

GLACIER

NATIONAL PARK
MONTANA



UNITED STATES SECTION
WATERTON-GLACIER
INTERNATIONAL PEACE PARK

GLACIER NATIONAL PARK

The National Park System, of which this park is a unit, is dedicated to conserving the scenic, scientific, and historic heritage of the United States for the benefit and enjoyment of its people.



Waterton Lake, looking south into Glacier National Park

GLACIER NATIONAL PARK, lying athwart the Rocky Mountains of northwestern Montana, contains some of the most spectacular scenery of the whole range. The park's glaciers are among the few in the United States which are easily accessible.

The park was established by act of Congress on May 11, 1910. It has an area of nearly 1,600 square miles. Among its high peaks are more than 50 glaciers and 200 beautiful lakes. In the summer it is possible to visit some of the glaciers and most of the lakes with relatively little difficulty. Horseback and foot trails reach almost all sections of the park. While no glaciers are accessible by road, some can be reached by trail.

In the national parks the scenery, the wildlife, and the objects of historic, prehistoric, and scientific interest are carefully preserved for the benefit of the people. Legislation creating the National Park Service provides that these areas shall be administered in such a manner as to leave them "unimpaired for the enjoyment of future generations." Thus, while you are urged to make full use of the park, you are requested to help conserve it by not damaging any of the park features.

International Peace Park

The Waterton-Glacier International Peace Park, comprising Glacier National Park in the United States and Waterton Lakes National Park in Canada, was established in 1932 by

WILD ANIMALS

It is dangerous for you to go near wild animals though they may appear tame. Some have become accustomed to humans but they still are wild and may seriously injure you if you approach them. Regulations prohibiting feeding, teasing, touching, or molesting wild animals are enforced for your own safety.

On the north, the Glacier Park Transport Co. connects at Waterton Lake with the Central Canadian Greyhound Lines from Lethbridge or Macleod.

By airplane. Northwest-Orient Airlines' planes land at Flathead County Airport, 26 miles west of West Glacier. Western Airlines, which connects at Salt Lake City with United Airlines' main transcontinental route and at Butte and Helena with Northwest-Orient Airlines, provides service to Cut Bank Airport, 48 miles east of East Glacier Park. On-call service for air passengers will be provided by the Glacier Park Transport Co., but arrangements should be made with the airlines before starting.

Park Roads

The spectacular Going-to-the-Sun Road links the east and west sides of the park, crossing the Continental Divide at Logan Pass (elevation 6,664 feet). Logan Pass is usually closed by snow until early June. The Going-to-the-Sun Road, 50 miles long, connects with U. S. 89 at the St. Mary Entrance and with U. S. 2 at West Glacier. A narrow dirt road follows the North Fork of the Flathead River to Bowman Lake and Kintla Lake.

The Blackfoot Highway (U. S. 89 and State Route 49), along the east side of the park, is an all-weather road leading from Browning and the village of East Glacier Park to the International Boundary Line at Carway.

The picturesque Chief Mountain International Road branches from U. S. 89 at Kennedy Creek, leading around the base of Chief Mountain and across the International Boundary to Waterton Lakes National Park. Branch roads lead from the Blackfoot Highway into the Two Medicine and Many Glacier Valleys. A narrow dirt road leads into the Cut Bank Valley.

On Going-to-the-Sun Road, looking toward Logan Pass, across the Continental Divide, and Mount Clements



The Theodore Roosevelt Highway (U. S. 2), follows the southern boundary of the park from the villages of East Glacier Park to West Glacier, a distance of 57 miles.

Seasons

The normal season is from June 15 to September 10 when hotels and cabin-camps are in operation. However, roads outside the boundary of the park are usually open by May 15, and accommodations may be had outside the park or on private lands within the park. The Going-to-the-Sun Road is usually open by June 15 and is usually kept open until October 15, weather permitting. After September 10, it is well to inquire locally about road conditions and accommodations before entering the park.

Before July 1 the park presents unusual scenic effects—high snowbanks along roads, mountains still covered with winter snow, and wildflowers in profusion at lower and middle elevations.

In the autumn you will see the brilliant color of the deciduous trees with a background of high peaks covered with the first snow.

There are no winter uses of the park at present, although you will usually find accommodations at West Glacier or East Glacier Park.

