

Greasy grass

The third part of
the tour of some
of America's less
famous National
Parks



(Part 3 of the "Best Idea" trilogy)



This trilogy consists of 3 geographically-based volumes, as shown above. You are in volume 3. The name of each volume is explained within its pages while the name of the trilogy is taken from a quote by Wallace Stegner, who said:

"National parks are the best idea we ever had. Absolutely American, absolutely democratic, they reflect us at our best rather than our worst."

Wallace Earle Stegner (1909 to 1993) was an American novelist, short story writer, environmentalist, and historian who won the Pulitzer Prize in 1972.

The National Park Service manages 418 individual units in all 50 states, the District of Columbia, and US territories. The table below shows most of the different naming designations, all of which are commonly referred to as "parks". Some parks such as Jean Lafitte consist of more than one location or unit.

16 National Battlefields, Battlefield Parks & Battlefield Sites
9 National Military Parks
52 National Historical Parks & 77 National Historic Sites
1 International Historic Site
4 National Lakeshores & 10 National Seashores
29 National Memorials & 88 National Monuments
60 National Parks
4 National Parkways
19 National Preserves & 2 National Reserves
18 National Recreation Areas
5 National Rivers
10 National Wild and Scenic Rivers and Riverways
3 National Scenic Trails

About 380 of the units keep records of visitor numbers, and we have used the official 2018 figures in deciding which sites count as "less famous".

23 Parks had more than 4 million visitors in 2018, and 45 had more than 2 million.

5 of the sites featured here had fewer than 100,000 visitors in the same period, and only 2 had more than half a million visitors.

Images in this book, if not our own, are © National Park Service.

We are sure you will know of, and may well have visited, the more famous US National Parks such as Yellowstone..



Death Valley,.....



..and the Grand Canyon.



You will know that there are many more National Parks in the USA, especially in the west of the country. Arizona and Utah in particular have some spectacular geomorphology with great canyons and red rocks, but there are plenty of interesting sites further east in the country as well. For example the National Parks Service looks after The National Mall in Washington D.C. and the Jefferson National Expansion Monument (Gateway Arch) in St. Louis.



In this book we're going to have a look at some sites which are much less well-known but still very interesting.

Devils Tower National Monument was the first United States National Monument, established on September 24, 1906, by President Theodore Roosevelt. Anyone who has seen the film “Close Encounters of the Third Kind” will be familiar with the setting of the film’s climax in north-east Wyoming, quite close to the borders of South Dakota and Montana. Standing 867 feet from summit to base, the summit is 5,112 feet above sea level.







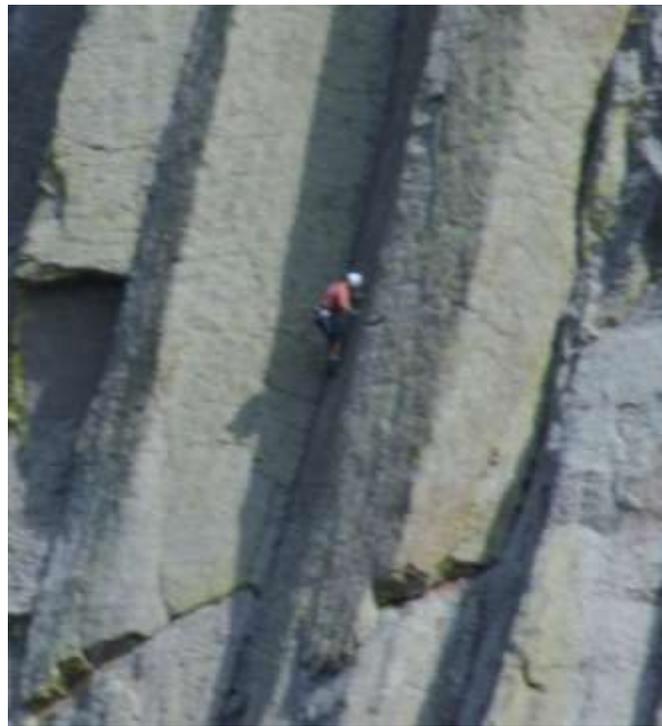
How was it formed?

Geologists agree that Devils Tower was formed by the intrusion of igneous material (the forcible entry of magma into or between other rock formations). What they cannot agree upon is how that process took place and whether or not the magma reached the land surface.

