) was in charge of Denbigh.<sup>121</sup>

Born in Austria, Stoeckeler received his Bachelor's (1930) and Master's (1931) degrees in forestry from Iowa State College. Later, in 1956, he received his PhD with a major in forest soils from the University of Minnesota. In his 36 years with the US Forest Service, Stoeckeler authored over 200 publications and made important contributions in shelterbelt planting research along with nursery and forest management research. A major portion of his publications and research legacy directly relates to his work at Denbigh.<sup>122</sup>

Emergency Relief Act (ERA) monies funded temporary federal employees and the State paid School of Forestry student assistants. By 1940, Denbigh had 270-acres of trees, over half conifers. Since 1931, the agency managed the 640-acre Denbigh Station and Experimental Forest as one unit and remains intact today. The Forest Service and the North Dakota School of Forestry shared responsibilities. Temporarily closed in 1942, the Denbigh facility reopened in the 1950s. During the 1930s and 1940s, workers planted nearly 40 different species of trees at Denbigh to create the present forest environment. Seed sources came from New Mexico to Montana, the Great Lake states, Europe, Russia and Asia. Trees planted in orchard type rows formed blocks of different tree types. These seedlings grew into stands of mature trees that cover about 60% of the property today. The remainder is mid-grass prairie with several types of grasses and stands of aspen. Personnel cleared fire lanes through the forest stands as the trees matured. The 1938 Denbigh Work Plan mentions disking fire lanes. Lack of natural fires over the years has caused a buildup of woodland duff on the forest floor and dead plant debris in grassy areas.<sup>123</sup>

## Denbigh Historic Buildings and Structures

Using plans prepared by Bates and executed by Sholz, CCC carpenters and others constructed a five-room office/dwelling the shop/garage and storage buildings in 1931/1932. They also installed a windmill/generator that provided electricity to storage batteries powering the lights in the office/dwelling.



**DENBIGH ADMINISTRATIVE  
BUILDING 1932**

All that remains today is the cement base that once held an iron pole pivot supporting the generator at the top of the windmill. The well was equipped with a Fairbanks-Morris typhoon combination gasoline engine and water pump. The three main historic buildings are still standing, but the windmill/generator came down sometime after 1944. Building and grounds upkeep occurred sporadically over the next three post-war decades. Today the administrative site still contains three historic buildings: headquarters/bunkhouse, shop/garage and implement/storage shed.<sup>124</sup>



**GARAGE/STORAGE SHED 1932**



**WINDMILL/  
GENERATOR 1932**

### **Wind Breaks/Shelterbelts**

The 1930s were a chaotic time for the people of the United States and other countries. Collapse of the New York Stock Exchange triggered the world wide “Great Depression.” On the semi-marginal soils of the Great Plains, drought, overgrazing and poor agricultural cultivation methods created the “Dust Bowl.” The US Forest Service was instrumental in the development and implementation of counter measures to combat soil erosion problems. Along with other facilities, Denbigh Station and Experimental Forest played a vital soil conservation role nationally.

In June 1924, Congress enacted the Clarke-McNary Act authorizing the United States Department of Agriculture to cooperate with states in the distribution of trees to farmers, so they could begin planting windbreaks, shelterbelts and woodlots. Severe droughts took place in the 1930s which none of the existing farming methods could mitigate. “Interest in tree planting was ignited for a new reason - to prevent soil erosion.”<sup>125</sup> The need for shelterbelts was greatest in central North Dakota and South Dakota. With its thousands of acres of sandy soils, McHenry County was particularly susceptible to wind erosion. An estimated eight feet of soil (15,700 tons per acre) was lost by 1936. Closely grown rows of trees and other shrubbery in windbreaks or shelterbelts would slow the wind thereby reduce erosion and moisture evaporation.

Nationally, foresters could do little more at first than encourage shelter belt planting and provide farmers with regional information on the best tree species, planting and cultivation methods.<sup>126</sup> More assistance was forthcoming. To make good on campaign promise, President Franklin D. Roosevelt launched the Prairie States Forestry Project through an Executive Order in 1934.

The government gave the Forest Service the task of completing the research and implementing this ambitious undertaking. They had to answer fundamental questions such as, can shelterbelts successfully be established in the Plains region, and if so, where is it most feasible and will it accomplish the greatest good? Foresters needed to answer these questions before any planting could take place.

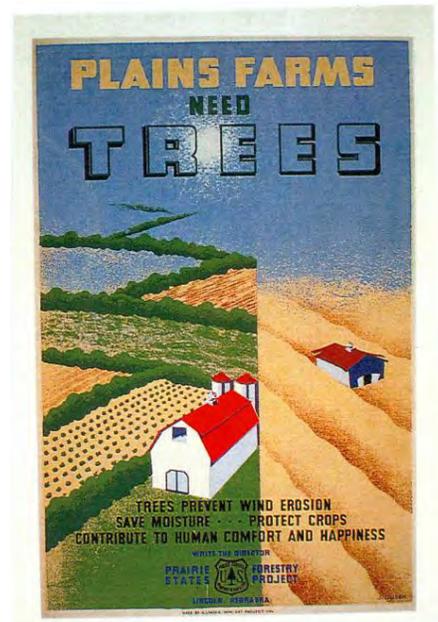
Investigations took place in 1934 and the beginning of 1935 prior to initiating the shelterbelt-planting project. The Forest Service studied climate and native soils of North Dakota, South Dakota, Nebraska, Kansas, Oklahoma and Texas. New information augmented the past trial and error methods. Implementation of the shelterbelt program happened almost immediately after the analysis work. Economics factored into the selection of locations. The Forest Service projected a



**DR. JOSEPH  
STOECKELER  
AND WIFE 1932**

60 million dollar budget to plant 700 million trees across six states in ten years. Nearly half of the funding would go to purchase land from farmers.<sup>127</sup> Forest Service Chief F. A. Silcox proclaimed, “This will be the largest project undertaken in the country to modify climate and agricultural conditions in an area.”<sup>128</sup> He put Carlos Bates in charge of the entire Prairie States Forestry Project. Denbigh and Dr. Stoeckeler played a key role.

