Glacier



Glacier

NATIONAL PARK

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Your visit to Glacier National Park can be a rewarding experience; memories of its lofty peaks, foaming waterfalls, gleaming lakes, and velvety-green forest carpet will be an enduring inspiration.

Please help protect this park and all it contains, so that those who visit in years to come will find it as beautiful as it is today.

In 1932, the Waterton-Glacier International Peace Park was established to commemorate the good will between the United States and Canada. Park boundaries crossing National boundaries—what better expression of common interests and parallel values? Glacier National Park forms the United States section of this international 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.

Glacier National Park lies astride the Continental Divide in northwestern Montana. It contains nearly 1,600 square miles of some of the most spectacular scenery and primitive wilderness in the entire Rocky Mountain region. From the park, streams flow northward to Hudson Bay, eastward to the Gulf of Mexico, and westward to the Pacific. It is a land of sharp, precipitous peaks and sheer knife-edged ridges, girdled with forests. Alpine glaciers lie in the shadow of towering walls at the head of great ice-carved valleys.

The park is a meeting place of plants that are characteristic of the west coast, Great Plains, and Rocky Mountains. The diversity of its terrain provides habitats for abundant and varied groupings of plants and animals. Conditions range from open, grassy, parklike areas, through dense forests, to arctic-alpine meadows above timberline. There is a noticeable difference in the composition of plant groups on the east and west sides of the Continental Divide.

Here deposition, faulting, and erosion are displayed on a tremendous scale. The Lewis overthrust, a gigantic fault, disturbed and displaced some of the oldest sedimentary rocks on earth, thrusting them as much as 35 miles over younger deposits, so that, within the park, the normal relation of rocks is reversed. From this upland, glaciers and streams shaped the present peaks and valleys. In their retreat, these sculpturing masses of ice left behind a wealth of glacial land forms.

Glacier National Park is one of the outstanding wilderness areas in the National Park System and one of the few remaining unspoiled primitive regions left in the United States. Here, in the rugged fastness, amid tranquil forests or beside lakes of almost unbelievable solitude and beauty, man can find peace and quiet to soothe jangled nerves and ease the tensions produced by the rush and stress of our high-speed, mechanized civilization.

GETTING TO KNOW YOUR PARK

On Foot

This is one of the greatest trail parks in the United States, with more than 1,000 miles of wilderness trails inviting your exploration. Most of the park is accessible to hikers from all campgrounds, chalets, and hotels. The trails are well marked, and you need not worry about venomous snakes or such unpleasant plants as poison-oak or poisonivy. We suggest that you pack your lunch, leave your automobile in a parking area, and spend a day or as much time as you can spare in the out of doors. Intimacy with nature is one of the priceless experiences offered in this

mountain sanctuary. Surely a hike into the wilderness will be the highlight of your visit to the park and will provide you with many vivid memories.

Trail trips range in length from short, 15-minute walks along self-guiding nature trails to hikes that may extend over a period of several days. You are invited to join ranger-naturalists on 2-hour, half-day, all-day, and overnight trips. And you may bring or organize your own party.

If you would like to take an interesting overnight hike without being burdened with camping equipment, you may hike to either Sperry Chalets or Granite Park Chalets, where meals and overnight accommodations are available.

There are shelter cabins at Gunsight Lake and Gunsight Pass, Fifty Mountain, and Mokowanis Junction. The shel-

ter cabins are equipped with cots and cooking stoves, but you will have to bring your own sleeping and cooking gear.

For back-country travel, you will need a topographic map that shows trails, streams, lakes, mountains, and glaciers. You may purchase a topographic map at park headquarters, hotels, and other places within the park, or by mail.

Experienced hikers know and observe the following rules; however, not all park visitors are experienced hikers and woodsmen, and so here are a few words of caution. Register your hiking plans at the nearest ranger station, and let the park rangers know when you have reached your final destination. Stay on the trails.

For further information on hiking, see chapters 6 and 7 of Ruhle's *Guide to Glacier National Park*.

Grinnell Glacier.





Ever try to hike with a wiggly pack? Great Northern Railway photo.

By Horseback

It is to the leisurely traveler, the hiker, and the horseback rider, that the park bestows its greatest gifts. After you have seen the easily accessible things, and if you do not care to hike, you may like to engage a competent guide, take horses and camping outfit, and follow the trails. If you do, you are likely to gain a better understanding of the increasing importance of our areas of unspoiled wilderness. On such trips, you may venture far afield, explore glaciers, climb divides for extraordinary views, catch glimpses of rarer wildlife species, search for and find the best fishing, and spend restful days in places of inspirational beauty.

You can rent saddle horses for trips within the park at Many Glacier Hotel and Lake McDonald Lodge at Apgar, and at St. Mary and East Glacier. Guides are required for all horseback trips. For further information about such trips, write George Moore, Glacier Park Saddle Horse Co., MG Ranch, Pablo, Mont. (winter), or Babb, Mont. (summer).