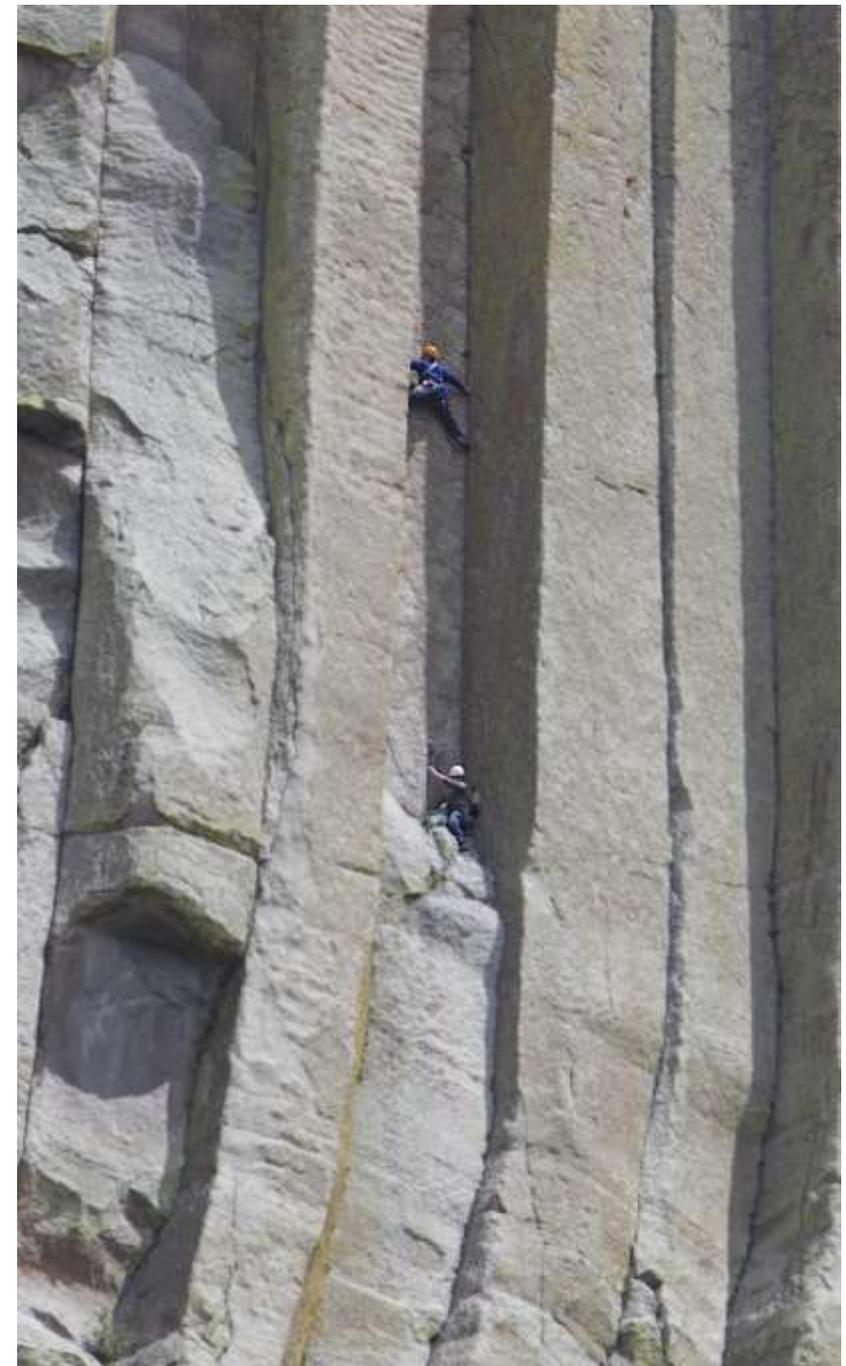
Numerous ideas have evolved since the official “discovery” of Devils Tower. Geologists who studied Devils Tower in the late 1800s came to the conclusion that the Tower was indeed formed by an igneous intrusion. Later geologists searched for more detailed explanations.

In 1907, scientists Darton and O'Hara decided that Devils Tower must be an eroded remnant of a laccolith, a large, mushroom-shaped mass of igneous rock which intrudes between the layers of sedimentary rocks but does not reach the surface. This produces a rounded bulge in the sedimentary layers above the intrusion. Others have suggested that Devils Tower is a volcanic plug or that it is the neck of an extinct volcano. Although there is no evidence of volcanic activity - volcanic ash, lava flows, or volcanic debris - anywhere in the surrounding countryside, it is possible that this material may simply have eroded away. The simplest explanation is that Devils Tower is a stock—a small intrusive body formed by magma which cooled underground and was later exposed by erosion.

