

# Jasper National Park

Cover: Maligne Lake

## 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 Canada's 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 the enjoyment of future generations."

Jasper National Park, 4,200 square miles in area and one of the largest parks on the North American continent, is notable for its magnificent mountain scenery and unique natural wonders — relics of the Ice Age.

The park is situated some 235 miles west of Edmonton and 258 miles northwest of Calgary. It extends along the eastern slope of the Canadian Rockies in the western part of the province of Alberta, with Banff National Park joining its boundary to the south and Mount Robson provincial park in British Columbia adjoining it to the west.

## The park environment

Each national park has its own character, its unique story as a living outdoor museum. Jasper is the story of an extreme landscape dominated by ice-capped mountains and great valleys. To survive, all living things have adapted to the extreme and variable conditions of topography and climate that are characteristic of the park.

## The land: mountains and glaciers

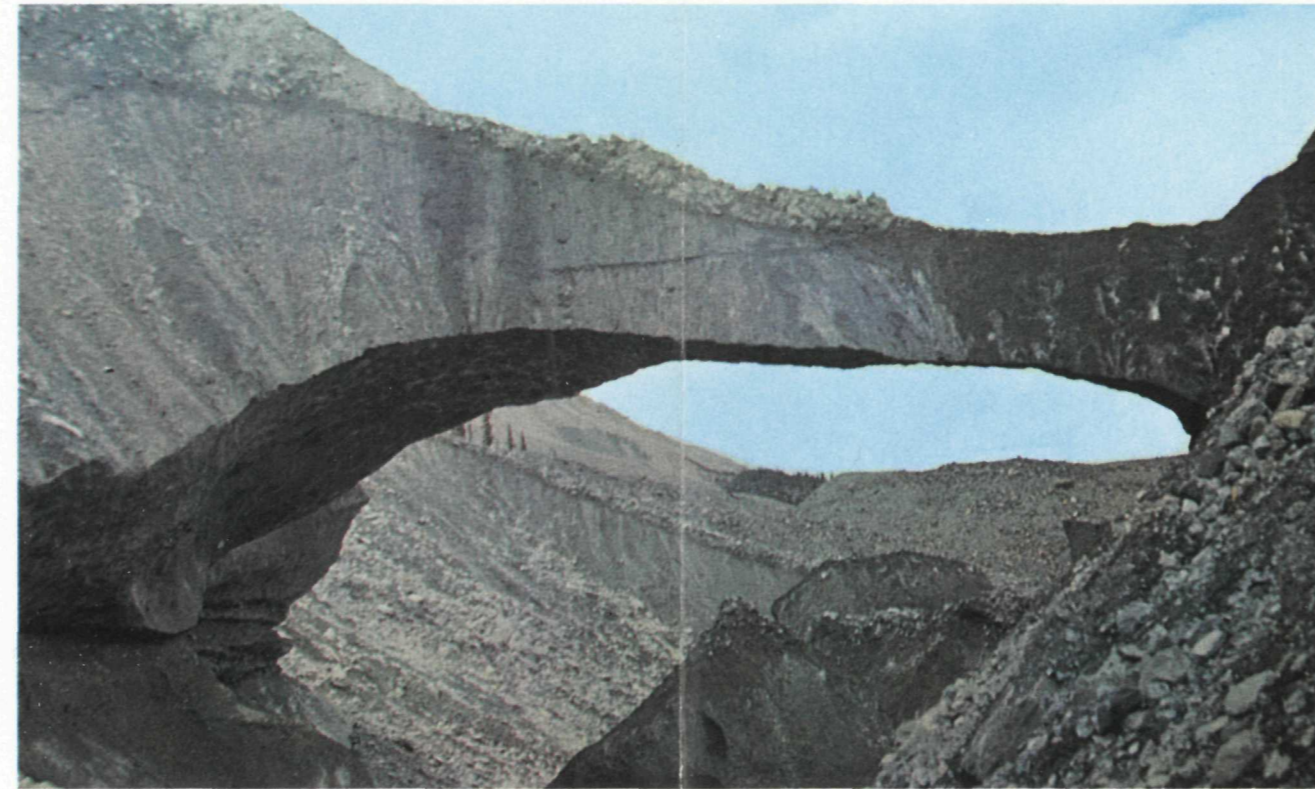
There is a pattern in the varied shapes of Jasper's mountains. The main peaks appear as chains in a north-south direction. Within each chain, or range, the peaks are closely related in age and structure.