By Automobile

Going-to-the-Sun Road, a renowned engineering accomplishment, links the east and west sides of the park, crossing the Continental Divide at Logan Pass (elev. 6,664 feet)

From your automobile as you gently but steadily climb above tree line, or from one of the many overlooks, you can see magnificent scenery, ranging from sparkling, glacier-fed lakes, swift, tree-lined streams, deeply shaded cedar forests carpeted with ferns, and lofty waterfalls, to broad meadows of alpine flowers at Logan Pass. The pass is usually closed by snow from mid-October until early June. Going-to-the-Sun Road, about 50 miles in length, connects with U.S. 89 at St. Mary and with U.S. 2 at West Glacier. A narrrow dirt road from headquarters follows the North Fork of the Flathead River to Bowman and Kintla Lakes.

U.S. 89, the Blackfeet Highway, 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.

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. Hard-surfaced branch roads lead from U.S. 89 into the Two Medicine and Many Glacier Valleys. A narrow dirt road provides access to Cut Bank Valley.

U.S. 2 follows the southern boundary of the park between the villages of East Glacier Park and West Glacier, a distance of 57 miles.

Throughout the park look for roadside exhibits describing points of interest.

Photography

You will want to get out your camera the minute you set foot in Glacier, for the amazing procession of wildlife, wildflowers, and superb mountain scenery will present more subjects than you can possibly take during your visit.

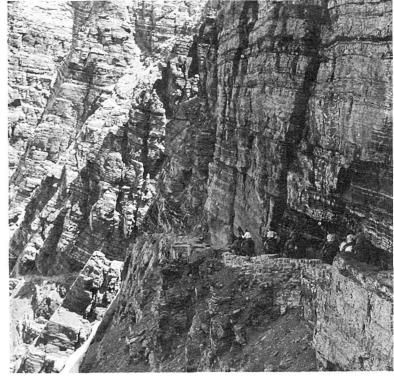
Glacier's intense blue skies provide ideal atmospheric conditions for the camera artist. Here too you will find sharp contrasts for both black-and-white and color shots.

Photo supply shops in each of the hotels and cabin-camp stores operated by Glacier Park, Inc., will take care of your film needs and provide developing and film service.

The Naturalist Program

To help you understand and enjoy the wonders of the park, the Service provides naturalist-conducted activities in several areas of the park, from about June 15 until September 10. These services are free except for the boat rides, and for lodging in connection with overnight trips to Sperry Glacier, Granite Park, and Garden Wall. Schedule leaflets, available at entrance stations, information offices, hotels, and cabin-camp offices, include the following activities:

Area	Activity
Headquarters; Apgar	Naturalist laboratory and workshop
	at park headquarters. Evening program at amphitheater, Apgar Campground.
	Nature walk to Avalanche Lake. Naturalist-accompanied boat trips from Lake McDonald Lodge. Evening programs, Lake McDonald Lodge and Avalanche Campground. Self-guiding nature trail, Avalanche Campground.
Sperry Glacier	Naturalist-conducted overnight trip from Lake McDonald Lodge to Sperry Chalets and Sperry Glacier.
Logan Pass	Information service daily. Orientation path. Free telescope during open hours to view mountain goats and scenery. Nature walks to Hidden Lake Overlook.
	Naturalist-led all-day or overnight hikes along Garden Wall to Gran- ite Park Chalets.
St. Mary; Rising Sun; Sun Point.	Sun Point information station; photographic point, wildflower display, maps, viewfinder, and exhibits. Naturalist-accompanied boat and combination boat and trail trip, St. Mary Lake. Evening programs, St. Mary Dormitory and St. Mary and Rising Sun
	Campgrounds. Self-guiding nature trail to Baring Falls.
Many Glacier	Nature walks to Grinnell Glacier, Ice- berg Lake, and Granite Park Chalets. Naturalist-accompanied boat and trail trips to Grinnell Lake.
	Evening programs, Many Glacier Hotel and Swiftcurrent Camp- ground.
- 16 li i - 1 l	Self-guiding nature trail along Swift- current Lake. Other walks as announced.
I WO Medicine Lake	Nature walks to interesting places. Naturalist-accompanied combination boat and trail trips to Twin Falls. Evening program, Two Medicine Campground. Trick Falls self-guiding nature trail.
	Nature walks to interesting places in the vicinity of Bowman Lake. Evening programs four times a week at Bowman Lake Campground; once a week at Kintla Lake Campground.
East Glacier Park	 Evening talk once a week, Glacier Park Lodge.
Waterton Lake	. Self-guiding nature trail from dock to Waterton Lake Ranger Station.
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The trail on the north side of Ptarmigan Tunnel.

Fishes and Fishing

Among the 22 kinds of fishes found in the park's clear waters, the pygmy whitefish is probably the most unique, for it has been discovered in only a few widely separated localities in North America. And the seasonal migrations of the native cutthroat, dolly varden, and kokanee into and out of lakes on the west side of the park provide much speculation.

Angling amidst the scenic grandeur can be an exhilarating experience. Awaiting your skill are sport fishes such as the cutthroat, rainbow, lake, and brook trouts, dolly varden, kokanee (landlocked sockeye salmon), whitefish, grayling, and pike.

In Glacier, no license is required. General angling season extends from late May to October 15, although special seasons apply to some waters. In any one day, you may keep 15 pounds of fish if your total catch does not exceed 10 fishes, but you may not possess more than one daily limit. The use or possession of salmon eggs or other fish eggs or any preparation therefrom or imitation thereof, or any kind of live or dead fish for bait, is prohibited.

You can obtain complete fishing regulations from the Superintendent, West Glacier, Mont., or at entrance stations or information offices.