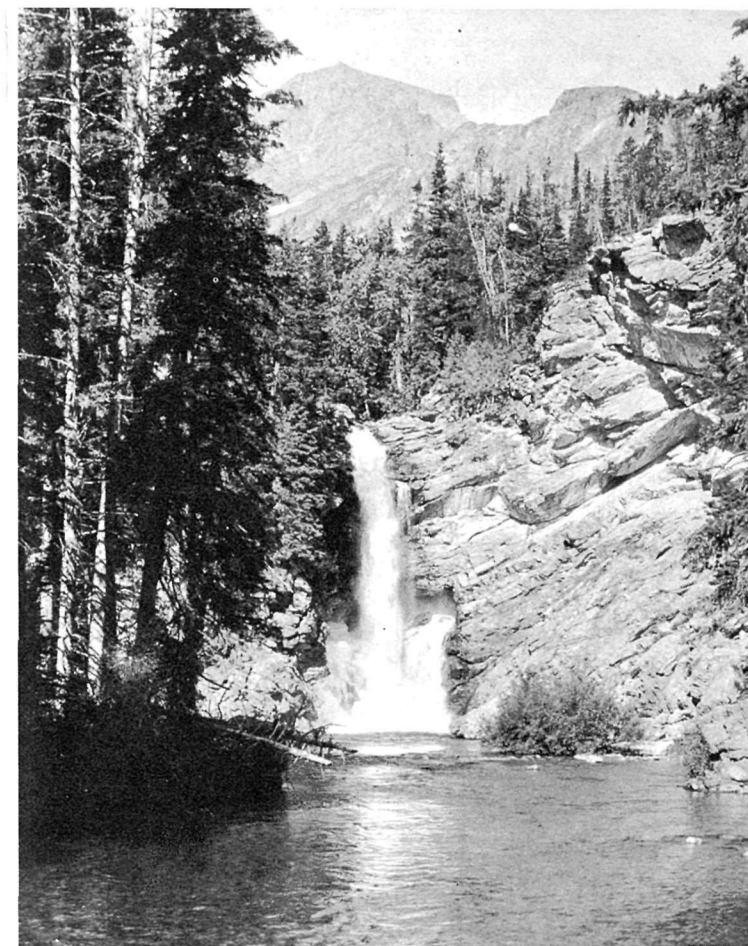
Trails

Glacier National Park has over 1,000 miles of trails. Hiking and horseback trips to remote wilderness parts of the park may be taken over these trails. This is the finest way to see and enjoy the back country of the park.

The Waterton Valley, the Belly River country, and the Bowman and Kintla Lakes valleys are among the most magnificent and isolated parts of the park. Overnight trail trips are required to see them. Overnight trips to Sperry or Granite Park Chalets offer opportunity for interesting hikes without camping equipment. There is a hiker's shelter at Gunsight Lake. ASK A PARK RANGER FOR TRAIL INFORMATION.

How the Land Was Formed and Sculptured

For millions of years, geologic processes such as mountain building, glaciation, and stream erosion have formed and sculptured the spectacular terrain of Glacier National Park. You can see the results of these forces in the lofty peaks, the deep glaciated valleys, the cataracts and cascades from hanging valleys, and the foaming streams. The geologic story begins with the oldest rocks and is brought up to date by the glaciers you see cupped in basins among the high peaks and by the water that streams down the mountain slopes.



Trick Falls on Two Medicine Creek

During long periods of geologic time, when this region lay beneath the sea, thick deposits of sand, silt, and limy mud accumulated on the ocean floor. These deposits were gradually converted to sandstone, shale, and limestone, which in time were altered by pressure and heat. Molten lava was squeezed into the cracks and between the rock layers, and even upon the ocean floor.

Then followed a general uplift of the land and final withdrawal of the sea.

Since the rocks varied in thickness and character and the upward pressures were not exerted evenly, buckling, folding, and fracturing occurred. In places there were displacements called "faults." Along one fault, a huge mass of rock was pushed upward, then shoved northeast 15 to 18 miles. This is the famous Lewis overthrust. Chief Mountain, standing on the plains, is a spectacular remnant of this overthrust mass from which the surrounding rocks have been eroded.

During this period the entire Rocky Mountain area was subjected to compression and uplift which caused mountain building. No doubt this was also the time when the shale

and sandstone were changed to the harder and denser argillite and quartzite rocks we see today.

At this time, newly formed streams were continuously at work, cutting deeper and deeper into the mountain mass to form narrow V-shaped valleys and side valleys.

Later, a change in climate resulted in the formation of huge ice sheets over northern North America and Europe. In the region of Glacier National Park heavy snows accumulated and were compressed by their own weight to form individual ice fields.

At high elevations at the heads of valleys, these snow and ice fields formed small glaciers that quarried the mountainsides, developing large amphitheatres, called cirques. These small glaciers joined to form larger glaciers. As they formed, they began to flow, with infinite slowness, along the main stream-cut valleys, shearing rock from their walls, and giving them the U-shapes they have today.

