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PAM FILE

CHARLES M. RUSSELL

NATIONAL
WILDLIFE REFUGE

**SELF-GUIDED
AUTO TOUR**



We hope you enjoyed your visit. If you do not want to keep this guide, please deposit it in the box at the end of the road.

Questions about public lands administered by BLM should be addressed to: Bureau of Land Management, Airport Road, Lewiston, Montana 59457. If you have any questions about Charles M. Russell NWR, contact the Headquarters Office, P.O. Box 110, Lewistown, Montana 59457, 406/538-8706, or any refuge officer. Arrangements for group tours can be made.



U.S. FISH AND WILDLIFE SERVICE
Department of the Interior




Welcome to the Charles M. Russell National Wildlife Refuge (NWR). The Refuge provides a unique blend of the wildlife, wildlands, history, and scenic vistas of the Missouri Breaks. Along the 20-mile drive is a land nearly the same as that viewed by the cowboy artist - Charles M. Russell - for whom the Refuge is named. We hope that this tour will help you understand the delicate interactions between man's activities, wildlife, and the land in this area.

Posts numbered 1 through 13 along the tour route correspond to the numbered paragraphs in this pamphlet. The driving time for the entire route is approximately 2 hours. If you have less time available, a shorter trip to Stop #6 and back is recommended. This trip takes approximately 1 hour.

There are no facilities along the route other than primitive campsites and toilets. The road is gravelled and can be travelled during wet weather.

Nature provides the clockwork for wildlife events. The best time to observe wildlife is early morning and late evening.

First stop .9 mile

 The U.S. Fish and Wildlife Service seeks to afford persons with disabilities full accessibility or reasonable accommodation. Contact Refuge Headquarter for information or to address accessibility problems. For the hearing impaired, use your State Relay System for the Deaf.



1 THE END OF A LEGEND

Below you is the last section of the free-flowing Missouri River. The legendary Missouri once flowed freely 2,500 miles through the heart of the continent. The rich bottomlands along the river, such as you see before you, supported

vast numbers of wildlife. Passing through this area on May 24, 1805, Captains Lewis and Clark recorded, "The buffalo is scarce today, but the elk, deer, and antelope are very numerous . . . We saw five (grizzly) bears."

The Fort Peck Dam and Reservoir, built in 1937, provides water storage, power generation, boating, and fishing. Much of the land that supported an abundance of wildlife in Lewis and Clark's day is now under water. The remaining habitat has become even more important for wildlife because so little remains.

Next stop .4 mile



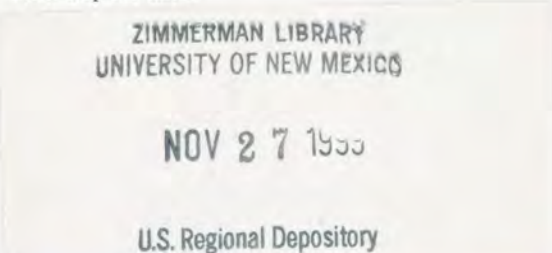
2 OPENING THE LAND

The Missouri River was the main route of travel during the early settlement of Montana. The first steamboat churned upstream in 1859. Early settlements, forts, trading posts, freight landings, and woodyards sprang up along the Missouri's banks. The

steamboats and keel boats that brought freight and trade goods up the Missouri returned to St. Louis with hides, gold, and colorful stories of this new frontier.

Large ranches like the Circle C and the Long X were established and divided the ranges for grazing. Men hired to operate the ranches, as well as new settlers, were soon looking for homesteads of their own. Rich river bottoms with their abundant forage led them to homestead places like the one on Bell Bottom in the distance.

