

Wood Buffalo National Park

Cover: Two bison bulls

Introducing a park and an idea

Canada covers half a continent, fronts on three oceans and stretches from the extreme Arctic more than halfway to the equator.

There is a great variety of landforms in this immense country, and national parks have been created to preserve important examples for you and for generations to come.

The National Parks Act of 1930 specifies that national parks are "dedicated to the people . . . for their benefit, education and enjoyment" and must remain "unimpaired for future generations."

Wood Buffalo National Park is a wilderness area of 17,300 square miles straddling the boundary between the Northwest Territories and the Province of Alberta. It was established in 1922 to protect the only remaining herd of wood bison.

The park's greatest length is 176 miles and it has an average width of more than 100 miles. Two-thirds of its area is in northern Alberta.

The park environment

Wood Buffalo contains examples of four types of topographical features common to the northern plains. These are erosion plateaus left by the glaciers, glaciated plains, a delta formed by two major rivers, and the alluvial lowlands of the rivers. In addition, there are two special types of area not common in Canada: the Salt Plains and the Karst area of the Alberta Plateau.

Erosion plateaus

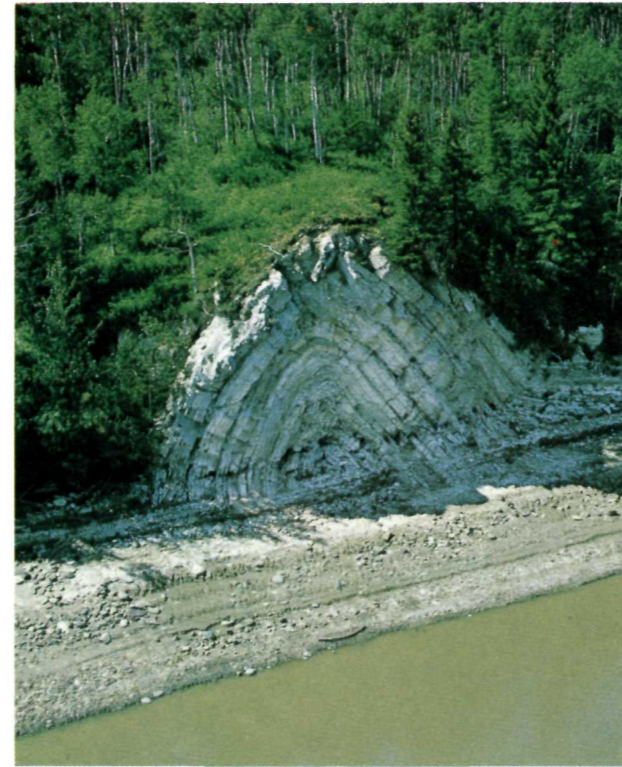
The Birch Mountains in the southwest and the Caribou Mountains in the west are erosion plateaus of the Cretaceous Age, about 150 million years old. They are round to oval plateaus, 2,500 and 3,200 feet above sea level, rising abruptly from almost flat plains. They are all that remain of deep sedimentary layers which covered the whole area and which elsewhere were removed by erosion. The plateaus give rise to many fast streams, which have cut deep, rugged gullies in the escarpments.

Glaciated plains

The major area of Wood Buffalo National Park is the Alberta Plateau. This is a large, almost flat area which extends over a great part of this country, in and out of the park. It is between 700 and 1,100 feet above sea level, a land of poor drainage, meandering streams and many shallow lakes and bogs. Throughout the plains eskers (long low ridges of sand and gravel) are thickly scattered. These eskers are composed of material that was carried by the glaciers and deposited along the course of streams formed in the melting ice.

The eastern edge of the Alberta Plateau is marked by an escarpment with a maximum height of 200 feet. It is noticeable on Highway 5 as a steep hill west of the Salt

Folded rock beds on Peace River



River. Little Buffalo Falls, reached on a side road just east of the warden station, and the canyon below the falls are another and very picturesque example.