During the 1930s at Denbigh, Stoeckeler developed the best methods of site preparation, planting and care of seedlings for shelterbelts. Aside from the main planting studies, he conducted nursery experiments, established sand-blow plantings and other put test plots in other localities. Stoeckeler also studied the effects of shelterbelts on snow drifting and soil moisture, as well as keeping records of grassland succession and water levels. Through experimentation and testing, he developed the principle methodology for the establishment of shelterbelts. It consisted of “thorough ground preparation before planting followed by three or four annual cultivations between rows for at least five years.”<sup>129</sup> In 1940, Dr. Stoeckeler planted an arboretum. The local community well respected him. After Stoeckeler died in 1967, state legislators, county commissioners and others insisted that the US Forest Service erect a memorial in his honor. A commemoration ceremony took place at Denbigh in 1969.<sup>130</sup>



**PRAIRIE STATES  
FOREST PROJECT  
POSTER**

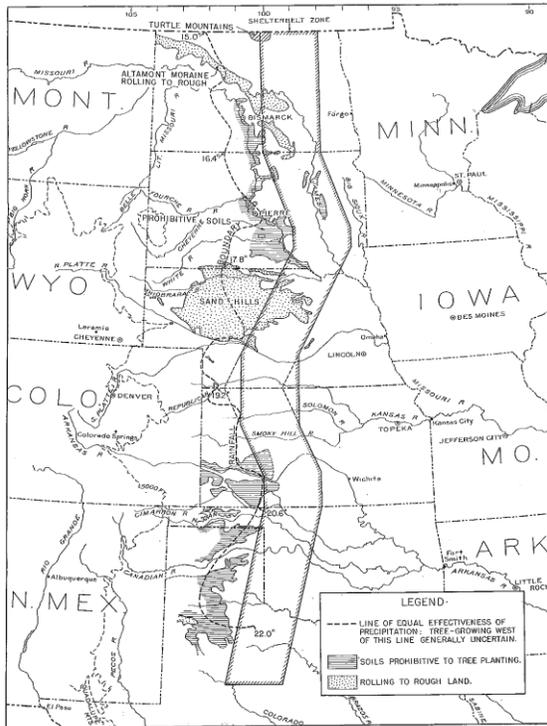


FIGURE 2.—Location of the shelterbelt zone, with factors limiting its westward extension.

## SHELTERBELT PLANTING ON THE GREAT PLAINS

(Source: Zon 1935)

While planting some trees was feasible, the Great Plains did not generally lend itself to the introduction of forests. The low annual precipitation may have been sufficient for agricultural crops. Perennial trees and shrubs, on the other hand, depend on a supply of sub-soil moisture, which is often lacking in the grasslands. Studies found that planting in strips or shelterbelts frequently would not deplete the subsoil moisture supply. Proper cultivation, along with the shelterbelts ability to retain drift snow that melts in the spring, actually increased the available moisture.

Tree planting was further restricted to areas with enough available moisture. This shelterbelt zone was roughly 100 miles wide and about 1,150 miles long. Its axis more or less follows the ninety-ninth meridian. A line demarcating 16 inches of annual precipitation defined the zone's western limits in the north and 22 inches of moisture in the south. This region contained around 114,700 square miles.

East of the zone, sufficient precipitation existed to grow shelterbelts without too much effort. Most shelterbelts had five to ten rows of different types of trees and shrubs with 10 feet to 12 feet left between the rows. Works Progress Administration (WPA) workers planted the majority of trees on an east-west axis with the remainder oriented in a north-south direction. A few others had no cardinal direction. They left 200 to 500 feet breaks every one-half mile for large shelterbelts and protected soil from the hot summer winds.<sup>131</sup>

Soil erosion continued to take place. The Forest Service never believed the Shelterbelt or Prairie States Forestry Project was a panacea to end the dust storms on the Great Plains.<sup>132</sup> "It was determined Shelterbelts alone could not eliminate dust storms. Efforts must also include grass reseeding, controlled grazing, terracing, strip cropping and agricultural diversification."<sup>133</sup> More than a few individuals considered shelterbelt planting as a make-work project. Most certainly, the WPA provided thousands of needed jobs for local people in planting and cultivation. In North Dakota, Shelterbelt planting WPA/CCC camps were located in Fargo and Mandan.<sup>134</sup>

Defoliation by insects and other pests was a major problem. Workers fenced most shelterbelts from cattle because they killed trees by scratching the bark off tree trunks. Jackrabbits and cottontail rabbits were the some of the worst offenders. They devoured young plants, often dug the roots of

tender seedlings and girdled small trees. No one had ever before conceived the idea of hunting rabbits on millions of acres. The Fish and Wildlife Service recruited hundreds of 35 man teams of hunters to try to eliminate or at least reduce the rabbit populations. Hunters carrying twelve-gauge shotguns would line up in a one-half mile long V and sweep an area.<sup>135</sup>

The Prairie States Forestry Project was in operation between 1934 and 1943. During the Period 30,000 shelterbelts (19,000 miles), that contained 220 million trees planted on approximately 33,000 farms. When the United States entered World War II, work relief projects were no longer necessary. In 1942, the Secretary of Agriculture officially transferred the Prairie States Forestry Project to the Soil Conservation Service. In 1943, they planted only 65 miles of shelterbelts and shortly afterwards the project ceased to exist.<sup>136</sup>