Next stop 2.5 miles

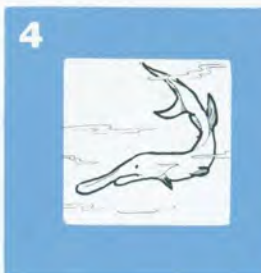


3 ISLAND FOOTPATH

If you would like to take a closer look, walk across the dike to Jones' Island, where you will find a footpath. The large cottonwood trees provide excellent opportunities to view and hear a variety of songbirds. If you see

piles of cut willow branches near the water's edge, they are most likely the work of a beaver. Great blue herons and cormorants are often seen in this area. Shrubs and trees such as rose, snowberry, willow, and cottonwood provide food and cover for wildlife.

As you walk through the river bottom, look for ice scars on the upstream sides of the large cottonwood trees. The river often floods in the spring. As the ice goes out, large ice jams moved by the floodwaters grind against objects that are normally high and dry. The Missouri is truly a "living river" - carving out its banks, depositing rich silt, and constantly changing channels. Next stop 1.2 miles



4 BOTTOMLANDS

This is a good place to stop and walk along the river. During the spring (April-June) many anglers come to this and other favorite spots to fish for paddlefish. This prehistoric fish has no true bone development, only a cartilage skeleton, similar to

your nose and ears. Paddlefish average 40 pounds, but are known to exceed 140 pounds in these waters. Paddlefish exist in only a few North American rivers. Other fish often caught from the Missouri include sauger, channel catfish, walleye, and northern pike. Next stop .7 mile



5 MONARCH OF THE BREAKS

As the cottonwoods flame golden in the crisp September air, as many as 60 elk may be seen here. September is the beginning of the rut or mating season for elk. During this season, if you sit quietly during the evening hours, you

may hear the low hoarse bellows and clear high tones of bugling elk. The native plains elk was eliminated from this area by the early 1900's. The present elk herd was established through the cooperation of the State of Montana, private individuals, and the U.S. Fish and Wildlife Service. Elk are truly one of the success stories of the Refuge and man's efforts to manage wildlife populations. The bottomlands provide important winter habitat for elk. The same thickets provide food and cover for white-tailed deer. Immediately after sunrise, or just before sunset, white-tailed deer may often be observed in this area. Next stop .3 mile



6 ANOTHER SUCCESS STORY

The Lewis and Clark journals refer to an abundance of Canada geese. By the 1930's, overhunting had practically eliminated geese from this area. In 1956, 71 goslings from Bowdoin National Wildlife Refuge were released here.

That effort has proved successful and Canada geese again nest up and down the river.

Next stop 1.6 miles



7 FORMATION OF THE LAND

Some of the exposed rock on the Refuge was formed 80 million years ago. Shallow seas and the deposit of sediment dominated the area for the next 22 million years. During the following 55 million years, sediments were

eroded away as glaciers advanced and retreated over the area. The most recent glacier retreated northward about 10,000 years ago.

When these great Pleistocene glaciers spread over northern Montana, the Missouri River was forced from its channel (now the Milk River, 60 miles north) and crowded southward. The mighty river carved out its present channel by cutting along the face of the glacier where you now stand. As the glaciers melted and began their retreat, the resulting streams flowed across the fragile soils, eroding the deep steep-walled coulees that are now called the "Breaks" or "Badlands" of the Missouri.

Many of the geological formations visible here are composed of brownish-gray Bearpaw Shale, which is very unstable. As you look across the river to the southeast, notice the large landslides on the skyline. Landslides are common in the Bearpaw Shale formation. Next stop 1.1 miles

(Continued on other side) →

8



SIMPLICITY ON A GRAND SCALE

From this spot you can see the Little Rocky Mountains to the north, the Snowy Mountains and Judith Mountains to the southwest, and the Bearpaw Mountains to the northwest.

Olaus J. Murie, who was largely responsible for the creation of the Refuge, wrote in 1935:

"This region as a whole is extremely picturesque. There is glamour of early explorations over it all, the romance of historic events. A camp out in the badlands, with the jumble of carved and stratified buttes, perhaps mellowed by the setting sun or set off by cloud formations at dawn, leave nothing to be desired. In such a setting the sight of a group of antelope on a ridge, or a sharp-tailed grouse whirring from the head of a coulee completes the picture. An occasional prairie dog or burrowing owl are interesting details that belong to the whole Simplicity on a grand scale is the keynote of this whole outdoor picture."