Karst Topography

This is the name given to land underlain by soft rocks, which are dissolved in places by sub-surface run-off and result in collapsed areas or sinkholes, some of great size. There is a large sinkhole, 120 feet across and 80 feet deep, beside the Nyarling River Warden Station. Pine Lake, with a depth of 70 feet, three miles long, results from the joining of several very large sinkholes.

The Salt Plains

East of the escarpment, in an area drained by the Salt River, are the Salt Plains. These are flat, mostly open areas with many salty streams and salt springs. In some parts the ground has such a high salt content that there is no plant life. In other areas there are plant communities composed of salt-tolerant species only. Some of the salt springs leave deposits of salt around them through evaporation of the water. This was the source of salt for Indians, explorers and early settlers. An excellent view of the Salt Plains is gained from the top of the ski hill off the Parson Lake road. The side road from Highway 5 to the east side of the Salt River leads through the Salt Plains.

The river valleys and lowlands

The Peace River occupies a wide, flat valley with very little drop along its course. This causes the river to meander and change its course from time to time. Davidson Lake and the Big Slough are remains of old river courses.

The Slave River lowlands occupy only small areas along the west side of the river above Fort Smith. Here the river marks the boundary between the Precambrian Shield and the Great Central Plains. On the east are old, eroded granite formations; on the west are the younger sedimentary rocks which underly the Canadian Prairies.

The delta

The delta formed by the Peace and Athabasca Rivers is one of the major deltas in Canada. During the time the glaciers were melting, Lake Athabasca was far larger than it is now. As the ice retreated farther and freed the north-flowing Slave River, much of the Lake was drained. Silt carried by the large rivers filled in much of the area, creating the present delta of winding channels, shallow lakes and mud flats.

Plant life

Plants in the park are typical of the boreal forest zone of Canada. White and black spruce, jack pine and tamarack predominate. Black poplar is found along many water courses and aspen occurs in nearly pure stands on some upland sites and in places where the spruce forest has been destroyed by fire. Interspersed with the forests are numerous bogs or muskegs. There are also patches of prairie dominated by grasses and such showy flowering species as shooting star, bluebell, goldenrod, aster, and gentian. The flora of the Salt Plains is composed of species that tolerate a high salinity. The flats of the Peace - Athabasca Delta contain extensive cattail marshes and sedge meadows. There are extensive stands of white spruce forest along the banks of the Peace, Athabasca and Birch Rivers. Balsam poplar also is plentiful in the area.

Natural succession of plants and forests

The park shows all stages of plant and forest succession. Most of the upland prairies, if not due to poor drainage, are due to forest fires, usually caused by summer lightning. A recent burn is about two miles east of the Nyarling River Warden Station. This is a small area burned in 1965 and so far has recovered only to the grass and willow stage. Further east are areas of more advanced recovery, perhaps 20 years old. These are marked by dense, even-aged stands of young jackpine, which grow amidst dead and fallen trees, providing fuel for further fires. Then, if there is a fire, the cycle starts all over again. Other areas with other types of soil have a more complicated cycle. There the cycle is likely to be grassland, willow, willow-poplar, poplar, poplar-spruce, spruce, if undisturbed by fire

A whooping crane



in between. Eventually, through random chance, lightning will strike in the old and decayed spruce forest and fire will restart the cycle. This type of succession is illustrated by a 1961 burn, eight miles west of the Carlsons Landing warden station, which is in the willow stage. Between Fitzgerald and Hay Camp lies an older burn area in the willow-poplar stage. Fifteen miles north of Peace Point there is an area of mature poplar with younger spruce which by now reach almost to the poplar crowns. The pure spruce stands seen east of Peace Point are an example of the climax stage in this cycle of succession.

Wildlife

The buffalo, for whose protection the park was established, is the symbol alike of pioneer North America and man's waste of natural resources. When the killing of wood buffalo was prohibited in 1893 it was estimated that there were fewer than 500 remaining, all in the region of what is now the park. By 1922 their numbers had grown to an estimated 1,500. The wood buffalo is a slightly larger, darker, northern relative of the plains buffalo.