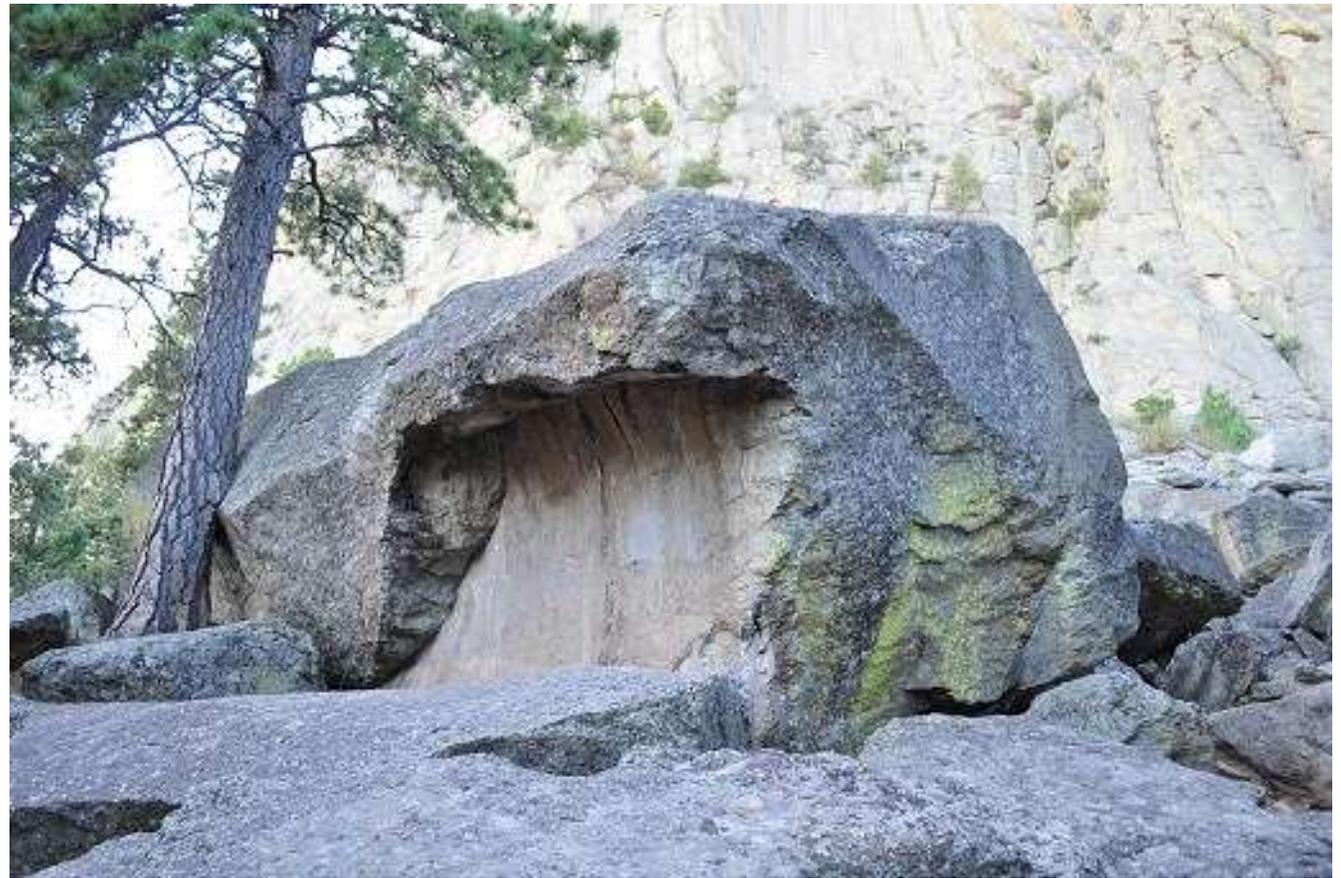
The magma which formed Devils Tower cooled and crystallized into a rock type known as phonolite porphyry. It is a light to dark-gray igneous rock with conspicuous crystals of white feldspar. Hot molten magma is less dense and occupies more volume than cool hardened rock. As the rock cooled, it contracted, forming mainly hexagonal but sometimes 4, 5 or 7-sided columns separated by vertical cracks. These columns are similar to those found at Devil's Postpile National Monument in California and in the Giant's Causeway in Northern Ireland.



Some people apparently enjoy climbing the tower, an activity which seems to involve a lot of doing the splits!



As rain and snow continue to erode the sedimentary rocks surrounding the Tower's base, and the Belle Fourche River carries away the debris, more of Devils Tower will be exposed. But at the same time, the Tower itself is slowly being eroded. Rocks are continually breaking off and falling from the steep walls. Rarely do entire columns fall, but on remote occasions, they do. Piles of rubble, broken columns, boulders, small rocks, and stones, lie at the base of the Tower, indicating that it was, at some time in the past, larger than it is today.