Lake States Forest Experimental Station (LSFES) director E. N. Munns and Stoeckeler made a field review of the six states in 1944, and they found mixed results for the Prairie States Forestry Project. Good farmers who had well kept farms and fields absent of weeds invariably had well tended shelterbelts. Conversely, run down farmsteads with rusty farm equipment lying around consistently had poorly tended shelterbelts. Farmers planted shelterbelts trees for aesthetic reasons around the farmstead buildings. Vegetation added color and contrast and gave the farming community the appearance of permanence, something solidly and deeply rooted in the soil. Shelterbelts dispelled some of the unreliable aspects associated with prairie carpetbaggers who settled down for a few years to gamble on the hopes of two good wheat crops in succession, and then promptly picked up and departed.<sup>137</sup>

### **Contemporary Environment and History**

From the beginning in 1931, LSFES and the North Dakota School of Forestry jointly managed Denbigh Station. They extended this agreement for another of 25 years in June 1947. During the 1950s, research authorities and responsibilities passed from the LSFES to the Rocky Mountain Forest Research and Experiment Station in Fort Collins, CO. In 1951, the North Dakota Forest Service took over various duties at Denbigh Station. Officially designated the Denbigh Experimental Forest in 1961 by the Chief of the Forest Service, the name provides the basis for a continuance of experimental tree planting with an emphasis on tree improvement, tree establishment and tree maintenance studies.

In 1972, the Forest Service exchanged the Towner Nursery land with the North Dakota for the remaining 600 acres of Section 36. State School Lands however retained a portion of the mineral rights with 'No Surface Occupancy' restrictions on any mineral development. The Shelter Belt Laboratory at North Dakota State University in Bottineau formally managed Denbigh from 1971 until the laboratory closed in 1982. Afterward Roy Laframboise, of the State Forestry Nursery at Towner, assumed management responsibilities for Denbigh Station. He passed away in 2008. In 1989, Denbigh was still a seed source for shelterbelts in the arid reaches of North Dakota and Montana. The North Dakota Forest Service, Custer National Forest and Rocky Mountain Forest Research and Experiment Station retained land management and research responsibilities. In 1998, they transferred some management authority to the newly created Dakota Prairie Grasslands.<sup>138</sup> Forest Service District Ranger, Bryan Stotts currently manages Denbigh.

Denbigh Station is extremely important today as wildlife habitat providing a variety of food and cover for numerous species. The enclosure has become a wildlife sanctuary from the privately owned surrounding area heavily grazed by cattle. Additionally the facility is a winter haven for white-tailed deer, other animals and birds, primarily to provide some protection from the elements and severe winter storms. Occasionally large snowdrifts trap yarded deer and many perish. Throughout the rest of the year, these species and others occupy the forest and grasslands habitat.

Wildlife biologists have recorded rare birds and butterflies and sighted rare nesters such as Sharp-shinned hawks and the "myrtle" yellow-rumped warbler at Denbigh with their young. They also documented black-backed woodpecker and pine warblers, both vagrant species. The facility is a keystone area for the "Christmas Bird Count," an annual worldwide event. Recent butterfly surveys identified the Delaware Skipper and Dusted Skipper both designated grasslands sensitive species.<sup>139</sup>

In 1983-1984, a major site renovation took place. Maintenance workers moved the well to a new location, repainted the buildings, replaced the cedar shake roofs with asphalt shingles, completed other deferred maintenance repairs and added new signage. Tree and ground maintenance work included pruning, thinning, noxious weed abatement and insect control. Contractors removed a 250-gallon underground fuel storage tank in 1987 and replaced the outhouse with a vault toilet in 2002. In 2006, they replaced the septic system, the electrical system and plumbing. The arboretum interpretive sign installed in 1969 is still standing and has attained its own separate historic significance.

To bring the buildings back to a more original condition, in 2010, American Relief and Recovery Act (ARRA) funding allowed a contractor to repaint the building interior/exterior, match original colors, re-shingle the roofs with cedar shakes and complete other overdue repairs. In addition, workers cleared trees and other encroaching vegetation from around the buildings.



**DENBIGH ADMINISTRATIVE  
BUILDING 2010**

Denbigh retains its excellent integrity and is a unique Forest Service administrative site in conception and as an experimental forest. The site is a symbol for national and statewide efforts initiated in the 1920s and 1930s to deal with the drought situation. Indeed the Denbigh Station and Experimental Forest is one of the few, if only intact facility of its kind still in existence from that period. Today this forested complex contains many of the original species of trees and three circa 1930s buildings retaining their essential historic integrity. The entire site is now a National Historic District listed on the National Register of Historic Places.

## US Forest Service History and Administration

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The first sources of federal assistance came from the 1933 Industrial Recovery Act and the Emergency Relief Appropriations Act of 1935. This legislation allowed the federal government to purchase sub-marginal lands and resettle destitute families. Earlier in 1928, the Souris and Sheyenne became two federal forest purchase units set up under the Weeks Law. The government never purchased the Souris parcel, but afterward the Rural Resettlement Administration acquired the Sheyenne in the 1930s and designated the Sheyenne National Grassland. Officials designed the Land Utilization (LU) programs to bring about sound land use, and achieve a balance between rural economic needs and natural resources.

In 1937, the Bankhead-Jones Farm Tenant Act (BJFTA) gave custody of these lands to the Secretary of Agriculture, and authorized more extensive conservation efforts. In February 1939, seventy-five percent of the people in Billings County were still receiving government assistance. In many Great Plains states including North and South Dakota, the Forest Service supervised Works Progress Administration (WPA) projects that planted shelterbelts. By 1942, the Department of Agriculture administered over 1,000,000 acres, both original public domain and recently purchased sub-marginal land in the Dakotas.