Development of these main glaciated valleys left the smaller stream-cut and glaciated side valleys higher above the floors of the main valleys, so they are called hanging valleys; from them you see streams plunging down hundreds of feet. In areas of less resistant rock, the glaciers gouged out basins of the present-day lakes.

Trees and Flowers

In Glacier, as nearly everywhere in the West, most of the trees are evergreens. These forests include juniper (often called redcedar), hemlock, fir, spruce, lodgepole pine, white pine, and Douglas-fir. The deciduous trees are cottonwood, larch, aspen, birch, and alder, making a brilliant show of autumn color in early October. There are about 30 species of trees in the park.

The colorful display of wildflowers is one of the greatest attractions of Glacier National Park. In the high mountain meadows they are at their best in July. Showiest is the bear-grass, with a tall stately head of tiny white lilies, which blooms successively from valley floors to alpine meadows as the season progresses. Glacier lilies in the high meadows are also spectacular in early summer. As the snowbanks melt in the spring, flowers appear, following the snow as it recedes. This continues until autumn when new snow falls. Over a thousand species of wildflowers occur in the park.

Animals

Wildlife is abundant and varied. Mountain goats, moose, elk (wapiti), mule and whitetail deer, grizzly and black bears, and coyotes are present in large numbers. While not as numerous as formerly, several small bands of bighorn (mountain sheep) remain. The interesting marten, mink, otter, badger, and cougar are meat-eaters. The rare fisher

and wolverine also are present. Beaver are abundant on the streams, and conies squeak from the rock slides. Ground squirrels and chipmunks are numerous and frequently tame. It is wisest to enjoy them without actual contact, however, for some rodents have been known to carry dangerous diseases.

Animals of the park are wild and should be treated as such. Many bears frequent park roads and campgrounds. Though they are apparently friendly, they cannot be trusted and are potentially very dangerous. **OBSERVE THEM ONLY FROM A SAFE DISTANCE.** Regulations which prohibit the feeding, molesting, touching, or teasing of wild animals will be enforced for the protection of all visitors.

Among the birds recorded in the park, those that attract the greatest attention are the osprey, water ouzel, ptarmigan, Clark's nutcracker, thrush, and golden and bald eagles.

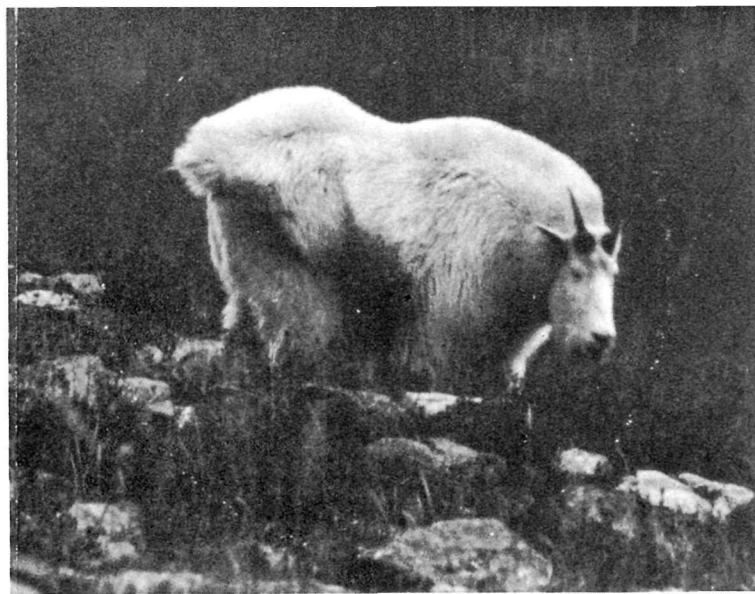
Indians and Glacier National Park

Before the coming of the white man, few Indians ever ventured into the high mountains of the park. Yet they used the valleys frequently in hunting and in warfare, establishing certain well-defined trails. In midsummer, they camped along the lakes and streams on the edge of the plains. All these signs of Indians in the park make a story that is of special interest. Many of the place names are of Indian origin.

The Museum of the Plains Indian

The Museum of the Plains Indian on the Blackfoot Indian Reservation, at Browning, 12 miles east of East Glacier Park, interprets the life of the Indians of the Great Plains region

Bighorn



Mountain goat. (Courtesy, Ruhle)

in the days when these Indians roamed the open grasslands east of the Rockies and hunted in the valleys and along the waterways of the present park. The museum exhibits interpret the dependence of the Plains Indian on wandering herds of buffalo, their use of the dog and horse, their patient skill as artists and craftsmen, their prowess as warriors, and their religious life. There are many remarkably realistic miniature scenes of typical Indian activities, in addition to carefully selected and artistically displayed specimens and a series of mural paintings by Indian artists. The museum is operated by the Bureau of Indian Affairs of the United States Department of the Interior.