Eventually, at some time far in the future, Devils Tower itself will erode away completely. The descendants of the many prairie dogs which live nearby will most likely still be there, however.

If we now head north into North Dakota, we come to **Theodore Roosevelt National Park**, which is actually 2 sites about an hour apart by road. The South Unit is very close to an Interstate and therefore has fairly large numbers of visitors, many of whom come to get close-up views of bison.





Very close-up
and personal in
our case!

The North Unit is much less-visited because of its remoteness. It constitutes the northern end of the Dakota Badlands, and has some fascinating geology, including these strange cannonball concretions.





A little further east, but still in North Dakota, lies **Knife River Indian Villages National Historic Site**.





The native Americans moved on many years ago, and all that is left of these villages built by the Hidatsa is the marks in the land where their earthlodges once stood.



As well as a very interesting Visitor Centre there is also a replica earthlodge.



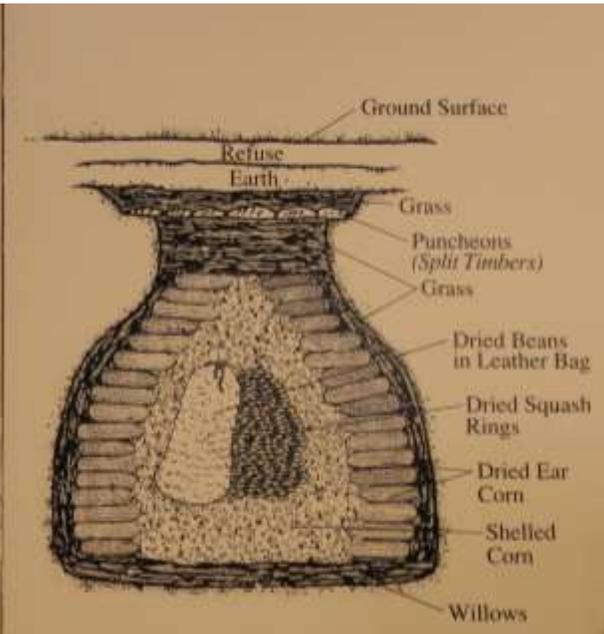


The Visitor Centre has a cross-section of a cache pit, used to store food for the (harsh) winters.



This was a time of transition from the long, hot days of summer to the brutally cold days of winter—a time for storing food. Cache pits were used for corn, beans, and squash and sometimes for dried meat. Their use was similar to root cellars but they were placed both inside and outside of earthlodges. Sizes were variable.

"It took me two days and a good part of a third to dig a cache pit, my mother helping me to carry off the dirt; such a cache pit... was large enough for a bull boat cover to be fitted into the bottom."
Buffalo Bird Woman



We now head further east and a little south to **Effigy Mounds National Monument** in Iowa.



The mounds were created by the original native American inhabitants, possibly for religious reasons. The monument covers 2,526 acres with 206 mounds of which 31 are effigies. The largest, Great Bear Mound, measures 42 metres from head to tail and rises over a metre above the original ground level.

The site is extremely close to the banks of the Mississippi River.





An aerial image of some of the mounds.

American Indian ceremonial mounds can be found in many different locations across the United States; however, only in north-eastern Iowa, along the Upper Mississippi River Valley, have so many of these mounds been found in the shape of animal effigies.





Let's go back westwards, now, to the western edge of Nebraska (near the border with Wyoming) and **Agate Fossil Beds National Monument**.





The mammals found at Agate Fossil Beds National Monument date from the early Miocene Epoch some 19 to 21 million years ago. At that time, today's Great Plains region was drying out. Flowering plants proliferated, and the abundant animals, including birds, responded to a new food source: grasslands that replaced forest and jungle. Although slightly different anatomically, some of these creatures resemble those of today. Three particular mammals were associated with the death event(s) that came to create "The Great Bonebed Of Agate." These were the Menoceras, a small rhinoceros; the large Moropus; and the fearsome Dinohyus (image below). Another quarry site is comprised almost entirely of the once-abundant small gazelle-camel, the Stenomylus. Certain other nearby geological formations contain remains of a burrowing dry-land beaver, the Palaeocastor, and its curious spiral home, the Daemonelix. The final, less frequently found animal is the predator Daphoenodon from the beardog family.



Most of the fossil bones were found in bonebeds about 2 feet thick, and many huge slabs were taken to universities and museums around America.





In addition to a display of some of the fossils (called stone bones by the local Sioux) found here, are 2 rooms devoted to native American culture.