### **Dakota Prairie Grasslands**

In 1954, the government reviewed the administration of Land Utilization (LU) property as part of a Department of Agriculture re-organization. They transferred parcels most suitable for specialized use to the National Park Service and US Fish and Wildlife Service. Other western units went to the Bureau of Land Management. Thirteen reforested LUs became national forests and in 1960, nearly four million acres became 18 national grasslands administered by the Forest Service.

Since 1960, the total number and size of the grasslands has remained constant.<sup>140</sup> The Custer National Forest administered the Little Missouri, Sheyenne, Cedar River, and Grand River national grasslands until 1998, when the agency established the Dakota Prairie Grasslands with a Supervisor's Office in Bismarck, North Dakota. Present staff officers are Curt Glasoe (engineering), Mark Goeden (natural resources) and Sherri Schwenke (staff/planning officer).



## Range

Livestock grazing has been an important use of the Dakota Prairie Grasslands since the government repurchased lands in the 1930's. After the Soil Conservation Service (SCS) took over the administration of the Land Utilization Projects (LUPs) in North Dakota and South Dakota, one of their first projects was to remove old farm buildings and fences. This provided greater manageable areas for livestock grazing. With the help of the Civilian Conservation Corps, farmers stabilized farmland by seeding the lands with grass and building perimeter fences and livestock watering facilities.

The influence of the Taylor Grazing Act and some early experiments in management with associations of ranchers is evident in the way that the SCS approached the administration of grazing use on the LUPs. Livestock growers played a large role in the early administration and allocation of grazing use on the acquired lands, much like grazing advisory boards on lands administered under the Taylor Grazing Act. Laws passed in the late 1930's, allowed for the establishment of grazing associations in both North Dakota and South Dakota. These associations, working with the SCS, were instrumental in apportioning grazing use to their members. The permits issued by the grazing associations required the applicant to demonstrate prior use of the area applied for, a demonstrated need to use the lands to support their operation and adequate private lands to sustain their livestock when they were not using the public lands.

In 1954, the SCS turned the administration of the LUPs over to the Forest Service and they were later designated national grasslands in 1960. By 1974, these properties were officially included as National Forest System Lands in the Forest and Rangeland Renewable Resources Planning Act. Grazing Associations continued to play a major role in the administration of grazing on the national grasslands. The relationships between the Forest Service and the grazing associations can and often is very effective and efficient. These relationships at times can also be very contentious, especially when the Forest Service's multiple use mandate does not coincide with maximizing forage for livestock.

The current range program on the Dakota Prairie includes the largest livestock-grazing program in the Forest Service. The agency authorized about 503,000 animal unit months (AUM) of grazing use each year, which would be valued at over \$9,000,000 on the open market. Eight grazing associations in North Dakota and South Dakota administer grazing use, providing livestock forage to over 548 individual association members and is very important in maintaining the local and regional economy.

In addition to providing livestock forage, the DPG's range program, in conjunction with other program areas, is focused on the restoration of lands degraded by past uses or impacted by invasive plants or noxious weeds. Restoration is key to these lands long-term health and ability to provide sustained delivery of the resources and values. They include wildlife habitat, watershed stability, recreational opportunities as well as clean water and air.<sup>141</sup> Chad Prosser is the present range program manager.

## Minerals

The Williston Basin is a large sedimentary basin known for its petroleum resources and includes much of western North Dakota, eastern Montana, northwestern South Dakota and south-central Canada. Petroleum producers discovered oil in the Williston Basin in 1951 at the Clarence Iverson Well site near Tioga, North Dakota. The Little Missouri and Cedar River national grasslands are located within the boundary of the Williston Basin. Oil with gas deposits occurs throughout. As far as development, the Madison Group has been the most important petroleum producing geologic formation. Surface and subsurface mineral rights fall under federal, state or private ownership with private mineral ownership occurring as reserved or outstanding rights. Exploration identified lignite coal seams in southern Billings, central Slope and southern McKenzie counties.

A significant boom in oil exploration and development took place between 1979 and 1985, followed by a period of falling oil prices and decreased exploration/production from 1986 to 1999. Oil prices and production rose again in 2001 and at this writing (2011), it is the highest ever with 166 active drilling rigs and 5,300 producing wells. The Dickinson and Watford City ranger stations administer the mineral permits for the Little Missouri National Grasslands.<sup>142</sup> Larry Melvin is the current minerals program manager.

## Fire Management

Fire historically played a significant role in the development and maintenance of the grassland ecosystem. Historically, ranchers fought fires by first killing a steer, splitting it lengthwise and then dragging the carcass blood side down along the fire line. Men followed on foot and beat out any remaining flames with slickers or wet horse blankets.<sup>143</sup> In the tall grass prairie, the historic fire return interval is about 3 to 5 years, while in the mixed-grass prairie this interval is between 5 to 20 years depending on vegetation type and topography. From 1980 to 2010, an average of 21 fires a year burned approximately 3,600 acres on the Dakota Prairie Grasslands in ND and north-central SD.



**MAGPIE FIRE 2004**  
(Courtesy of Maure Sand)

Up until 1988, Grazing Associations provided initial attack fire suppression on fires occurring on the national grasslands while the Forest Service had responsibility for suppressing large extended attack fires. Forest Service and Grazing Associations approved use of Conservation Practices funding to purchase small slip-on units and other fire suppression equipment for grazing permittees. During the 1988 fire season, 41 reported fires burned over 18,650 acres. Due to the large number and severity of fires occurring because of prolonged drought conditions, grazing associations developed fire protection agreements with local fire departments to assist in fire protection. Fire departments

were paid 1 to 2 cents per acre annually through Conservation Practices funding to provide protection on national grasslands within their fire protection districts.