The Jasper-Banff Highway follows the Athabasca River from Jasper townsite to Sunwapta Falls, over the Sunwapta Pass and into Banff National Park. On either side of the highway from Jasper townsite to Lake Louise one sees a panorama of unbroken but ever changing mountain ranges. To the east are the so-called "front ranges". Much younger than the mountains to the west of the highway, the front ranges were upended about 20 million years ago and are today wildly tilted, their rock layers sometimes standing completely on end, or folded back on themselves. The Endless Chain Ridge, which extends for approximately 10 miles from Poboktan Creek to Beauty Creek, is an excellent example of this.

To the west lie the "main ranges", formed out of the flat-lying sedimentary rocks and laid down about 100 million years ago. Here are some of the most famous mountains east of the Continental Divide, including the castle-like Mount Robson and the Ramparts.

Between these great ranges stretches a vast valley

Ice bridge on Athabasca Glacier



system occupied by the Athabasca and Sunwapta rivers. These wide, U-shaped valleys are the result of glacial erosion during the Ice Age. Remnant glaciers can still be seen high on the peaks. When the Ice Age ended, only such high, cold places could maintain glacier ice, and the Athabasca Glacier exists today mainly because of these climatic conditions. The highway passes within one mile of the Athabasca Glacier and an access road provides a close and uninterrupted view of this great ice mass.

The great Columbia Icefield, 150 square miles in area and the largest sheet of glacial ice on the North American continent outside the Arctic Circle, is shared by Jasper and Banff National Parks.

Much of this icefield is above 8,500 feet in elevation and some peaks rise above 10,000 feet. From this region many glacial tongues reach down into the valleys of both parks.

Where meltwaters from the glaciers pour into the flat valleys of Jasper, beautiful blue-green lakes have formed, many of them dammed by moraines or debris deposited by glaciers. Crevasses, cascades of meltwaters, and interesting channels in the ice, rock tables and other glacial features can be seen at Angel Glacier, on the flank of Mount Edith Cavell, while the great moraines at Athabasca and Angel glaciers are impressive evidence of the power of glacial erosion. Silt particles, crushed from rock by the moving glaciers, are carried by the meltwaters into

the lakes. These suspended particles give the lakes their unusual and beautiful turquoise colour, which changes in tone and intensity as the sunlight strikes them at different angles.

A prime example of water erosion is Maligne Canyon. This great gash, almost 200 feet deep with nearly vertical walls less than 10 feet apart in some places, has been cut through Palaeozoic limestone during centuries of ceaseless wear by a small stream of running water.

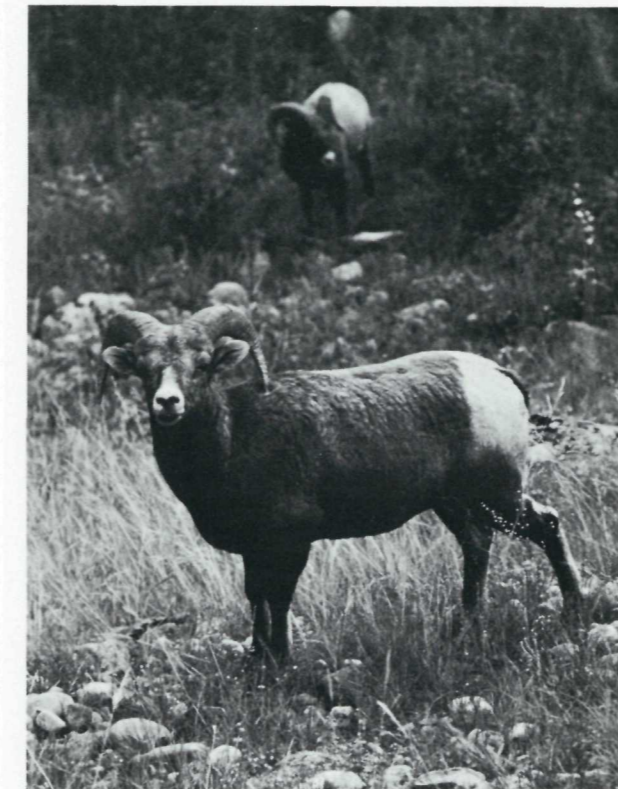
North of Jasper townsite, the "front ranges" are represented by the Bosche, Jacques and De Smet Ranges while the "main ranges" are represented by the Victoria Cross Range.