THE SEASONS

The main summer travel season is from June 15 to September 10, when the major hotels and cabin-camps are in operation. Most roads outside the park are open throughout the year. Accommodations outside the park or on private lands within the park are available from about May 15 to October 15. The Going-to-the-Sun Road is usually open by June 15 and is kept open until about October 15, if weather permits.

During the summer, sudden rain squalls or thunder-showers may occur, and so—a word to the wise for hikers—add a raincoat to your equipment. You will need warm clothing while hiking in the higher elevations at all times of the year. Days are warm, but when the sun sets or during storms you will reach for a sweater, and nights are chilly!

Regardless of the season you come, we hope that you will follow the advice of the Scottish-born naturalist, John Muir, who, after a visit to Glacier, wrote these inspirational words:

"Give a month at least to this precious preserve. The time will not be taken from the sum of your life. Instead of shortening, it will indefinitely lengthen it and make you truly immortal."

HOW THE LAND WAS FORMED

Nothing seems more permanent than mountains; yet, considered geologically, they are transient features of the land-scape. The mountains of Glacier National Park are young, but their origins lie in the dim past, in a period when life capable of leaving a record in the rocks was just beginning.

The story of the park begins at least a half-billion years ago. At that time the area was the bed of an extensive shallow sea. The material now solidified into rock was deposited as silt, sand, clay, and lime muds. Pressure, heat,

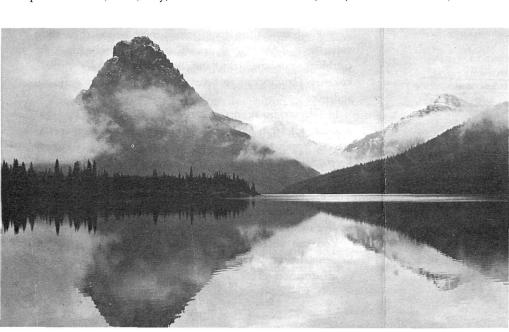
and chemical changes eventually solidified these into argullites, quartzites, and limestones, forming the multicolored strata that now make up Glacier's spectacular scenery. Later, molten rock penetrated into cracks and between the rock layers; lava oozed along the ancient sea floor. Also scattered throughout these rocks are remains of deposits made by colonies of algae.

The story of the elevation of these rocks from sea bottom to soaring heights is a dramatic chapter in the formation of the landscape of Glacier National Park. Long after the seas had disappeared, stresses applied to the earth's crust from the northeast and southwest caused it to rise in long, wavelike folds. When the rock could no longer stand these tremendous strains, it split asunder, and one edge was thrust upward and over the other edge, forming the world-famous Lewis overthrust. This was not, as it may seem, accomplished all at once—the movement covered millions of years; in fact, it would probably have been imperceptible had anyone been present to witness the event.

This tremendous mass of rock, thousands of feet thick and hundreds of miles long, was thrust eastward at least 35 miles. It is well exposed on the eastern side of the park, and Chief Mountain, standing out by itself near the Canadian border, is a remnant of this overthrust mass.

Uplifting of the Rocky Mountain area at this time produced new streams and gave renewed life to older streams. They commenced to cut deeper and deeper into the mountains and to carve narrow V-shaped valleys and side valleys.

The park's final chapter begins with the ice age, about a million years ago. A change in climate resulted in the formation of vast ice sheets over much of northern North America and Europe. Heavy snows accumulating in the area of Glacier National Park began to form individual ice masses, or mountain glaciers.



Two Medicine Lake, at dawn.



Trail to Iceberg Lake, route of the wildflowers.

Mel Ruder, Hungry Horse News, photo.

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GLACIER NATIONAL PARK WATERTON - GLACIER INTERNATIONAL PEACE PARK ALBERTA - MONTANA SCALE IN MILES ONTINENTAL TO LAKE LOUISE , 300 MILES (BANFF NATIONAL PARK) Mt. Dungarvan AWATERTON LAKES NATIONAL PARK Mt. Blakiston TO CARDSTON, AKAMINA HEADQUARTERS MAMI LAKE Kinnerly KINTLA WATERTON LAKES **~** BEAVERDAM LAKE LAKE BOUNDARY Mt. Richards BROWN WATERTON
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Mountain 6,664

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BLACKFOOT Mt. Logan GLACIER 9.262 HARRISON Walton GLACIER APGAR A Blackfoot R RED EAGLE Mountain PASS 9,607 6,910 Mountain (HEADQUARTERS INCOL **CUT BANK** Mt. James • 9,375 Glacier Triple Divide HARRISON TRIPLE DIVIDE Loneman CREEK FLATHERD Mountain 6,910 Mt. Stimson Mt. Pinchot TO BROWNING, 13 MILES (MUSEUM OF THE PLAINS INDIAN) PITAMAKAN Martin City Hungry CUT BANK Nyack MARTHAS Horse Kiowa TO KALISPELL, 23 MI WHITEFISH, 16 MI COLUMBIA FALLS, 7 MILES HUNGRY HORSE DAM Eaglehead Mountain 9,170 Mt. Doody MEDICINE LAKE 5,165 Mt. Henry 8,870 YELLOWSTONE Mt. St. Nicholas Great Northern STANTON Mountain 8,700 M GLACIER 7,500 TWO MEDICINE Mt. Grant • GRANT GLACIER Pinnacle CREEK FIREBRAND Shelter Cabin O Campground Ranger Station Summit Fire Lookout Essex Mountain 6,800 Mountain 6,925 Railroad N Distance Between Points WALTON Summi Paved Road D S Dirt Road Z LEWIS Trail AND CLAR 0 Park Boundary NATIONAL Ш FOREST FLATHEAD