In the same building is an arts and crafts center, serving as a central market for genuine Indian handicrafts of the present-day Indians of the Northern Plains Reservations.

Historic Events

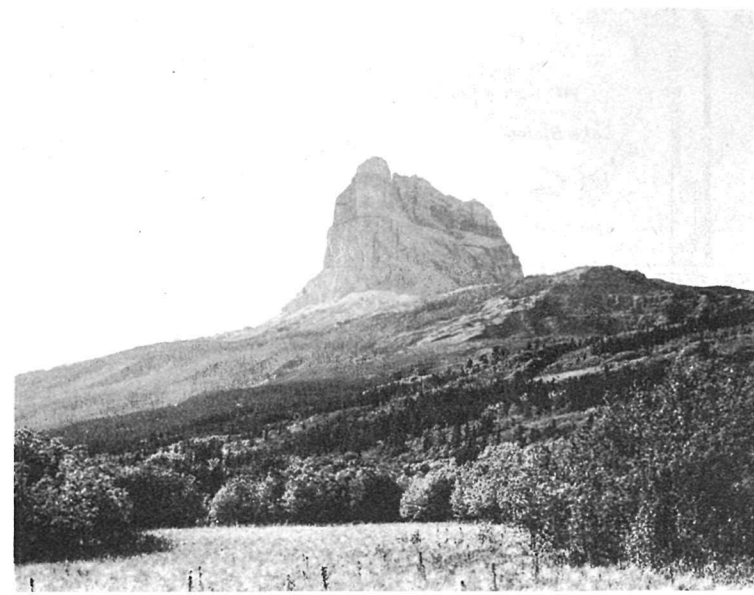
- 1670 Grant to Hudson's Bay Company included north-east portion of present park.
- 1806 Meriwether Lewis reached a point 40 miles east of present park. Chief Mountain was indicated as King Mountain on expedition map.
- 1810 First probable crossing of Marias Pass by white man.
- 1816 Hugh Monroe, of the Hudson's Bay Company, is said to have visited the eastern part of the park.
- 1853 Cut Bank Pass crossed by A. W. Tinkham, engineer of exploration party with Isaac I. Stevens, Governor of Washington Territory.
- 1854 James Doty explored eastern base of the range and camped on Lower St. Mary Lake.

- 1861 Northwest Boundary Commission completed survey of 49th parallel from Pacific Ocean to the Continental Divide at northern boundary of the park.
- 1872 International boundary survey that fixed northern boundary of park reached Continental Divide from the east.
- 1882-83 Prof. Raphael Pumpelly of the Northern Transcontinental Railway survey explored park region.
- 1889 John F. Stevens explored Marias Pass as location of railroad line.
- 1891 Great Northern Railroad built through Marias Pass.
- 1895 Purchase of territory east of Continental Divide from the Blackfeet Indians to be thrown open to prospectors and miners.
- 1901 George Bird Grinnell, in Century Magazine, first called attention to the region and need for its conservation.
- 1910 Bill establishing Glacier National Park was signed on May 11. Maj. W. R. Logan became first superintendent.
- 1932 Waterton-Glacier International Peace Park dedicated.
- 1933 Going-to-the-Sun Road opened to travel throughout its length.
- 1938 Chief Mountain International Road opened to Waterton Lakes National Park.

The Park Rangers

Ranger stations are located at main points of interest in the park to serve you. If you need information, or are in any difficulty, see a park ranger.

Chief Mountain



Fishing in Lake McDonald

Administration

Glacier National Park is administered by the National Park Service, U. S. Department of the Interior. A superintendent, whose address is West Glacier, Mont., is in immediate charge.

To Help You Enjoy the Park

Park ranger naturalists conduct daily field trips, present evening talks, usually illustrated with color slides or movies, at the hotels and certain campgrounds, and furnish information concerning the history and natural history of the park. You are invited to use this free service, available from approximately June 15 to September 10, at Apgar, Lake McDonald, Avalanche Campground, Logan Pass, Sun Point, Many Glacier, Two Medicine, St. Mary, and Rising Sun.

Park ranger naturalists accompany some of the launch trips operated by the boat companies. Leaflets covering the naturalist program are available at entrance stations, information offices, hotels, and cabin-camp offices.

You will find place-name signs and roadside exhibits along major roads in the park; also self-guiding nature trails at Avalanche Campground, Trick Falls in the Two Medicine area, and Swiftcurrent Lake in the Many Glacier area.