The Jasper-Edmonton Highway corridor presents a very different view of these mountain ranges, and from Jasper townsite to the park entrance this road cuts through the mountain chains. In the resultant panorama, dominated by fault block mountains (mountains whose strata have become exposed by a fracture in the rock formation), rocks of various epochs can be seen.

## The plants: alpine and subalpine

Plant life in Jasper National Park reflects the wide range of local climatic zones found at different altitudes in any mountainous area. The succession of plant communities encountered when climbing in the mountains can be com-

Rocky Mountain sheep



pared to the sequence of plants one would find on a trip to the north pole. In both cases, local climate determines which plants can grow in a certain zone. Plants characteristic of both the prairies and the mountains grow side by side in great profusion throughout the park, while arctic species are found at the higher altitudes.

The valleys are heavily forested with conifers. The main forest cover is lodgepole pine and white spruce. On some low, dry slopes Douglas fir grows, and in the river valley bottom trembling aspen and a few balsam poplar can be found.

The intermediate slopes support a coniferous forest of lodgepole pine and white spruce at lower levels, grading into alpine fir, Engelmann's spruce and white-bark pine near timberline.

Above timberline, at an altitude of about 7,000 feet, the alpine zone is devoid of trees and closely resembles Canadian arctic regions. Here the growing season is short, cold and unpredictable. Deep snow drifts last until late summer and frost may occur at almost any time. In spite of this, small alpine and arctic plants, unusually bright in colour, grow in great profusion around and above timberline throughout the summer, including the red and pink mountain-heath, white mountain heather, forget-me-not, mountain rhododendron, arctic harebell, one-flowered wintergreen, moss campion and northern gentian.

Some of the more common shrubs in the park are wild rose, buffalo berry, willow, alder, juniper, shrubby cinquefoil, silverberry, saskatoon berry, Labrador tea, red osier dogwood and bearberry.

## The animals: each seeks its own habitat

Animals, like plantlife, depend on suitable environment for their survival. The mountain goat, marmot and pika usually inhabit the higher regions. Mountain sheep and elk are seen on the lower slopes, while the moose, mule deer, beaver and muskrat stay near the valley bottom.

In winter, animals which do not hibernate move to snow-free slopes or into the valleys, where food is more plentiful.

Other mammals, such as the lynx, coyote, porcupine, black and grizzly bear, wolverine, marten and badger also live in places suited to their needs. The shy Columbian and golden-mantled ground squirrel are abundant.

Bird life in the mountains is not plentiful, either in species or numbers. About 200 species have been identified in the park.

The white-tailed ptarmigan, pipit and eagle live at high altitudes; thrushes, ducks and geese at low elevations. The gray or Canada jay, Clarke's nutcracker and the magpie roam everywhere, unafraid of human visitors.

## A brief history of the park

Perhaps no part of the Canadian Rockies provides a more fascinating chapter in the pages of western Canada's history than the area now occupied by Jasper National Park. The early days of the area are recorded in the diaries and reports of the explorers, fur traders, missionaries, prospectors, engineers, scientists, botanists, geographers and other pioneers who used the famous Athabasca Trail, the green valleys and the rugged mountain passes before the park itself was established in 1907.