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In the upper valleys at high elevations, the snow and ice formed small glaciers. These in turn joined to form larger glaciers. Large amphitheaters, called cirques, formed at the headwall of the glaciers—a result of ice erosion or the quarrying effect of the ice. Down the stream-cut valleys the developing glaciers flowed with infinite slowness, plucking and gouging their way, producing the **U**-shapes of today.

Development of the main glaciated valleys left the smaller stream-cut and glaciated side valleys high above the floors of the main valleys; they are called hanging valleys. From them, streams plunge down for hundreds of feet. In areas of less resistant rock, glaciers scoured out basins for the present-day lakes. Repeated advances and retreats of the great glaciers carved and recarved the landscape, leaving rugged mountains and **U**-shaped valleys. Water erosion today is, further modifying the landscape. You can see the results and the forces that are still altering the landscape—the lofty peaks, the active glaciers, the glaciated valleys, the waterfalls, and the sparkling streams and lakes.

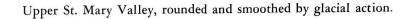
You may see many of these formations and features from the park's roads, but the farther you get from the roads, the greater the reward. Travel into the less accessible, but most spectacular parts can be by foot, horse, or boat. By such means, you may easily obtain firsthand views of the rock formations or the glaciers; in fact, free guided trips are available to both Sperry and Grinnell Glaciers.

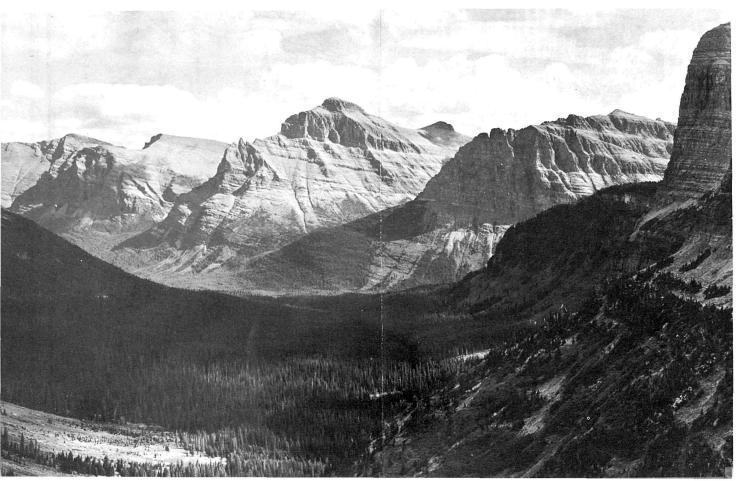
The Rock Formations

You can easily distinguish four differently colored rock formations (and the igneous sill) in the park. The fact that these formations occur in alphabetical order, with the oldest formation the lowest, will help you.

The lowest easily recognizable formation is the Altyn. About 2,000 feet thick, it is gray-blue and weathers to pale buff. Good places to examine this formation are: on the ridge immediately behind Many Glacier Hotel; above Swiftcurrent Falls; and at the narrows of St. Mary Lake. In the Two Medicine area, it forms the terrace over which Trick Falls drop. It contains fossil algae colonies.

On top of this is a 2,000- to 5,000-foot layer of Appekunny argillite. It is a greenish color, and it may be seen





along the Going-to-the-Sun Road near McDonald Falls on the west side and for several miles east of Sun Point on the east side. You can hike over it on the lower part of the Grinnell Glacier trail.

The Grinnell argillite, the next formation, is nearly 3,000 feet thick. Red to purplish, it is the most colorful formation in the park. It constitutes an important scenic feature along many miles of the Going-to-the-Sun Road. It comprises the bulk of most of the peaks on the east side of the park. You cross it on the trails to Grinnell Glacier and Cracker and Iceberg Lakes; the Going-to-the-Sun Road crosses it near Baring Falls on the east side and near Avalanche Creek on the west side. It is well exposed at both Sperry Chalets and Sperry Glacier, where the violently folded white quartzite layers within the red argillite make it very conspicuous and showy.

The fourth of these formations, the Siyeh, ranges from 1,800 to 5,000 feet in thickness. It is a dark, bluish-gray formation, weathering to buff. It caps most of the taller peaks of the park. You may see it best in the Garden Wall from the Many Glacier area. Through this formation runs an igneous sill (layer of volcanic rock), which few persons fail to notice. It is most evident on the face of the Garden Wall and on Mount Wilbur in the Many Glacier area. It is most accessible at Logan Pass, where you may examine it on the trail to Granite Park Chalets, about 200 yards from the pass. The sill, about 100 feet thick, has turned the limestone on either side of it to marble by the tremendous heat it gave off while it was still molten.

Several other formations occur above the Siyeh, but they are very localized. The Shepard formation is exposed on the summits of Swiftcurrent, Reynolds, Clements, Citadel, and Almost-a-Dog Mountains. The Kintla formation outcrops on a few peaks in the northwest portion of the park. Purcell lava, which was laid down under the sea, can best be seen at Granite Park.