Fishing

The National Park Service seeks to maintain native fish populations in the park lakes and streams. Most numerous game species are now cutthroat, eastern brook, rainbow, and Dolly Varden trout, some of which have been introduced. St. Mary, Crossley, and Waterton Lakes have the

larger mackinaw trout. The fishing season starts with the Montana opening date, usually the latter part of May, and closes October 15. Waterton Lake conforms to the Canadian season. Information on other exceptions may be obtained from park rangers. No fishing license is required in Glacier National Park. You can help the park with its fishery studies by reporting your catch to a park ranger.

Weather

The table below will give you some idea of the weather conditions during the visiting season at Glacier. It is well to bear in mind that the evenings are usually cool even throughout the summer and warm clothing should be worn. During the summer, sudden rain squalls or thunder-showers may occur so some kind of rain clothes should be carried while hiking. Warm clothing is advisable for hiking in the alpine sections at all times of the year.

Temperature and Precipitation ^{1 2}

Month	Average maximum	Average minimum	Average temperature	Average precipitation
	°F	°F	°F	Inches
May.....	65.2	37.5	51.3	2.4
June.....	70.4	43.8	57.1	3.0
July.....	80.9	47.5	64.4	1.3
Aug.....	79.3	45.4	62.3	1.2
Sept.....	67.4	39.5	53.4	1.9
Oct.....	45.2	32.7	43.4	2.4

¹ Temperature over 22 years (1931-52), U. S. Weather Bureau, Helena, Mont., for all Montana Weather Bureau Stations.

² Precipitation over 22 years (1931-52), U. S. Weather Bureau Station, West Glacier, Mont.

VISITOR USE FEES

Automobile, house trailer, and motorcycle permit fees are collected at entrance stations. When vehicles enter at times when entrance stations are unattended, it is necessary that the permit be obtained before leaving the park and be shown upon reentry. The fees applicable to the park are not listed herein because they are subject to change, but they may be obtained in advance of a visit by addressing a request to the superintendent.

All national park fees are deposited as revenue in the U. S. Treasury; they offset, in part, appropriations made for operating and maintaining the National Park System.



United States Department of the Interior
Fred A. Seaton, Secretary

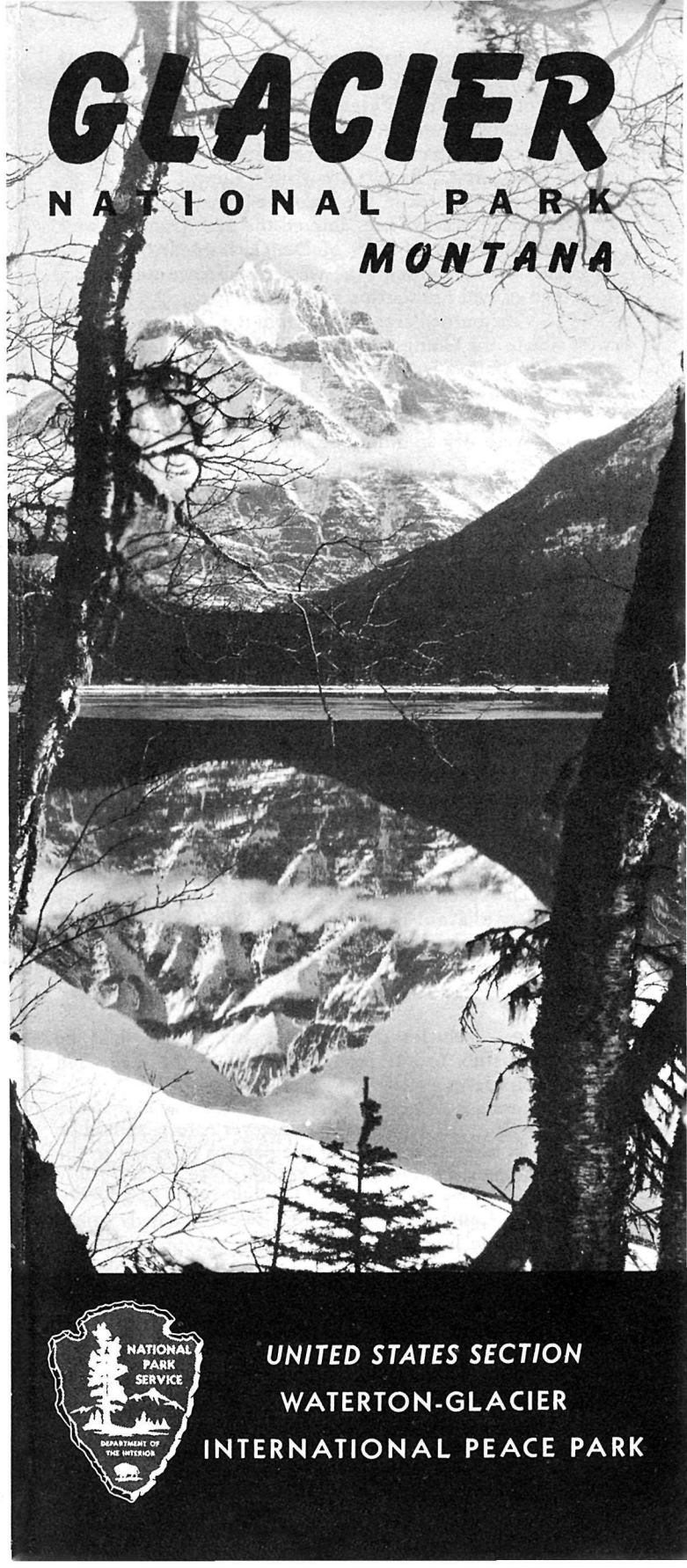
National Park Service
Conrad L. Wirth, Director