The Gap Fire and Rough Creek fires burned a combined 60,000 acres in the fall 1999, and the Blacktail Complex Fire, consisting of 11 fires, burned over 2,700 acres in the summer 2000. Afterward, the Dakota Prairie Grasslands determined a need to develop its own fire suppression capability to supplement and enhance the local efforts. The unit funded two engine modules consisting of a Type 6 engine and a five-person crew for the Little Missouri National Grasslands, with an engine located at each district office in Dickinson and Watford City. On the Sheyenne, Grand River and Cedar River national grasslands, the Forest Service continued to rely entirely on local fire department protection. Fifty-two fires in the 2006 burned 8,700 acres. The Forest Service also began developing direct agreements with the local fire departments to provide reimbursement payments for fire department equipment and personnel used for suppression assistance.

Due to liability concerns, in 2010, the US Forest Service revised language in the grazing agreements to remove fire suppression responsibility from the grazing associations. The Dakota Prairie now has fire protection agreements with 22 of the 34 fire departments adjacent to the national grasslands. In addition to fire suppression and reimbursement payments, the agreements also provide for training opportunities for the fire departments and reimbursement for assisting the Forest Service with prescribed burning on the national grasslands.<sup>144</sup> Maure Sand has been the fire management officer since 1999.

## **Recreation**

Outdoor recreation serves as the public's direct contact with natural resources and is one of the nation's most influential factors in building positive public attitudes toward the resource. In addition, recreation plays direct and indirect roles in the evolving concept of how we care for, use and value America's public land. In the nation's formative years, the government did not recognize public recreation as a force shaping land management policies. George Perkins Marsh introduced the concept of land stewardship in 1864, but the country was not yet ready. Ninety percent of the population lived in rural areas served by slow and limited transportation. They were usually too busy wrestling out a living from the land to revisit it during their scarce leisure time.

Established in 1905, the US Forest Service first dealt with the rapid loss of natural resources and left lesser issues such as recreation for later. Congress did not identify recreation as a resource in the 1897 Organic Act, nor was there a massive public clamoring for more recreation facilities. The agency initially negatively viewed recreation primarily from the standpoint of sanitation and fire prevention. Congress created the National Park Service in 1916, which developed overlapping recreational functions with the Forest Service. In 1931, Robert Stuart, Chief of the Forest Service, called for a clearer distinction between Forest Service and the Park Service recreation programs.

Shortly afterwards, recreational use of the national forests began to receive attention. The Copeland Report, completed in the spring of 1933 became the blueprint for 'New Deal' forestry. Robert Marshall, who authored the recreation portion of the report, called for a recreation survey, so

decision-makers might learn public preferences and how much land to set aside. He proposed a spectrum of seven recreational categories ranging from ‘wilderness’ to more suburban places called “outing areas.’ Recreation and Lands became separate divisions in 1935. The Forest Service, however, could not convince a substantial number of the public that multiple-use management adequately safeguarded recreational values. The agency was only partially successful in bringing its recreational case to the public in *Forest Outings by Thirty Foresters*, a 1940 publication.

Post World War II population growth strained the capacity of recreational facilities on public land. Many facilities built by the CCC in the 1930s were now outmoded in design and intent. Recreationists came to forests to camp, hike and fish, and to their dismay discovered logging operations taking place. General confusion between national forests and national parks caused the public to feel deceived. They considered it appalling to harvest timber in either locale. Forest Service’s timber management programs collided head on with an extremely effective public relations program by conservation groups. This conflict turned many of the public against agency policy.

In 1956, Senator Hubert H. Humphrey of Minnesota introduced a bill to protect and preserve multiple resources of the national forests. President Eisenhower signed the Multiple Use-Sustained Yield Act into law in 1960. For the first time, the Forest Service placed recreation on the same level as timber, wildlife, range and water. Internal agency conflict between recreation values and other multiple-uses nonetheless remained unresolved. Congress established the Outdoor Recreation Resources Review Commission (ORRRC). Their 1962 report, *Outdoor Recreation in America*, was the beginning of a massive federal movement to create more recreation opportunities.



**BIKE RIDERS ON  
THE MAAH DAAH  
HEY TRAIL**

The ORRRC report also set off a chain of related events that ultimately came to define national and state policies on outdoor recreation. Congress passed the Wilderness Act (1964), Outdoor Recreation Act (1963), National Trails System Act (1968) and National Wild and Scenic Rivers Act (1968). The Wilderness Act reflected the public’s lack of faith in the Forest Service. Even though the agency had invented the concept, 40 years earlier and on its own initiative created a multi-million-acre wilderness system. At various times, the public criticized the Forest Service for both inactive policy and implementing changes. Detractors perceived the Forest Service’s implementation methods as a least effort approach that lacked resolve.<sup>145</sup>

During the 1960s, the agency began building recreation facilities on the Little Missouri National Grasslands. They constructed Burning Coal Vein Campground, Whitetail Day Use Area, Sather Lake Campground and CCC Campground. Buffalo Gap Campground dates to 1970. In the late 1980s, the agency

completed a 28-mile section of the North Country National Scenic Trail on the Sheyenne National Grasslands. They constructed Maah Daah Hey Trail with its accompanying overnight campground Buffalo Gap Campground received a major renovation between 1997 and 2002. In addition, a 45 miles extension of the Maah Daah Hey Trail "II" took place between 2008 and 2010. On the Sheyenne, contractors completed the Hankinson Hills Trail in 2006 and Hankinson Hills Campground in 2007. Recreation staff finished the 13-mile Wolf Trail on the McKenzie Ranger District and 16-mile Blacktail Trail on the Grand River Ranger District in 2005. Paula Johnston is presently the recreation program manager.