WILDFLOWERS AND TREES

The colorful display of wildflowers is one of the greatest attractions in Glacier National Park. Few areas in western United States have a richer variety and greater abundance of trees and wildflowers. Here, southern forms mingle with northern ones, and western varieties meet those of the East. In all, over 1,000 species of trees and wildflowers may be found in Glacier National Park.

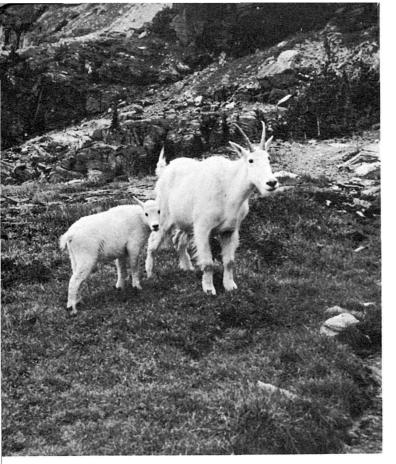
Wildflower shows begin in early spring at the lower elevations and progress up the mountainsides as the snow recedes, culminating in the alpine floral displays when the season is well advanced. At no time, from early spring to early autumn, can you fail to find a flower display some-



Beargrass.

where within the park. And with the coming of autumn, the scarlet berries and yellow and orange leaves make the park a colorful spectacle.

Showiest of all the park's myriad flowers is the beargrass, usually considered the park flower. It neither belongs to the bears nor is it a grass. Unfortunately, we do not know who named it or why they decided on "beargrass." It belongs to the lily family. It sometimes covers acres of open, dry forest. In June, it commences to bloom on the valley floors, and it continues into August at the higher elevations. In early summer, at the higher places in the park, the yellow lambstongue fawnlily ("glacier lily") puts on a spectacular display, growing along the edges of snowbanks and even through the snow. Among the more common plants of the park are the scarlet painted-cup ("Indian paintbrush"), common perennial gaillardia ("brown-eyed-susan"), American falsehellebore, western pasqueflower, western thimbleberry, common cowparsnip, red baneberry, Sitka mountainash, bearberry, fireweed, aster and aspen fleabanes, huckleberry, and bearberry honeysuckle.



Mountain goats.

Mel Ruder, Hungry Horse News, photo.

Cone-bearing trees dominate the lower landscapes of Glacier. Fifteen species are found, two of which have fleshy "cones" and one of which loses its needles in the winter. The most common tree in the park is the lodgepole pine, which occurs on both slopes of the park, growing in pure stands or mixed with spruce, fir, and Douglas-fir. The tree with the fernlike leaves seen commonly in the McDonald Valley is the western redcedar. It occupies much the same area as the hemlock and yew, and it is commonly associated with spruce and fir. The needle-losing "evergreen" is the western larch. In the autumn, its golden-yellow needles stand out in bright contrast against a background of forest greenery.

Ponderosa pine may be found in the northwest part of the park along the North Fork truck trail. Other coniferous trees of the park include the western white pine, limber pine, whitebark pine, subalpine fir, grand fir, Engelmann spruce, and junipers.

Two species of alder, 25 species of willow, black hawthorn, common chokecherry, pin cherry, and Douglas maple complete the list of trees found in the park.

BIRDS AND MAMMALS

To the geologic story and the floral displays of Glacier National Park can be added 57 species of mammals and 216 species of birds.

Many of the species that you can see in the park have disappeared over much of the country, and so Glacier, as well as other National Parks, has become an outstanding outdoor wildlife exhibit.

Here you may see the mountain goat, the bighorn, and (if you are fortunate) the scarlet-crested, crow-sized, raucous-voiced pileated woodpecker. You will, no doubt, see bears, but be wary of them—they have lost some fear of man and can be very dangerous.

It is hard to tell exactly where any of these animals can be seen, for they are constantly on the move. In general, look for water birds on any of the park's lakes. Thickets and burned-over areas are centers of birdlife, especially along lakeshores and streambanks. Above timberline, the ptarmigan, mountain goat, gray-crowned rosy finch, and the pipit may be seen.

Common smaller animals usually seen are the marmot, ground squirrel, pine squirrel, chipmunk, coyote, porcupine, snowshoe hare, and beaver. Larger mammals to watch for are white-tailed deer, mule deer, moose, and American elk. Not-so-common animals you might see are marten, wolverine, wolf, otter, grizzly bear, and the rare (for Glacier) northern bog lemming.

The park's wilderness trails provide the best place to see wildlife. Hawks and eagles wheel overhead, grouse frequently zoom up from underfoot, the slaty-gray dipper (water ouzel) may be seen along swift-flowing streams, the Clark's nutcracker scolds raucously from the treetops, and thrushes are heard singing in the undergrowth. The most handsome bird is probably the osprey, although the majestic bald eagle would run a close second. Common birds you may see along the trails are the sparrows, bluebirds, warblers, kinglets, chickadees, and nuthatches.

THE HUMAN STORY

Prehistory and History

The archeology of northern Montana is not well known, but there is evidence that Indians have occupied the region for about 10,000 years. Stone weapon points, ranging in age from those used by hunters of extinct species of bison to the arrowpoints of historic tribes, have been found throughout the area.