Next stop 3.0 miles

9



CATTLE GRAZING

Grazing is the dominant land use around the Charles M. Russell NWR and it can often be utilized as a wildlife management tool. Grazing, mechanical disturbance, or fire may be used to remove old vegetation and increase plant vigor. Some wildlife

such as prairie dogs and killdeer do not do well with dense grasses or cover; whereas, sharp-tailed grouse and elk require abundant cover. What may be good habitat management for one species could cause another species to decline. On the Refuge some areas have been set aside to be managed for prairie dogs and the species associated with light cover. Other areas are left with abundant cover for species like the sharp-tailed grouse. Elk, bighorn sheep, and sharp-tailed grouse are examples of wildlife species that can be carefully regulated. Next stop 2.3 miles

10



SPRINGTIME DANCERS

The area east of the road is a traditional sharp-tailed grouse dancing ground. From late March to mid-May and late September and October, male sharp-tailed grouse gather here at daybreak. With a hooting or cooing sound and

short rapid stamping steps, they attempt to attract females. Sometimes two males pair off in battle. With wings and tails spread, they rush each other and stop short beak-to-beak. This display is repeated again and again.

"Sharptails" are important game birds throughout the plains of the central United States. These birds are closely associated with grasslands and are dependent on good grass cover. They need 8 to 10 inches of plant cover for nesting; during the winter they utilize shrubs for food and cover. Next stop .9 mile

11



FISH AND WILDLIFE SERVICE AND BUREAU OF LAND MANAGEMENT

You are now passing from the Refuge onto lands managed by the Bureau of Land Management (BLM). These two agencies are part of the U.S. Department of the

Interior. Charles M. Russell NWR objectives include protection of endangered species, resident wildlife, migratory birds, and their habitats. The Refuge preserves historical, archeological, and paleontological resources. Activities such as hunting, fishing, cattle grazing, and wildlife observation are permitted on the Refuge. However, these activities are allowed only after the primary purpose of the Refuge - wildlife management - has been met.

BLM manages public lands for several major programs such as minerals, timber, grazing, recreation, cultural resources (history, archaeology, and paleontology), and wildlife habitat including threatened and endangered species. Next stop 2.2 miles

12



TRADITIONAL HUNTING GROUNDS

This area has long been - and still is - a choice hunting ground. Until the late 1800's tribes of Crow, Blackfeet, Sioux, and others travelled into this area to hunt. These tribes depended on the abundant game for food, clothing, shelter, and religious articles.

The Bell Ridge Reservoir to the east is an example of multiple use management by the BLM. Reservoirs can help facilitate cattle distribution. In this area, cattle are watered by well and the reservoir has been fenced to exclude cattle. It is stocked with rainbow trout by the Montana Department of Fish, Wildlife and Parks. Next stop 2.5 miles

13



THE FUTURE

At one time this area was filled with huge herds of migrating bison. Naturalist Ernest Thompson Seton estimated there were 60 million bison in North America in 1800. Antelope, elk, Audubon's bighorn sheep, plains grizzly, wolf, coyote, prairie dog, and a myriad of other animals completed the scene. By the late 1800's only a few scattered herds of bison remained. The Audubon's bighorn sheep, plains grizzly, and prairie wolf disappeared forever. Elk and antelope almost followed their fate. Thousands of acres of habitat were lost as the great reservoirs flooded the Missouri bottomlands and uplands were converted to agricultural use.

The Charles M. Russell NWR is a major contributor to the wildlife and wildlands of the area. However, the ultimate force in determining the future for wildlife management will rest with the desires of our society. You have an important role to play, and have taken the first step to understand this land and its wildlife. What will you do now?