## **Heritage**

Around 10 years after the passage of the National Historic Preservation Act (1966), the Forest Service began hiring archaeologists. On the Little Missouri National Grasslands, contract cultural resource specialists completed a few pedestrian surveys in 1977 and 1978. James Keyser was the first forest archaeologist on the Custer National Forest. By 1980, Mike Beckes PhD was the archaeologist on staff at the Medora Ranger District. At the time, the grasslands in North Dakota and northwestern South Dakota were part of the Custer National Forest. During this oil boom period of the 1980s, heritage work focused largely on Section 106 compliance and in addition to survey work, several large salvage excavations took place.

In addition to compliance, the McKenzie zone archaeologist Walt Allen completed research and fieldwork on eagle trapping in 1983. This resulted in a Masters thesis for Allen and a publication in *North Dakota History*. In 1988 zone archaeologist Mark Hill wrote a cultural resource survey strategy for the Little Missouri National Grasslands. During the 1990s, cultural resource staff Mervin Floodman and Bill Kurtz surveyed the region containing the 1864 Battle of the Badlands and 1876 Custer Military Trail. Floodman also drafted nominations to list Cinnamon Ridge and Eagle Trapping sites for the National Register of Historic Places (NRHP) as well as completing a major report on cattle damage to archaeological sites. Until 1999, Halcyon La Point was the forest archeologist located on the Custer National Forest in Billings, Montana.

The Forest Service founded a Supervisors Office in Bismarck in 1998 and hired Thomas Turck as grasslands archaeologist and recreation program manager in 1999. From 1999 to 2011, heritage and recreation staff completed the Burnt Hills Interpretive Site and Trail and stabilized Woods Cabin. In 2005, historical archaeologist Richard Fox finished the Custer Trail data report. Jointly with Turck, they nominated and listed the Custer Military Trail to the NRHP in 2009. The Dakota Prairie and the State Historical Foundation staff designed and had printed the *Passport to North Dakota History* and developed the *History on Call* program.

Forest Service archaeologists developed the Custer Trail Auto Tour with seven interpretive sites (including Initial Rock) and an auto tour brochure. In 2010, Turck nominated and listed Denbigh Station and Experimental Forest to the NRHP and with other DPG staff finished a major historic building restoration at the site. A draft NRHP nomination for Elkhorn Ranch is in process at this time. Over the last 12 years, the heritage team received three Regional awards and two National *Windows on the Past* awards.

## **Water Resources**

Motivated by the destruction of watersheds and widespread flooding as well as erosion, President Harrison signed the 1891 bill authorizing establishment of forest reserves. Congress ratified that effort and later in 1897 passed the Organic Administration Act, which stated the forest reserves were primarily for ‘securing favorable conditions of water flows.’ In his 1905 “Primer on Forestry,” Gifford Pincholt wrote, “A forest, large or small, may render its service in many ways. It may reach its highest usefulness by standing as a safeguard against floods, winds, snow slides, or especially against the need of water in the streams.”

The US Forest Service is committed to protecting, sustaining, and improving the water and watershed resources and services of our Nation’s forest and grassland ecosystems, for current and future generations. Improving, protecting, and restoring watersheds, riparian, and groundwater resources have been part of the DPG mission since its inception. Leadership hired a full time hydrologist to manage activities related to watershed resources in 1999 and a zone hydrologist to cover watershed activities on the Little Missouri National Grasslands in 2006. The watershed program works in close cooperation with the ecology program on projects to enhance or improve watershed characteristics and habitats related to those characteristics.

Some watershed improvement activities include plugging abandoned wells, dam restorations, creation of riparian pastures and exclosures, riparian plantings, and stream crossing improvements. Hydrologists monitor survey and track watershed conditions throughout the DPG. “Proper Functioning Condition” surveys monitor stream system overall health and groundwater monitoring check for the presence of pesticides in all perennial and intermittent streams. Watershed restoration projects are in development along the Grand River, Chicken Creek and Ash Coulee.<sup>146</sup> Alison Schlag is the hydrologist for the grasslands.

## **Wildlife**

Since the inception of the agency, the US Forest Service recognized wildlife conservation as one of its roles. The Multiple Use-Sustained Yield Act of 1960 codified the importance of fish, plant, and wildlife conservation. Subsequently, numerous federal laws reinforce their value. This emphasis has carried through into the 2001 *Dakota Prairie Grasslands’ Land and Resource Management Plan*.

Fish, plant, and wildlife conservation is now part of the day-to-day business on the DPG. The unit’s “ecology program” conducts conservation education, inventory and monitoring, and habitat enhancement projects. We target conservation education at various age groups with schools (elementary thru college) usually the most frequent audiences. Recent projects include presentations, field trips to view wildflowers and grassland birds, and publication of books describing the status of bird and plant species.

Inventory and monitoring projects included studying how sharp-tailed grouse respond to oil activity, the movements of ferruginous hawks throughout Canada, Mexico, and the United States; and the status of rare plants. Habitat improvement projects encompass everything from planting cottonwoods along western rivers, to inter-seeding native forbs to removing barriers for greater fish dispersal.

Fish, plant, and wildlife conservation efforts today are similar to the former Custer National Forest management. Exceptions include an increased emphasis on stockpond creation and cross-fencing; and less emphasis on crested wheatgrass management, conservation education, prescribed burning, and inventory and monitoring.<sup>147</sup> Dan Svingen is the wildlife biologist.

## **Engineering**

The Dakota Prairie Grasslands (DPG) was originally part of the Custer National Forest. In the early 1960s, the engineering staff headquartered in Billings, Montana with the East Zone engineer Ron Hagen having overall project supervision for the ranger districts in North Dakota. Later in the mid-1970s, Chuck Tietz became the first East Zone engineer in Dickinson, North Dakota along with two civil engineering technicians, Russ Alexander and Bob Kramlich, in Dickinson and Art Gallinger in Watford City. The Zone also covered the Sioux Ranger District in Camp Crook, South Dakota until 1999 when the DPG split with the Custer.