Shortly after the establishment of the park more than 6,600 plains bison were moved by rail and barge from Buffalo National Park (now non-existent) at Wainwright, Alberta, to Wood Buffalo National Park. The two species intermingled and now number 10,000 to 12,000.

Alberta & N.W. Territories





Other large animals in the park are moose, woodland caribou and black bear. The southward winter migration of barren-ground caribou used to carry them into the park in large numbers for two or three months each winter, but in recent years they have passed 50 miles northeast of the park. There are a few mule deer and white-tailed deer in the park, but the country is not really suitable for them.

Smaller mammals are locally abundant in various areas throughout the park. Suitable streams are well populated with beaver and the marshy delta areas provide ideal habitat for large numbers of muskrats. Fox, lynx, mink, ermine and red squirrel are also common. Altogether 46 species of mammals have been recorded in the park.

More than 200 species and sub-species of birds have been reported in the park. Most of these are summer residents and are species familiar to bird watchers in western Canada and the United States. The accumulation of waterfowl on the Peace - Athabasca Delta in autumn is one of the greatest spectacles of its kind to be found anywhere. Ruffed, sharp-tailed and spruce grouse reach extremely high peaks of abundance about once each decade, and then for two or three years they almost disappear from the scene. Gulls, both eastern and western species, are common wherever the fishing is good, such as at the foot of the Slave River rapids at Fort Smith. Here, too, is found the northernmost colony of pelicans in North America. Hawks, eagles, owls and ravens are present throughout the park.

The latest addition of the known life of the park, and in many ways the most dramatic, is the nearly extinct whooping crane. The nesting ground of this rare species was discovered when a family of the birds was seen in 1954 by a federal forest engineer, and his observation was confirmed by a biologist of the Canadian Wildlife Service. The 1970 crane population was 76, including 20 in captivity.

Park history

The park is in one of the earliest explored and settled areas of Alberta. In 1789 Alexander Mackenzie travelled down the Slave River on his trip to the Arctic Ocean, and up the

Peace River on his way to the Pacific a few years later. Simon Fraser also travelled up the Peace River. He visited the original Fort Chipewyan on Lake Athabasca, which was built in 1788 and is the oldest permanent settlement in Alberta. Salt River Settlement, downriver from Fort Smith, was settled in the 1870's. The Athabasca, Peace and Slave Rivers, leading to the Mackenzie, were for years the highway to the north. The all-weather road to Fort Smith was not completed until 1966.

Both the Northwest and the Hudson's Bay Companies were active in the area until the latter absorbed its rival. There are several abandoned Hudson's Bay Company posts.

In the late eighteen and early nineteen hundreds a number of natural scientists of note made research studies in the park. Several of these came to study the wood bison before it was determined to be a separate species. A number of these men are commemorated by place names: Hornaday River, Seton Creek (after Ernest Thompson Seton), Preble Creek, Raup Lake. Charles Camsell travelled extensively through the park, making the first recorded canoe passage from Great Slave Lake to the Peace River.

The park was established in 1922 as an area of approximately 11,000 square miles and was enlarged to its present size in 1926 by taking in the area south of the Peace River.

How to get there

The park may be reached by road via the Mackenzie Highway to Hay River and Highway 5 to Fort Smith. Fort Smith is approximately 850 road miles from Edmonton, the last 480 of which are gravel. There is daily airline service from Edmonton and Yellowknife to Fort Smith and there is a limited number of cars for rent in Fort Smith. The park may also be reached by boat on the Peace and Athabasca Rivers and from Great Slave Lake, but this should not be attempted except in seaworthy boats by experienced operators. The large lakes can be very rough.

Light aircraft for visitor use are not permitted to land within the park. To protect the nesting grounds of the whooping crane there is a height restriction for aircraft over the part of the park north of Highway 5 (see Canada Ministry of Transport regulations).