The occupants of the northern Montana plains during prehistoric times have not been identified. The Blackfeet, known to have been in Eagle Hills of South Saskatchewan about 1720, penetrated this region before they acquired the horse. With the acquisition of the horse and possession of firearms, they consolidated their hold on the area. The Kutenai Indians, who now dwell only west of the Continental Divide, were displaced by the better armed and more mobile Blackfeet. A Siouan-speaking group, the Crows, who might have been pushing into the area from the southeast at about the same time, were driven beyond the Yellowstone River. The Blackfeet dominated the region until curbed and confined to reservations.

In 1806, the explorer, Meriwether Lewis, reached a point on the Marias River about 30 miles from the present park boundary.

The valuable furs of the beaver found upon the upper tributaries of the Missouri River attracted venturesome fur trappers and traders from St. Louis, beginning in 1807. The trappers explored the region of the Three Forks of the Missouri, but the continuing hostility of the Blackfeet prevented their entry into the Glacier National Park area.

In 1853, A. W. Tinkham, a Government engineeer exploring a route for a Pacific railroad, ascended Nyack Creek by mistake and crossed over the ridge to Cut Bank River and Fort Benton. He reported the country as being impractical for railroad purposes.

The next to enter the park area was a group of surveyors establishing the Canadian boundary in 1861.

Marias Pass, where the Great Northern Railway crosses the Continental Divide, was explored by John F. Stephens in December 1889. A monument has been erected in the pass to commemorate this exploit.

In 1890, copper ore was found at the head of Quartz Creek, and there was a rush of prospectors. The east side of the Continental Divide, being part of the Blackfeet Indian Reservation, was closed to prospectors, and Congress was importuned to take steps that would open the area to investigation of the mineral resources. In 1896, this land was purchased from the Indians for \$1½ million, but not enough copper was found for profitable mining and the boom collapsed.

After the excitement over the copper had died down, the region was visited only by big-game hunters and occasional sightseers until it was made a National Park in 1910.

The Indians Today

Today the Blackfeet on the reservation adjoining the park on the east remain a picturesque reminder of their former glory. They have laid aside their intense hostility to the white man and have reconciled themselves to the march of civilization. Some of them, dressed in colorful native costume, demonstrate their traditional dances occasionally at the Glacier Park Lodge during the summer season.

At Browning, 12 miles east of East Glacier Park, a museum is maintained to interpret the customs and ways of life of the Indians of the Great Plains. The museum is operated by the Bureau of Indian Affairs of the U.S. Department of the Interior. An arts and crafts center in the building serves as a central market for handicraft articles of the present-day Indians of the reservations of the northern plains.

Establishment of the Park

When we think of the priceless benefits offered by Glacier and the other National Parks, we naturally ask the question, "When did the idea of this park originate, and who was responsible for it?" There is no clear answer because we do not know what thoughts might have run through the minds of many early explorers and travelers, but we do have written records of the ideas of a few of these men.

One of them was George Bird Grinnell, popularly known as the father of the movement to establish Glacier National Park, who first came to the area in 1885. He became captivated with the region and returned annually for many years. He saw the possibilities of the area, and for 25 years he labored courageously to have it set aside as a National Park, contending against Indian problems, opposition of those who wished to further their private interests, and even arguments of congressional committees.

Finally, in the spring of 1910, after previously rejecting two bills to make the area a National Park, Congress passed and sent to the President a bill establishing Glacier National Park. The President signed the bill on May 11, 1910.

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 Presidential proclamation, as authorized by the Congress of the United States and the Canadian Parliament.

At the dedication exercises in June 1932, the following message from President Hoover was read:

"The dedication of the Waterton-Glacier International

Peace Park is a further gesture of the good will that has so long blessed our relations with our Canadian neighbors, and I am gratified by the hope and faith that it will forever be an appropriate symbol of permanent peace and friendship."

PREPARING FOR YOUR VISIT

Other Publications About the Park

For your added enjoyment and understanding of the park, there are many books and other publications that you may wish to purchase before you come here or after you arrive. Following is a selected list of publications on sale at park headquarters, hotels, and other places within the park:

Guide to Glacier National Park, by George C. Ruhle.

Motorist's Guide to the Going-to-the-Sun Road, by M. E. Beatty.

The Geologic Story of Glacier National Park, by James L. Dyson.

Rocks and Fossils of Glacier National Park, by Clyde P. Ross and Richard Rezak.

Glaciers and Glaciation in Glacier National Park, by James L. Dyson.

Mammals of Glacier National Park, by R. R. Lechleitner. Trees and Forests of Glacier National Park, by Donald H. Robinson.

101 Wildflowers of Glacier National Park, by Grant W. Sharpe.

Topographic Map of Glacier National Park, prepared by the Geological Survey, U.S. Department of the Interior.

Hiking Trail Map, by Gingery and Wilhelm.

Write to Glacier Natural History Association, West Glacier, Mont., for prices and complete list of publications available from this non-profit organization.

What to Bring

As a rule, Glacier visitors are inclined to carry too much. We suggest a very inexpensive and simple outfit—comfortable clothes and stout shoes. You will need light clothing for sunny days and indoors and a warm jacket, sweater, or topcoat for cool nights. On trails, afoot or horseback, you will appreciate a wool shirt, slacks or levis, a brimmed cap, a raincoat, and sunglasses.