In 1810-11 David Thompson, pioneer explorer of Canada's West, discovered the Athabasca Pass and a practical fur trade route to the Pacific coast. Over the years rivalry for the fur trade between the Hudson's Bay and Northwest Companies stimulated the use of this route, known as "La Grande Traverse".

Travellers on foot or by horse pack train came to know the broad valley of the Athabasca River en route to the boat encampment at the junction of the Canoe and Columbia Rivers, from where they travelled via the Columbia River and southwestern overland routes to the Oregon coast. Among these travellers was Jasper Hawes, a Missouri trapper and employee of the Northwest Company, who took charge of the first trading post at the outlet of Brulé Lake. He soon moved the post upstream to the outlet of Jasper Lake where it became known as "Jasper's House". At the turn of the century several names for the new national park were suggested and Jasper was chosen.

A park naturalist explains the wonders of nature



Alberta





The present townsite, situated on a boulder-strewn flat, was originally named "Fitzhugh". Its first building was erected in 1911. The same year the first road to Pyramid Lake was constructed. In 1915, eight tent houses were erected on the shore of Lac Beauvert for summer use by park visitors. Six years later Canadian National Railways purchased these tent houses and began construction of the Jasper Park Lodge.

Motor cars were prohibited from the national parks until 1916. Access was by train, and travel was either on foot, on horseback or by horse-drawn "tallyhos". The first trip into Jasper by automobile was made in 1923, from Edmonton, on the abandoned railway grade of the Grand Trunk Pacific Railway. That same year a scenic road was built to Mount Edith Cavell. In 1938 a road was built to provide convenient access to Miette Hot Springs in the eastern section of the park.

The long-planned highway from Jasper National Park to Lake Louise was completed in 1940. Canada's Icefield Highway provides access to the Columbia Icefields and affords a magnificent view of Rocky Mountain scenery just east of the continental divide. This link completes the road system connecting Jasper with Banff, Kootenay and Yoho National Parks.

#### How to get there

The park is served by rail and highway. The transcontinental line of the Canadian National Railway crosses the park, following the valleys of the Athabasca and Miette Rivers and climbing through the famous Yellowhead Pass en route west.

There are three major highway approaches to the park. From the northeast the Edmonton-Jasper Highway, no. 16, follows the Athabasca River. From the west Highways no. 16 – known as the "Yellowhead Highway" – and no. 5 from British Columbia enter through the Yellowhead Pass along the Fraser and Miette Rivers. The Jasper-Banff (Icefield) Highway, no. 93, running north and south through the heart of the Canadian Rockies, traverses by way of the Sunwapta Pass and joins the Trans-Canada Highway near Lake Louise in Banff National Park. The Jasper-Banff Highway is open all summer and patrolled for specified hours of travel in winter. Bus and auto access via the Yellowhead Highway (Route 16) and rail access via Canadian National into Jasper National Park are available year-round.

#### How to enjoy the park

*Season* – The park and townsite are open all year, although some tourist services are available only during the summer season. Summer is the busiest time, but visits to the park

at other seasons are increasing every year. Swimming, canoeing, boating, golfing, riding, hiking, fishing, camping and mountain climbing are the favourite summer activities, while skiing, skating, curling, snowshoeing and ski-touring are increasing in popularity during the winter months.

*Boating* – Rowboats and canoes are permitted on most of the park's larger lakes and ponds. Motor boats are restricted to Pyramid and Medicine Lakes. They must conform with federal navigation regulations and carry proper safety equipment. Cruiser boat trips on Maligne Lake are offered by concessionaires.

*Fishing* – A regular fish-stocking program is carried out in some of the lakes and streams. Game fish found in Jasper National Park include Rocky Mountain white-fish, rainbow, cutthroat, brown, eastern brook, Dolly Varden and lake trout. There are two species of hybrid fish, a rainbow and cutthroat trout cross, and the splake, which is a cross of lake and eastern brook trout. Fishing bulletins are issued regularly and are available at park information centres, where the required national park angling licence may also be purchased.