Curt Glasoe was the second East Zone engineer in Dickinson holding the position between 1978 and 1983. Afterward Don McGuire became the third and last engineer for the East Zone. Glasoe was promoted first to forest cadastral engineer in 1983 to handle boundary landline and right-of-way issues and then in 1991 to forest engineer for the Custer. In 1999, he became the new DPG grasslands engineer and Arlin Krogstad the Custer National Forest engineer. In 2007, the grasslands engineer position moved to Bismarck from Dickinson.

DPG engineering staff since 1999 included Steve Volesky, KC Homiston, Curt Grudniewski, Mark Aughtman, Brian Moe, Kevin McElvaney, Justin Krieg, Russ Walsh, Kevin Sullivan, Lacey Metz, Rob Piippo and Zach Verlinde, Don McGuire and Curtis Glasoe.

The majority of engineering project work consists of constructing and maintaining 2,600 miles of surfaced roads and two-track prairie roads. Additionally, we constructed 210 miles of hiking trail on the DPG in the last ten years; maintained twenty buildings in facilities and restored the Denbigh Experimental Forest historic buildings with ARRA funds.

Engineers also survey, design, and administer construction of range water pipelines, stock, wildlife, and recreation dams. One-million dollars of ARRA money helped restore two major dams, rip-rap seven others, as well as reclaiming nine dams back to original contour. ARRA money also helped renovate three campgrounds and bring them up to accessibility standards. In accordance with state regulations, we annually plug about ten water wells no longer in use (for a total of about 300) and usually reclaim two dams. Additionally removal of many structures for Aquatic Organism Passage (AOP) has taken place over the years.

Recently, engineers have been heavily involved in the oil and gas development, locating over 30-miles of new oil well roads in just the last two years. Forest Service engineers first locate the roads. After the petroleum company's A/E consultants surveyed and prepared road designs, the engineers review and approve the plans, then supervise construction. The DPG has over 400-miles of roads under permit to oil companies and engineers approve over 25 special use plats annually, mostly for

the oil and gas facilities. Engineering staff also maintain over thirty miles of roads to our thirteen existing recreation sites.

A large number of county roads traverse the DPG, and we have granted easements on over 200 miles of roads in 11 counties. Engineers approve an average of six easement grant surveys and plats per year for the counties. In addition we utilize the Legacy Program (averaging \$540,000/year from FY07 to FY10) to restore many miles of roads and trails to current standards on all districts. This work consists of decommissioning unneeded roads, reconstructing roads to the desired standard and surfacing of eroded areas. Trail work consists of the installation of small drainage structures and surfacing eroding clay and sandy areas. The engineering cadastral crew surveys and posts over 25-miles of boundary and about six right-of-way plats annually. In 2009, they became part of the East Side Lands Zone of Region I.<sup>148</sup>

# Grasslands Supervisors and District Rangers

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## **Bismarck Supervisors Office**

Larry Dawson Grassland Supervisor 1998-2001  
David M Peiper Grassland Supervisor 2001-2011  
Nancy Peak (acting Grassland Supervisor) 2011

## **Grand River/Cedar River Ranger District**

Leslie R. Albee - District Conservationist 1942 - May 1944  
Carl T. Carlson - District Conservationist May 1944 - August 1947  
A. Forrest Sorensen - District Conservationist August 1948 - April 1953  
C.A. Dyson - Range Manager December 1953 - February 1959  
O.J. (Ode) Cusker - District Ranger November 1959 - December 1966  
Bob Graves - District Ranger December 1966 - March 1967  
Sam Halvorson - District Ranger March 1967 - June 1972  
Joe Pogue - District Ranger June 1972 - May 1976  
John Padden - District Ranger July 1976 - July 1978  
Ron Stellingwerf - District Ranger August 1978 - July 1984  
Tom Heintz - District Ranger August 1984 - June 1990  
Forest G. Morin - District Ranger February 1991 - January 1998  
Jane D. Darnell - District Ranger July 1998 - June 2001  
Jack Isaacs - District Ranger November 2001 - August 2006  
Joby P. Timm - District Ranger May 2007 - Present<sup>149</sup>

## **Sheyenne River Ranger District**

Carl Fredrickson - District Ranger to September 1962  
Harold Simpson - District Ranger October 1962 – February 1967  
Robert Richmond - District Ranger March 1967 – June 1969  
Donald Nelson Jr. - District Ranger July 1969 - September 1972  
Robert Storch - District Ranger October 1972 – January 1976  
Dale F. Shanholtzer - District Ranger March 1976 – July 1978  
Robert L. Riddle - District Ranger September 1978 –  
Mike McNeill - (acting) District Ranger September 1983 – January 1984  
William Fortune - District Ranger January 1984 – January 1990  
Larry Potts - District Ranger January 1990 – May 1995  
Bernadette Braun - (acting) District Ranger June 1995 - October 1995  
Bryan Stotts - District Ranger October 1995 to present

## **McKenzie Ranger District**

Arnie Winsness - District Ranger 1960-1967 (Deen Boe as of October 1, 1967)  
Deen Boe - District Ranger 1968 - 1972  
Sam Halvorson - District Ranger 1973-1976  
Joe Pogue - District Ranger 1977  
James R. Fishburn - District Ranger 1980-1986  
Wayne Paintner - District Ranger 1987-1991  
Lesley W. (Spkie) Thompson - District Ranger 1992-2000  
Frank Guzman - District Ranger 2001-2007  
Ronald E. Hecker - District Ranger 2007 - present

**Medora Ranger District**

J. Harold Johnson - District Ranger 1960-1961  
Bernard W. Alt - District Ranger 1962-1964  
Bernard W. Alt (Ellis J. Callantine as of October 1, 1965)  
Orian J. Cusker - District Ranger 1966-1970  
Richard A. Ellison - District Ranger 1971-1975  
Darrol L. Harrison - District Ranger 1976-1977  
Robert W. Hamner - District Ranger 1980  
Jerry B. Reese - District Ranger 1981-1984  
Richard W. Farrar - District Ranger 1985-1991  
Samuel Redfern - District Ranger 1992-1995  
Larry J. Dawson - District Ranger 1997-1998  
Scott Fitzwilliams - District Ranger 1998-2000  
Ron Jablonski - District Ranger 2001 – present

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## Notes

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<sup>2</sup> Allen, Eagle Trapping, 4-22; Keyser, *Art of the Warrior*, 18, 24; Parks, Arikara, 374-381; Wood and Irwin, Mandan, 356.