COVER: Mount Cannon (Hileman photo.)

GLACIER NATIONAL PARK MONTANA



UNITED STATES SECTION
WATERTON-GLACIER
INTERNATIONAL PEACE PARK



Free Campgrounds

Major campgrounds at Sprague Creek, Avalanche Creek, Rising Sun, Swiftcurrent, Two Medicine, and Apgar Village have fireplaces, tables, sanitary facilities, and running water. A coffee shop, soda fountain, and camp store are at the Swiftcurrent and Rising Sun campgrounds.

Smaller campgrounds for those desiring solitude are at Kintla Lake, Bowman Lake, Polebridge, Quartz Creek, Logging Creek, Fish Creek, Walton Ranger Station, and Cut Bank; these camps have fireplaces, tables, and toilets.

Hikers desiring to camp away from these designated campgrounds must obtain fire permits from the nearest ranger. No fires shall be built outside designated campgrounds unless a written fire permit has been secured from a ranger.

It is advisable to bring a small gasoline or kerosene stove for cooking.

Trailer space is available in all campgrounds except Sprague Creek. The dirt road from Fish Creek Campground to Kintla and Bowman Lake campgrounds (North Fork area) is too narrow for large house trailers. Contact a ranger before attempting this route with a house trailer.

Accommodations

All accommodations and services, unless otherwise stated, are operated under contract with the Government, and rates are approved by the National Park Service. For rates or reservations, address the Glacier Park Co., from June 1 through October 15 at East Glacier Park, Mont.; October 16 through May 31, 218 Great Northern Building, St. Paul 1, Minn.

Hotels and cabins. The Glacier Park Co. operates hotels in, and a lodge adjoining, the park. They are the Many Glacier and Lake McDonald Hotels, and the Glacier Park Lodge, open from June 15 to September 10.

Chalets. Granite park and Sperry Chalets are operated by B. Ross Luding, Martin City, Mont. Open July 1 through Labor Day for lodging and meals.

Groceries, coffee, sandwiches, film, and other incidentals are available at the store in the Two Medicine area.

Cabin camps, stores, and coffee shops are located at Rising Sun and Many Glacier. Housekeeping cabins are available at Many Glacier. Only sleeping accommodations are to be had at the Rising Sun cabins. Meals may be obtained at the coffee shops and hotels.

Additional cabin facilities, and general stores carrying a complete line of campers' supplies and photographic film, are available on private lands within the park at Apgar Village and near Lake McDonald Hotel. Facilities are also available along the highways adjacent to the park.

All-expense tours. The park concessioners have jointly arranged attractive all-expense tours, which include bus fare, meals, hotel lodging, and launch excursion. Trips which include the Prince of Wales Hotel, Waterton Lakes National Park, are also available. Information concerning rates or reservations may be obtained from the Glacier Park Co.

Transportation. Bus service is maintained between all hotels, including the Prince of Wales Hotel, in Waterton Lakes National Park, and Two Medicine Lake. Sufficient time is allowed at Two Medicine Lake to fish or enjoy a launch trip.

Saddle horses may be engaged for trips in the park at Many Glacier and Lake McDonald Hotels.

Boats. Regular launch service is available on Two Medicine, Swiftcurrent, Josephine, McDonald, and St. Mary Lakes. Regular launch service is maintained between the townsites in Waterton Lakes National Park and the head of Waterton Lake in Glacier National Park.

Rowboats are available from June 15 to September 10 at Two Medicine, Swiftcurrent, Josephine, McDonald, and St. Mary Lakes.

Post office, telephone, and telegraph. Post offices are at East Glacier Park, West Glacier, Babb, Polebridge, and (from June 15 to September 10) Lake McDonald, Mont. Telephone and telegraph service is available at all hotels.