*Hiking* – This is one of the best ways to explore a national park. There are over 600 miles of trails covering all the main valleys of Jasper National Park. Many of the trails into the remote areas necessitate camping overnight. Other areas are readily accessible for day walking or riding, particularly the Pyramid Lake, Mount Edith Cavell, Lake Annette, Lake Edith and Maligne Canyon areas. Trails in the townsite area are shown on a separate folder and map, "Trail Outings at Jasper", which is available from the information centres. Topographical maps of various scales, detailing the trails and features of the park, are also available there and in the administration office.

*Mountain climbing* – For the protection of mountain climbers, all travel off the park trails must be registered with a park warden before and after the climb. Inexperienced climbers should obtain the services of a guide and full information about necessary equipment. A mountain search and rescue group is on call to aid people injured or in danger.

*Skiing* – Marmot Basin Ski Lifts Ltd. offers powder snow skiing on intermediate terrain with open bowls and well-cared-for ski runs. Novice ski runs up to three miles long are complimented by exciting advanced runs. Marmot Basin is open from November to May, depending on snow conditions, has high capacity lifts, two up-to-date day lodges, a ski shop and a ski school. Skiers can find accommodation and après-ski entertainment in Jasper townsite just eight miles from the ski area.

*Swimming* – There are two swimming pools available to visitors of the park, a heated freshwater pool in Jasper townsite and a natural hot sulphur water pool at Miette. Both are operated by the National Parks Service and are open from mid-May until mid-September.



*Snowmobiles* – Operators must register at the gate when entering the park, and stay on trails designated for snowmobile use. All other motorized land vehicles are restricted to public roads.

#### Other facilities

Private business operates bus and boat tours, Athabasca Glacier tours, travel by horse, a site-seeing gondola lift and a golf course.

#### Some don'ts

National parks are selected areas set apart as natural 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 wildflowers are not to be picked; they must be left for others to enjoy. Feeding, touching or molesting wild animals is not permitted.

Beware of bears. They are unpredictable and apt to be dangerous in spite of their apparent tameness.

#### Where to stay

Camping brings you into the closest contact with the park's natural environment. Camping facilities are provided at a number of campgrounds, the largest of which is Whistlers. Daily fees at campsites vary and depend on whether the

site is unserviced or is equipped with electrical, water and sewage connections. Camping space is allocated on a first-come, first-served basis; therefore, reservations cannot be accepted. Campgrounds open about May 15 and close about September 15, depending on weather conditions. The maximum allowable stay in a campground is 14 days.

Visitors on overnight trail trips may camp in established wilderness camp areas, provided they register with a park warden before and after each trip.

A variety of indoor accommodation is offered by private commercial establishments, details of which are available at all park information centres and from the Jasper Chamber of Commerce. The Jasper townsite has restaurants, stores, laundries, garages, service stations and police, medical and hospital services.

#### Fires

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

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

#### How to get the most out of your visit

To help you understand and appreciate Jasper's complex natural environment, you are urged to take advantage of the free interpretive program, conducted by the park naturalist and his trained staff. It will provide you with an insight into how climate, landforms, lakes, plants and animals are interrelated, and it will make your visit more rewarding.

During the day there are conducted field trips and auto caravans; in the evening informative talks, illustrated with slides or films, are given in the outdoor theatres in the larger campgrounds.

Self-guiding trails, exhibits, interpretive signs and viewpoints also explain the park's natural features. Information on the interpretive program is available from bulletin boards, information centres and park staff. Special groups, including school, scout and guide organizations, may take advantage of these programs throughout the year.