HOW TO REACH THE PARK

By automobile. You can reach Glacier National Park over a number of modern well-marked roads. It is on U.S. 2 and 89 and near U.S. 91 and 93. Automobile associations, touring services, travel bureaus, chambers of commerce, and

leading gasoline stations can furnish road information and maps. You should make local inquiry concerning road conditions and snow in high mountain passes in May and June and in September and October.

By train. The park is on the main transcontinental line of the Great Northern Railway. For information about railroad fares and services, inquire of local ticket agents or travel bureaus, or write the Passenger Traffic Manager, 175 East Fourth Street, St. Paul 1, Minn. Regular bus service is provided by Glacier Park, Inc., for those who arrive by train.

By bus. The Intermountain Transportation Co. operates buses to West Glacier from Missoula on the south and to East Glacier Park from Shelby, Great Falls, and other places to the east. The Great Falls Coach Lines Co. also serves the park from Great Falls, where connections are made to eastern points. On the north, Glacier Park, Inc., buses connect at Waterton Lake with the Central Canadian Greyhound Lines from Lethbridge or Fort Macleod.

By airplane. West Coast Airlines serves Flathead County Airport, 26 miles west (by road) of West Glacier, and provides service to Cut Bank Airport, 48 miles east (by road) of East Glacier Park. Glacier Park, Inc., will provide on-call service for air passengers, but you should make arrangements for such service with the airlines before you start your trip.

WHERE TO STAY

Inside the Park

The concessioners within the park operate under the supervision of the National Park Service, which keeps careful check on the rates, features and quality of services, equipment, liability, and other items.

Hotels. Glacier Park, Inc., operates Many Glacier Hotel and Lake McDonald and Glacier Park Lodges in or near Glacier National Park and Prince of Wales Hotel in Waterton Lakes National Park. These hotels are open from about June 15 to about September 10.

Motels and cabins. Motel units and cabins are available at Swiftcurrent, Rising Sun, and Apgar Village.

Reservations are usually necessary for hotels, motels, and cabins. For rates and reservations, write Glacier Park, Inc., from June 1 through October 15, at East Glacier Park, Mont.; from October 16 through May 31, at P.O. Box 4250, Tucson, Ariz.

Chalets. Two chalets, Sperry and Granite Park, are open for use of hikers and horseback parties from July 1 through Labor Day. They are operated by B. Ross Luding, Martin City, Mont., and are reached by trail only. Sperry

Chalets are 6.5 miles from the Lake McDonald Lodge. Granite Park Chalets are 7.4 miles from Logan Pass.

Campgrounds. Camping is popular in Glacier. To accommodate the increasing numbers of visitors who wish to live out-of-doors, the National Park Service has provided several free campgrounds.

The major campgrounds, located at Apgar, Sprague Creek, Avalanche Creek, St. Mary, Rising Sun, Swiftcurrent, and Two Medicine, have fireplaces, tables, sanitary facilities, and running water. Coffee shops, soda fountains, and camp stores are located near Swiftcurrent, Rising Sun, Two Medicine, Sprague Creek, and Apgar campgrounds.

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

See the section, "Help Us Protect Your Park" for regulations regarding campfires and time limits for camping.

You should make a list of camping needs for cooking, sleeping, and general outdoor living if you plan to camp out. Include a small gasoline or kerosene stove for cooking.

Trailer space is available in all campgrounds except Sprague Creek, but there are no utility connections. The dirt road from Fish Creek Campground to Kintla and Bowman Lake Campgrounds (North Fork area) is too narrow for large housetrailers. Before you attempt this route with a housetrailer, consult a park ranger.

Outside the Park

Most of the neighboring cities and towns have hotels and tourist courts with modern facilities. For information, address inquiries to the chambers of commerce of nearby towns in Montana—Kalispell, Havre, Cut Bank, Whitefish, Columbia Falls, or East Glacier Park.

SERVICES

Meals and supplies. Groceries, film, camping supplies, and other items are available in stores at Swiftcurrent, Rising Sun, Lake McDonald, and Two Medicine. Meals may be obtained at the coffee shops at Swiftcurrent, Lake McDonald, Rising Sun, and in all the hotels. Coffee, soup, and sandwiches may be obtained at the camp store at Two Medicine. Additional cabin facilities and general stores carrying complete lines of campers' supplies and photographic film are available on private lands within the park at Apgar Village and near Lake McDonald Lodge.

All-expense tours. The park concessioners have jointly arranged attractive all-expense tours, which include bus fare, meals, hotel lodging, launch excursion, and horseback rid-



Sperry Chalets.

Mel Ruder, Hungry Horse News, photo.

ing. Trips that include the Prince of Wales Hotel in Waterton Lakes National Park are also available. You may obtain information concerning rates or reservations from Glacier Park, Inc.

Transportation. Bus service is maintained between all hotels, including the Prince of Wales Hotel and Two Medicine Lake. At Two Medicine Lake, the bus stops long enough to give you the opportunity to do some fishing or to enjoy a launch trip and short hike with a naturalist.

If you do not have your own transportation and would like to do some independent exploring of the park, you can obtain rental cars from Glacier Park, Inc.