The ranch belonged to James Cook, a man years ahead of his time in that he was friendly with the local Sioux and Cheyenne. This dress belonged to Good Road, wife of Chief Red Cloud of the Oglala Sioux. Red Cloud was a regular visitor to the ranch, and gave many items to Cook as gestures of friendship. The shirt on the next page actually belonged to Red Cloud.



Continuing west almost to the Pacific, we reach one of the geological wonders of the world (in my opinion, anyway): **Crater Lake National Park** in Oregon. I'll let the pictures say it for me.







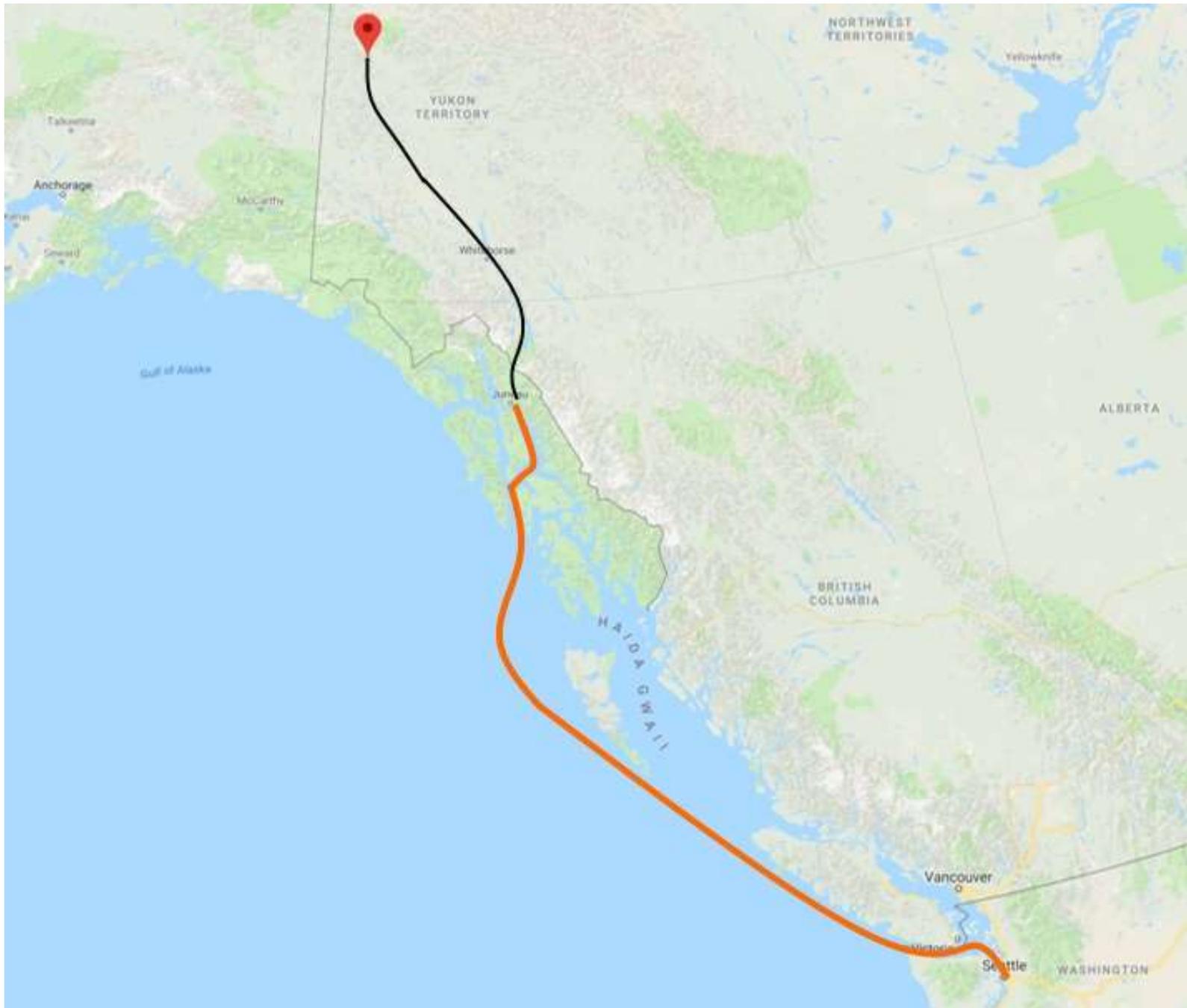


Let's now move further up the Pacific coast of America, to Seattle, our next site:



Officially this building (an old shop on the corner of the Cadillac Hotel in the city centre) is the **Klondike Gold Rush National Historical Park**.

But wait a minute, Klondike is actually in Yukon Territory in northwest Canada, over 2000 kilometres from Seattle as the crow flies, so what is this site doing in Seattle?