<sup>3</sup> DeMallie, The Sioux Until 1850; Ewers, *Dakota's Plains Indians History*, 176-177; Mallery, *Picture Writing of the American Indians*.

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<sup>5</sup> Deaver and Kooistra-Manning, *Ethnographic Overview*, 4.33; DeMalle, Yankton and Yanktonai, Teton, 799; Archambault, Sundance, 983-995.

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<sup>9</sup> Moulton, *The Lewis and Clark Journals*; State Historical Society of North Dakota, *Passport to North Dakota History*, 19; Turck, Lewis and Clark's Choice of Campsites, 7-10; US Forest Service, *Birnt Hills Overlook*, Interpretive Signs.

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<sup>11</sup> Keyser, *Art of the Warrior*.

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<sup>17</sup> Park Net, Saving America's Battlefields; Andrus, Guidelines for Historic Battlefields.

<sup>18</sup> Turck, Collaborative Efforts in North Dakota Historical Archaeology.

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- <sup>19</sup> Albers, Santee, 780.
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- <sup>21</sup> Sully, *No Tears for the General*, 189.
- <sup>22</sup> Steinbeck, *Travels with Charley*, 154.
- <sup>23</sup> Utley, *The Lance and the Shield*, 55.
- <sup>24</sup> Fox 1993, *The Custer Trail*, 13-14; (Lingk, *The Northwest Indian Expedition*, 187; Kurtz, *The Custer Trail and Battle of the Badlands*.
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<sup>84</sup> Sherer Mathes, "Theodore Roosevelt as a Naturalist, 209.

<sup>85</sup> Morris, *The Rise of Theodore Roosevelt*, 336; Putnam, *Theodore Roosevelt, The Formative Years*, 587-588.

<sup>86</sup> Sherer Mathes, "Theodore Roosevelt as a Naturalist, 209; Putnam, *Theodore Roosevelt, The Formative Years*, 588-589; McCullough, *Mornings on Horseback*, 344; Morris, *The Rise of Theodore Roosevelt*, 337.

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<sup>90</sup> Putnam, *Theodore Roosevelt, The Formative Years*, 594.

<sup>91</sup> Brooks and Mattison, *Theodore Roosevelt and the Dakota Badlands*, 46; Mathes, "Theodore Roosevelt as a Naturalist and Badlands Rancher, 210-211; Mattison. Roosevelt's Elkhorn Ranch, 56-57; Putnam, *Theodore Roosevelt, The Formative Years*, 596-597.

<sup>92</sup> Baier, Theodore Roosevelt's Elkhorn Ranch: An Icon of America's National Identity.

<sup>93</sup> Putnam, *Theodore Roosevelt, The Formative Years*, 313.

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<sup>102</sup> Robinson, *The History of North Dakota*, 133-135.

<sup>103</sup> Burlingame, The Buffalo in Trade and Commerce, 262-291; Tweton and Albers, *The Sodbusters*.

<sup>104</sup> Greene, *The Dakota National Forest*.

<sup>105</sup> Zon, Possibilities of Shelterbelt Planting.

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- <sup>108</sup> Bates, *Forestry in North Dakota*; Rudolf, *Work of the Lake States*.
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- <sup>110</sup> Bates quoted in *North Dakota Outdoors*.
- <sup>111</sup> Kramer Eikesdahl, Looking Back, Denbigh.
- <sup>112</sup> Roloff, *McHenry County's Dust Bowl*.
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- <sup>116</sup> *Mouse River Farmers Press*, Reforestation Work Started on Monday.
- <sup>117</sup> *North Dakota Outdoors*, Bates quote.
- <sup>118</sup> *Mouse River Farmers Press*, 480,000 - Acre Forest Near Here Gets Federal OK.
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- <sup>121</sup> Paul O. Rudolf, *History of the Lake States*.
- <sup>122</sup> Memorial Program Brochure, Joseph H. Stoeckeler.
- <sup>123</sup> Carlos G Bates, Memorandum for Mr. Zon; Rudolf, *Work of the Lake States*; Rudolf, *History of the Lake States*; Heidel, North Dakota Natural Heritage Inventory: Denbigh.
- <sup>124</sup> Rudolf, *History of the Lake States*; Nancy Ross, Denbigh Experimental Forest.
- <sup>125</sup> North Dakota Forest Service, Celebrating 100 years of Forestry.
- <sup>126</sup> H. H. Chapman, The Shelterbelt Tree Planting Project; Munns and Stoeckeler, "How are the Great Plains Shelterbelts, 237; Roloff, Denbigh Experimental Forest Briefing Paper; Hurt, Forestry on the Great Plains.

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- <sup>145</sup> Steen, *The U.S. Forest Service: A History* :113-120,210-212,304-313; Cordell, *Outdoor Recreation in American Life*: 8-9.
- <sup>146</sup> Schlag, Alison, Hydrologist, written personal communication, 2011.
- <sup>147</sup> Svingen, Dan, Wildlife Biologist, written personal communication, 2011.
- <sup>148</sup> Glasoe, Curt, Grasslands Engineer, written personal communication. 2011.

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