Accommodation and other services

The park is little developed for visitor use. There are a picnic ground and a 16-site campground at Pine Lake and a beach where the water is warm enough for swimming from mid-July until mid-August. Elsewhere in the park all camping or picknicking must be done under natural conditions. The Government of the Northwest Territories maintains a campground at Little Buffalo Falls just outside the park, and there is an attractive picnic area at Mountain Portage between Fort Smith and Fitzgerald.

Visitors on overnight trips may bivouac en route anywhere in the park, provided they have previously registered



with a park warden and obtained a campfire permit.

Supplies, services and accommodations are available in Hay River and Fort Smith but not in the park. Travellers by boat can obtain supplies in Fort Chipewyan, but there is no commercial accommodation there. Fitzgerald no longer exists as a town, so there is no source of supply there.

How to enjoy the park

Season – The main park roads are open throughout the year, but during spring breakup or after heavy rains they may be soft in places.

Boating – Motor boats may be used on the Peace, Slave and Athabasca Rivers and the delta channels connecting Lake Athabasca to the Peace and Slave River. Motor boats may be used on Pine Lake only if a permit is obtained (free of charge) at the park office in Fort Smith. All motor boats must carry proper safety equipment and conform with federal navigation regulations.

Fishing – Pike and pickerel (walleye) are found in many of the shallow lakes and sluggish streams in the park. Goldeye are present in the lower Peace River. Pine Lake and the Rainbow Lakes are stocked with trout. Whitefish, suckers and inconnu (somewhat like whitefish) are also found.

It is necessary to have a fishing permit when fishing in the park. Permits are sold at a nominal fee at the park office and the Pine Lake warden station. Fishing regula-

tions are available at the same locations.

Snowmobiles – These must stay on trails designated for their use. All other motorized land vehicles are restricted to regular roads.

Some don'ts

National parks are selected areas set apart as nature sanctuaries and special care is taken to maintain them in their natural state. For this reason, all wildlife, including birds and animals, and all plants, trees, rocks and fossils are to be left undisturbed. Even the wild flowers are not to be picked; they must be left for others to enjoy. Feeding, touching or molesting wild animals is not permitted.

Dogs and cats may accompany visitors into the park. For protection of park animals, however, dogs must be kept on leash. No permit or vaccination certificate is needed.

Fires

Campfires may be set only in fireplaces provided for this purpose, or in outdoor portable stoves. Barbecues may be used only in the campground or the picnic area, and all coals must be dumped into existing park fireplaces. Fire permits must be obtained from a park warden for open fires during back-country travel.

Anyone finding an unattended fire should try to extinguish it, or if it is beyond control, report it at once.