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

Rental rowboats are available from June 15 to September 10 at Bowman, Two Medicine, Swiftcurrent, McDonald, and St. Mary Lakes.

See the section titled "Help Us Protect Your Park" before launching a private boat in any of the park waters.

Medical service. During the park season, there are qualified nurses at the hotels on both sides of the park, and a resident physician is at the Glacier Park Lodge.

Religious services. Protestant and Roman Catholic church services are conducted at several places in the park on

Sundays. Protestant services are sponsored by the National Council of Churches. Times and locations of the services are posted in the principal gathering places within the park, and park rangers will have this information.

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

HELP US PROTECT YOUR PARK

You can help us protect the park's beauty and its wildlife by observing the regulations, which were established to protect you as well as the park.

Fires. Build fires only in fireplaces provided in designated campgrounds. If you desire to camp away from designated campgrounds, you must obtain a fire permit from a park ranger. Make sure your fire is out before you leave it! Extinguish the last spark with water. Be just as careful with any other burning material; do not throw cigarettes, cigars, or matches from your automobile or along the trails. Remember, fire is the greatest enemy of the forests of the park and of all the creatures that live in them.

Camping. Camping is limited to 14 days at designated campgrounds during July and August.

Preserving natural features. It is against the law to disturb, injure, or destroy trees, flowers, and other vegetation, and all wildlife, rocks, and fossils within the park.

Traffic. The speed limit in the park is 45 miles per hour, unless otherwise posted; $1\frac{1}{2}$ -ton trucks or over, 35 miles per hour. Keep gears meshed and out of overdrive on grades.

Signal when leaving the road to park on overlooks. Do not park so as to interfere with travel on the road. Drive slowly and do not park on curves.

Report all accidents to the nearest ranger station or to park headquarters.

ABOUT WILD ANIMALS

Wild animals are harmless at a distance, but they are dangerous when approached or startled. Please—for your protection—never offer food to bears; never get between an adult animal and her young; always keep a safe distance; be noisy on trails.

To avoid startling the grizzly bear in the back country, bikers should use various methods of creating noise to make their presence known, such as rocks in cans, using a small bell or whistle, or loud talking or singing.

Remember, wild animals are dangerous when startled or approached.

Hunting. The park is a sanctuary for all wildlife, and hunting within park boundaries is prohibited. Firearms are permitted within the park only if they are adequately sealed, cased, broken down, or otherwise packed to prevent their use.

Motor vehicles and bicycles are prohibited on trails.

Dogs and cats are permitted in the park, but they must be crated or otherwise under physical restraint at all times. They are not allowed on park trails.

Private boats. You must obtain a boat permit at the entrance station or at any ranger station before you may launch a private boat in any of the park waters. State and Federal boating regulations apply. Restrictions are placed on the use of motorboats in certain waters.

Lost articles should be reported at the nearest ranger station. If found, they should be deposited at the office of the superintendent or at the nearest ranger station. Articles not claimed by the owners within 60 days will be returned to the finders.

ADMINISTRATION

Glacier National Park is administered by the National Park Service, U.S. Department of the Interior. A superintendent is in immediate charge; his address is Glacier National Park, West Glacier, Mont. Send any questions or comments about services within the park to him.

Park rangers and naturalists are here to help you learn and understand the natural and human history of Glacier, to enforce park regulations, and to help and advise you; therefore, you should consult them if you have any questions about the park or are in any difficulty.

Created in 1849, the Department of the Interior—America's Department of Natural Resources—is concerned with the management, conservation, and development of the Nation's water, wildlife, mineral, forest, and park and recreational resources. It also has major responsibilities for Indian and Territorial affairs.

As the Nation's principal conservation agency, the Department works to assure that nonrenewable resources are developed and used wisely, that park and recreational resources are conserved for the future, and that renewable resources make their full contribution to the progress, prosperity, and security of the United States—now and in the future.

MISSION 66 AT GLACIER

MISSION 66 is a 10-year conservation, development, and improvement program of the National Park Service. It was launched in 1956 and is scheduled for completion in

1966, the 50th anniversary of the establishment of the National Park Service. The program is concerned with developing, staffing, and improving the areas managed by the National Park Service, in such a way as to assure their wisest possible use.

Mission 66 projects completed at Glacier include expansion and renovation of several campgrounds; two new campgrounds; road improvements, with roadside parking areas; trail improvements, with shelter cabins for the back country; and new or improved water and sewer systems.

As for the future—improvement and expansion of campgrounds will continue; visitor centers will be built; improved roads, especially the Camas Creek cutoff part of the proposed International Loop Road, will be completed; and other related facilities will be built to help you better to enjoy Glacier National Park.

Privately owned lands within the park are being obtained as owners are willing to sell and funds become available. It is the goal of the National Park Service to acquire all such lands ultimately so that they may be preserved for general public benefit and use.

Ranger, naturalist, and maintenance staffs at Glacier have been expanded and given additional training under the Mission 66 program so that you can be served better.

VISITOR-USE FEES

Vehicle permit fees are collected at entrance stations. If you arrive when an entrance station is unattended, you must obtain a permit before leaving the park. Fees are not listed herein because they are subject to change, but the information may be obtained by writing to the superintendent.

Fee revenues are deposited in the U.S. Treasury; they offset, in part, the cost of operating and maintaining the National Parks.

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UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE



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