Seattle's prosperity was largely based on the 1897-99 Klondike Gold Rush: after gold was discovered there Seattle tried to get a slice of this wealth and advertised itself as the "Gateway to the Gold Fields". It is estimated that about half of the 70,000 American prospectors who went to the Klondike travelled via Seattle.

After buying all their supplies in Seattle, the prospectors travelled by ship to Juneau or Skagway in Alaska before an extremely arduous overland 500-mile journey to the goldfields.

Some of the prospectors had an easier journey than others: apparently the mountains in this area, through which they had to pass, had over 70 feet of snow during the winter of 1897-98.



Each of them was required by the Canadian authorities to bring a year's supply of food in order to prevent starvation. In all, their equipment weighed close to a ton, which most had to carry in stages by themselves. Together with mountainous terrain and cold climate, this meant that many of those who persisted did not arrive until summer 1898.

This 1898 photograph shows Klondikers carrying supplies ascending the Chilkoot Pass (less than a quarter of the way from the coast to The Klondike). Almost all the prospectors had sold everything they owned to fund the trip.

Not surprisingly some “stampeder” as they were known died on the way, and many others gave up before reaching their destination.

Of those who did make it there, the later arrivals found few opportunities, and many left disappointed. Some did, however, strike it lucky and find gold and then had to keep it secure before taking it home with them: normally by retracing their steps.

Those very few lucky prospectors often did find significant quantities of gold, however. When the US Government eventually agreed to the establishment of an Assay Office in Seattle it assayed over 1,000,000 dollars' worth of gold on the first day it opened.



By today's values that is about **\$30 billion!**

Let's move back eastwards now to **Grant-Kohrs Ranch National Historic Site** in Montana, still in the northwest of America.



The picture above shows a cowboy herding cattle on the ranch in 1910

The (renovated) chuck wagon shown above used to go round the ranch feeding the cowboys as they went about their duties. In its heyday the ranch extended to 1,000,000 acres (1500+ square miles).

Dreams of getting rich lured the first cattle men to Montana where the range was open and unfenced, and they could fatten their cattle on the lush bunchgrass and push on to new pastures when the old areas were overgrazed. The main obstacles were buffalo and the Indians, and by the 1860s both were fast being overcome. (Although Custer's Last Stand at the Little Bighorn, 300-odd miles from here but still in Montana, actually took place in 1876.)

Many of the herds were built through trade with westward-bound pioneers, who gladly swapped two or more trail-worn cows for a single well-fed one. In the late 1870s cowboys drove herds of rangy longhorns up from Texas to the better grazing lands of Montana, adding a Spanish strain to the English shorthorn breeds already established there and greatly multiplying the herds.





By 1885, cattle raising was the biggest industry on the High Plains, and foreign investors and eastern speculators rushed to get in on the bonanza. As ranches multiplied and the northern herds grew, there came a very predictable consequence: overgrazing. Additionally the fierce snows during the winter of 1886-87 caused enormous losses, estimated at between one-third and half of all the cattle on the northern plains.



Homesteaders, with their barbed wire and fenced-in 160 acre claims, then finished off the ranching industry. Despite what you might assume from Western films, the open-range cattle industry lasted only three decades. Few of its pioneering men and women made or retained their fortunes.