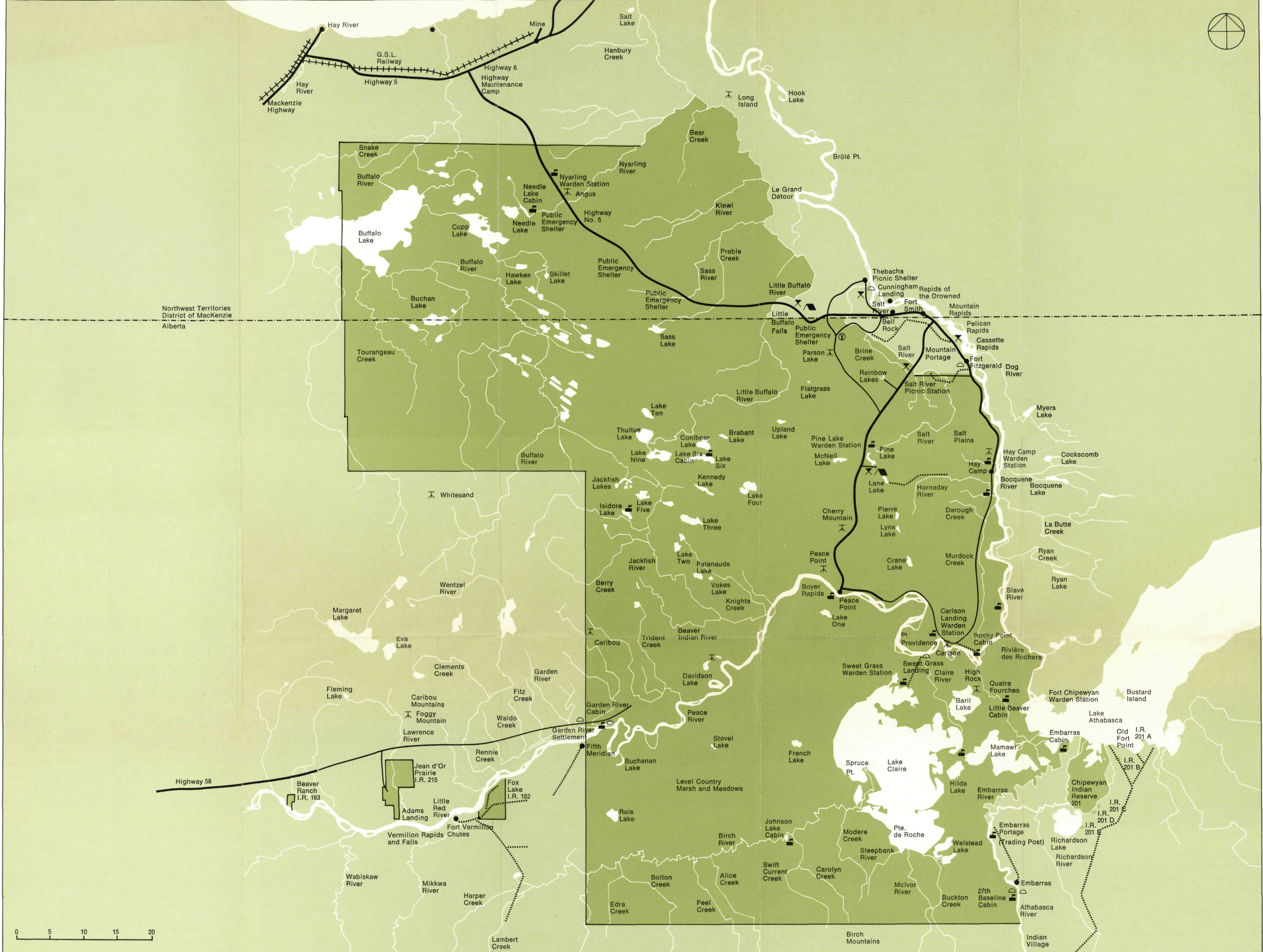
How to get the most out of your visit

There are as yet no formal hiking trails, riding trails or interpretive programs. The park is best seen by car and boat. One of the best drives is the Parson Lake road from Highway 5 to the Pine Lake road. This gives a view of the Salt Plains, the escarpment, sinkholes, sink-hole lakes and the Plateau forests. This road should not be used in wet weather. Murdock Creek and many of the small lakes are good canoe country. The major rivers and the delta area provide attractive power boat trips, but care must be taken to avoid mudbanks.

For more information . . .

More information on the park may be obtained at the park office in Fort Smith or from the park wardens. The latter, though not primarily responsible for information, will serve visitors whenever possible. They are particularly helpful in planning trips into isolated areas.

Prospective visitors may obtain information on Wood Buffalo by writing to the Superintendent, Wood Buffalo National Park, Fort Smith, Northwest Territories. Requests for information on other national parks should be addressed to the Director, National and Historic Parks Branch, Department of Indian Affairs and Northern Development, Ottawa.



Wood Buffalo National Park

- Highway (All Weather Road)
- Secondary Road (Dry Weather Road)
- Trail
- Lake, River, Creek
- Warden Station, Park Cabin
- ⊗ Picnic Area
- ▲ Campground
- ⊙ Ski Hill
- ⊠ Fire Tower
- △ Sawmill

Note: This is but a reference map, designed to give you a general idea of what you will find in this park. It is *not* a road, hiking or boating map. To find your way accurately, you should obtain a topographical map, available at the park administration office.