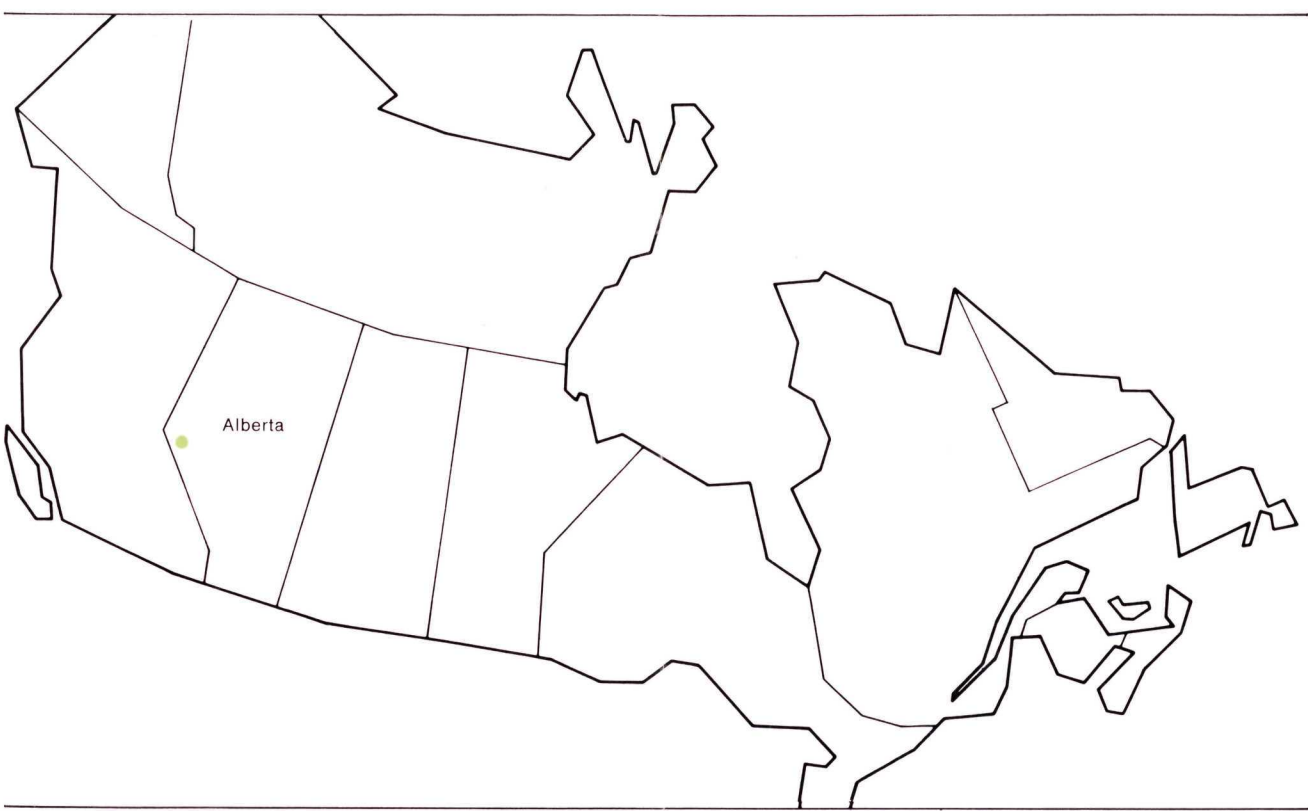
#### Where to get information

Information may be obtained from the traffic control points on Highway 16 leading into the park from Edmonton on the east and from Vancouver and Prince Rupert through the Yellowhead Pass on the west.

Detailed information is available from the park information office on Connaught Drive in the townsite and from the park information centre at the Columbia Icefield. Uniformed staff will answer questions, provide maps, outline travel routes and refer visitors to the various areas and facilities in the park. Special events are posted on bulletin boards.

Park wardens and naturalists will help visitors whenever possible.

Additional information about the park is available from the Superintendent, Jasper National Park, Jasper, Alberta. For information about other national parks, write to the Director, National and Historic Parks Branch, Department of Indian Affairs and Northern Development, Ottawa 4, Ontario.



### Jasper National Park

- Highway
- Secondary Road
- Riding and Hiking Trail
- Railroad
- Lake, River, Creek
- Glacier
- Mountain
- Wardens Cabin
- Picnic Area
- Accommodation
- Campground
- Viewpoint
- Nature Trail
- Youth Hostel
- Fire Lookout