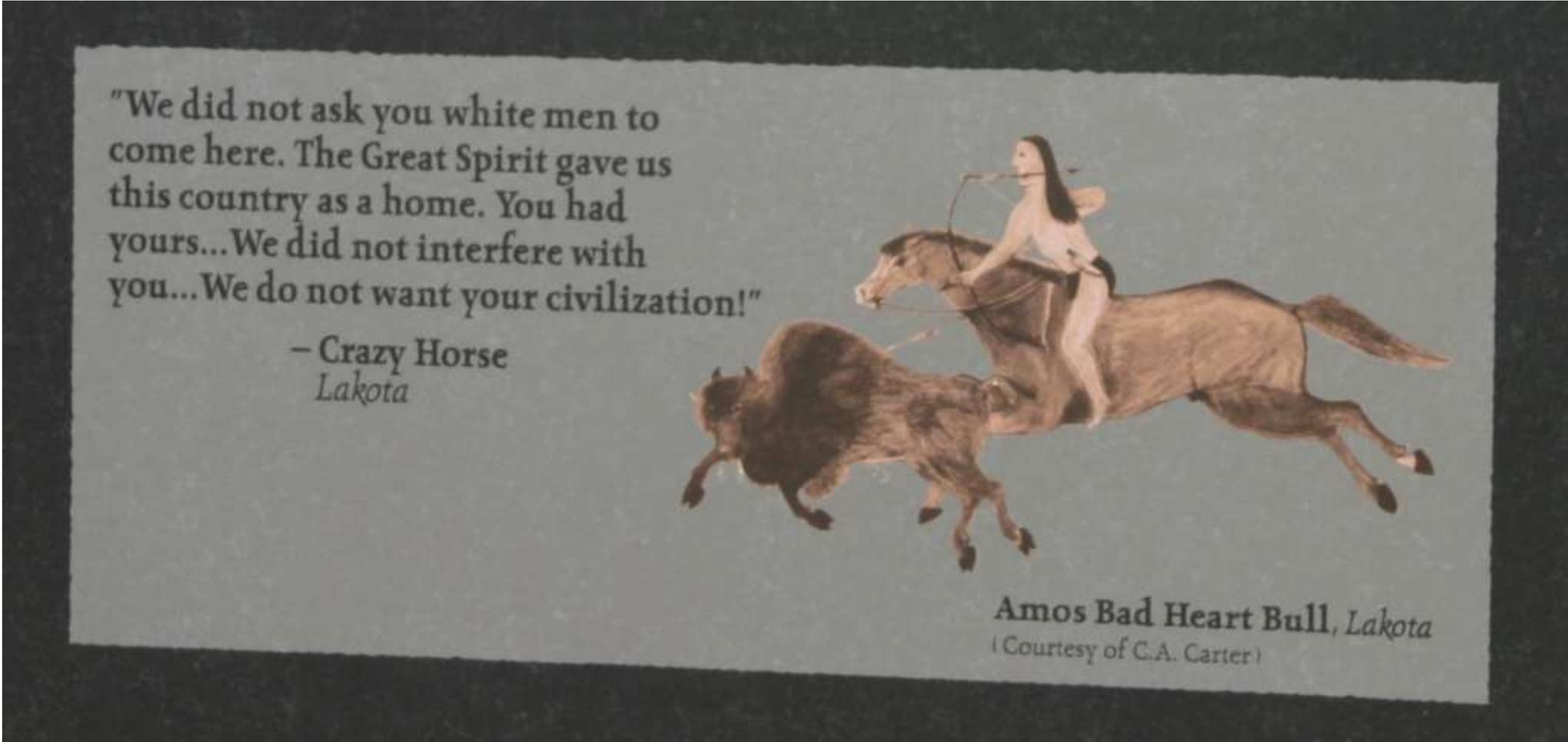


For the final site in this little tour we are back to within about 200 miles of where we started, and to the source of the title of this tour. This is **Little Bighorn Battlefield National Monument**, where as recently as 1876 the US Army fought its own countrymen.



So why is this part of the book called “Greasy grass”? Well that’s what the winning side, the Lakota Sioux and their allies, called the battle.

“When I was a boy the Lakota owned the world. The sun rose and set on their lands. They sent 10,000 horsemen to battle.”
– Sitting Bull
Lakota