Publications

The following natural history publications about Glacier National Park are on sale at park headquarters, hotels, and other places in the park:

Guide Book to Glacier National Park	\$1.60
Motorist's Guide to the Going-to-the-Sun Highway30
Geological Story of Glacier National Park30
Glaciers and Glaciation30
Mammals of Glacier National Park	1.10
Trees of Glacier National Park55
101 Wildflowers of Glacier National Park55

The prices of the above publications include postage. Mail orders should be addressed to Glacier Natural History Association, West Glacier, Mont.

A topographic map of the park is available at various points in the park, and by mail from the Geological Survey, U. S. Department of the Interior, Washington 25, D. C., for 50 cents.

Mission 66

Mission 66 is a program designed to be completed by 1966 which will assure the maximum protection of the scenic, scientific, wilderness, and historic resources of the National Park System in such ways and by such means as will make them available for the use and enjoyment of present and future generations.

Forest Protection

Forest fires are a terrible and ever-present menace. Although some major fires were caused by lightning, thousands of acres of burned forest are proof of some person's criminal carelessness or ignorance. The record of major fires is:

1910—one of the most disastrous fire years in the history of the Northwest. Results are visible along U. S. 2.

1916—burned area in the Two Medicine Valley.

1926—several large fires entered the park from the west. The area northwest of Lake McDonald burned.

1929—the area around the western entrance was burned by a man-caused fire starting west of the park.

1936—the burned area visible from the switchback on the west side of the Going-to-the-Sun Road and at Many Glacier was a fire started by lightning on the Glacier Wall which swept over Swiftcurrent Pass.

1945—unusually dry year, with little rainfall, culminating in severe dry lightning storm August 25, starting 28 fires. Curley Bear Mountain fire burned 290 acres; all others extinguished while small. First use of parachute jumpers for fire fighting in Glacier.

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Help Us Protect This Park

Park regulations are designed for the protection of the natural features of the park, as well as for your welfare and safety. The following synopsis is for your general guidance. Complete regulations may be seen at park headquarters and at ranger stations.

Fires. Fires are the greatest menace to the forests of Glacier National Park. *Know your fire is out before you leave it.* Fire permits must be obtained from a ranger to build fires away from designated campgrounds.

Speed regulations. Automobiles and other vehicles shall be operated so as to be under safe control of the driver at all times. The speed shall be kept within such limits as may be necessary to avoid accidents. Speed limit is 45 miles per hour unless otherwise posted; one-and-a-half-ton trucks and over, 35 miles per hour. Keep gears meshed and out of overdrive on grades.

Parking. Vehicles stopping for any reason shall be parked so as not to interfere with travel on the road. No parking on curves.

Accidents. All accidents, of whatever nature, should be reported as soon as possible by the persons involved to the nearest ranger station or to park headquarters.

Camps. Camping is restricted to designated campgrounds. The limit of stay is 30 days, except at Sprague Creek where the limit is 15 days. Burn all combustible garbage in your campfire; place tin cans and unburnable residue in garbage cans. Do not contaminate watersheds or water supplies.

Preservation of natural features. Trees, flowers, and other vegetation, and all wildlife, rocks, or fossils may not be disturbed, injured, or destroyed.

Fire prevention. Park rangers, assisted by fire-control aides, constitute the fire organization. Lookout stations are located strategically and observers maintain a constant watch for forest fires. Telephones and radios provide communication between fire personnel. Tools and equipment are kept at key locations.

Anyone discovering a forest fire should report it to the nearest ranger station, hotel, road camp, or park headquarters.

Campfires should be built only at designated campgrounds. At times of high winds or during exceptionally dry periods, fires should be lighted only in stoves provided at the free auto camps. At times of extreme hazard, it is necessary to restrict smoking to hotel and camp areas. Notices are then posted accordingly. Permits to build fires at any campsites other than in auto camps must be secured in advance from a park ranger.

You must be sure that campfires are put out before leaving them, even for a few minutes. Fires may be extinguished by thoroughly mixing ashes with water.

Dogs and cats. Dogs and cats must be kept on leash, crated, or otherwise under physical restrictive control at all times. They are not allowed on park trails.

Fishing. The park limit is 10 fish per day for each person fishing, except that the total catch shall not have a net weight in excess of 15 pounds and 1 fish per day for each person fishing. The limit in possession shall not exceed 1 day's catch for each person fishing. The possession or use for bait, of live or dead minnows, chubs, or other bait fish, salmon eggs or fish spawn, or any preparation therefrom or imitation thereof, is not permitted. Fishing with multiple spinner baits (lures with more than one spinner on a single line) is not allowed.

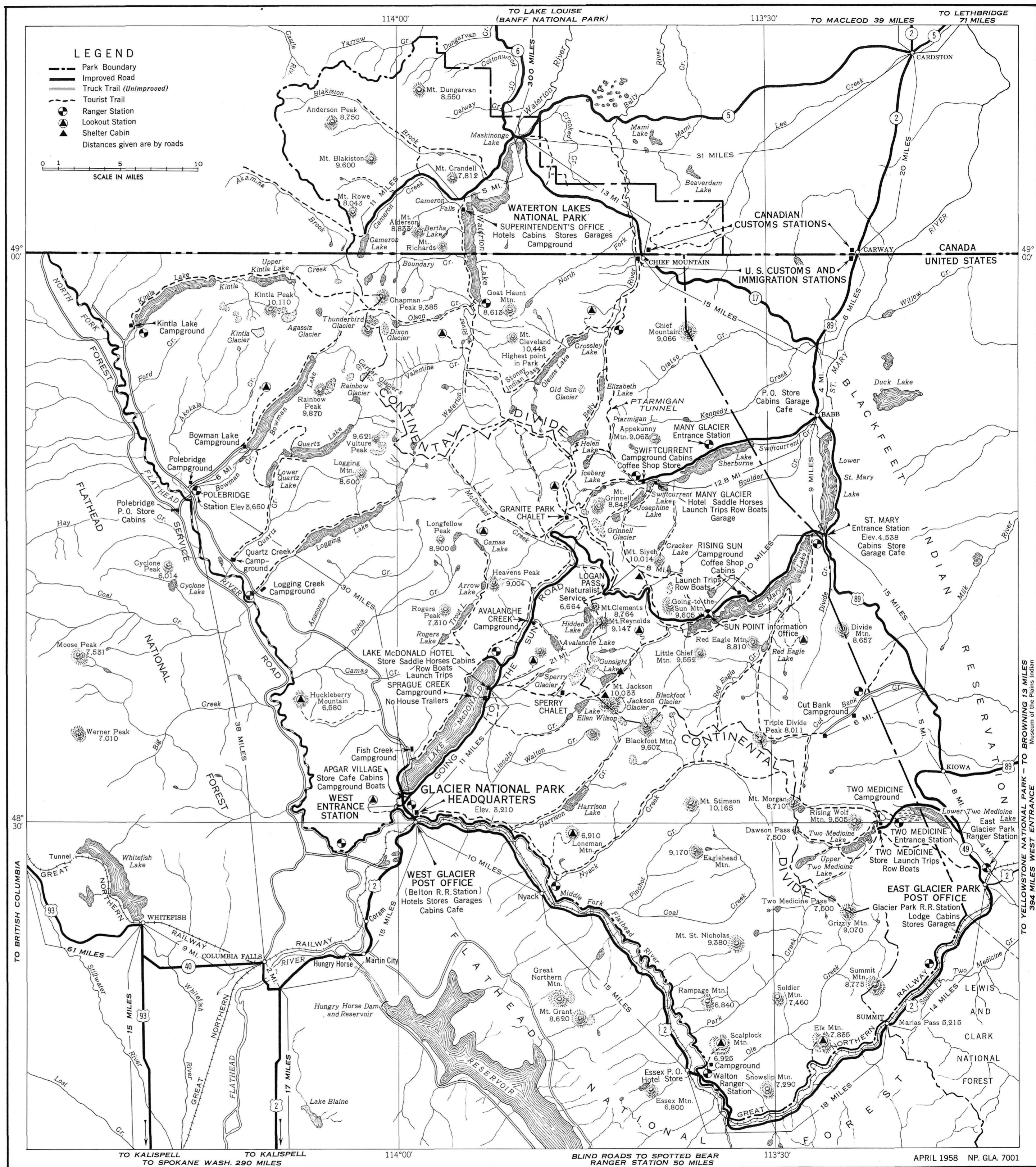
Hunting. The park is a sanctuary for wildlife and hunting within park boundaries is not permitted. Unless adequately sealed, cased, broken down, or otherwise packed to prevent their use while in the park, firearms are prohibited, except upon written permission from the superintendent.

Wild animals. The feeding, touching, teasing, or molesting of wild animals is prohibited.

Lost and found articles. Persons finding articles should deposit them at the nearest ranger station, leaving their own names and addresses. Articles not claimed by the owners within 60 days will be returned to the finders.

Offenders. Persons charged with violations of park rules and regulations are tried at park headquarters by the United States Commissioner.

PRIVATE LANDS
Private lands within the park were either owned or had been filed upon prior to the time legislation was enacted which established the park. These private lands and structures thereon are not part of the park facilities and the rights of the property owners should be respected.



GUIDE MAP OF WATERTON-GLACIER INTERNATIONAL PEACE PARK