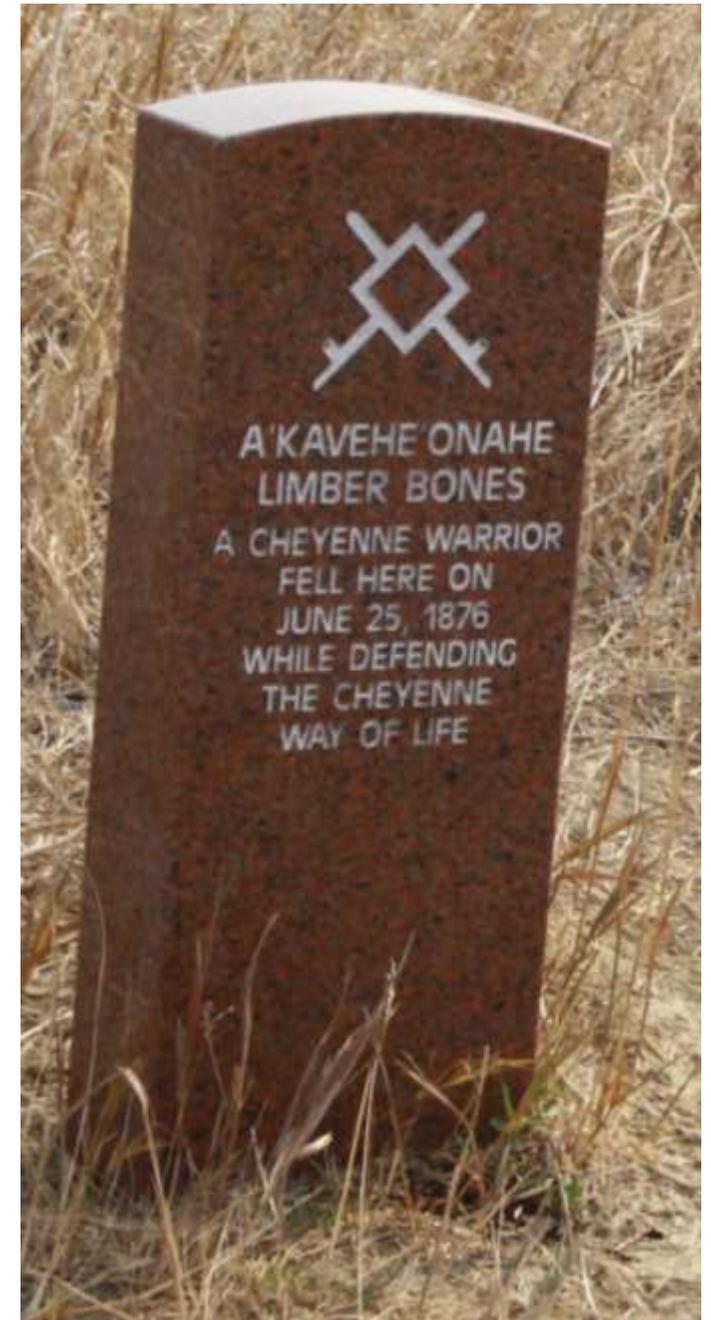
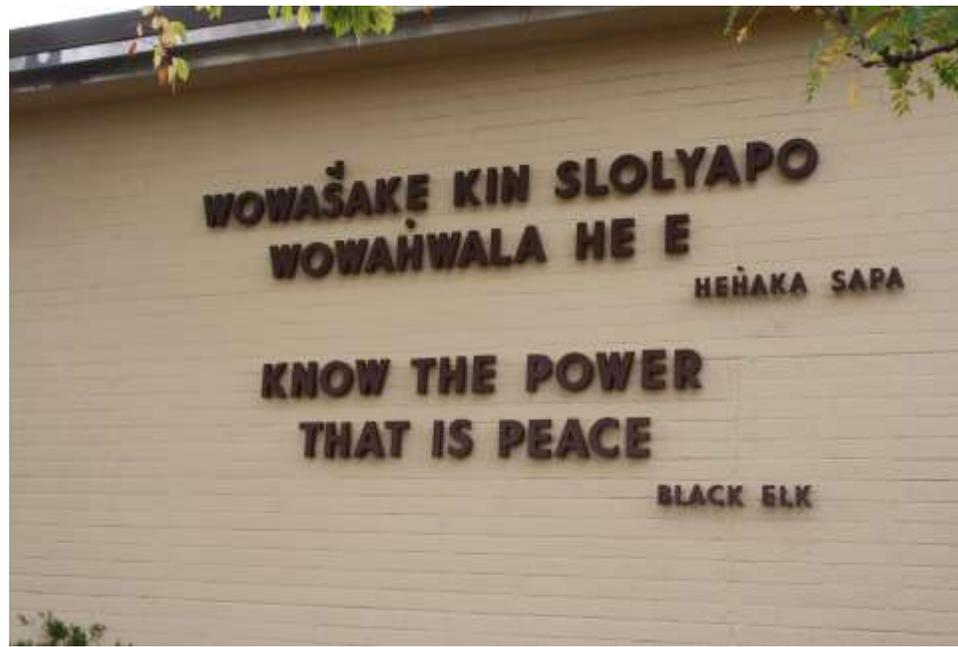


“We did not ask you white men to come here. The Great Spirit gave us this country as a home. You had yours... We did not interfere with you... We do not want your civilization!”

– Crazy Horse
Lakota



Amos Bad Heart Bull, *Lakota*
(Courtesy of C.A. Carter)





This map gives an idea of the locations of all the sites featured in this final book.



The table below shows their rank in the 2018 list of most-visited National Parks.

93	Theodore Roosevelt NP	749389
97	Crater Lake NP	720659
125	Devils Tower NM	468216
159	Little Bighorn Battlefield NM	272591
247	Klondike Gold Rush NHP Seattle	82646
279	Effigy Mounds NM	55576
327	Grant-Kohrs Ranch NHS	26676
345	Agate Fossil Beds NM	16238
353	Knife River Indian Villages NHS	11682

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Grateful thanks go to Margaret (Maggie) Morrison for allowing me to use so many of her photographs and for her help proof-reading the book.

Thanks are also due to the US National Park Service for their work in maintaining these wonderful parks for all to enjoy as well as for the few photographs copied from their website at www.nps.gov .