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DEPARTMENT OF THE INTERIOR
FRANKLIN K. LANE, SECRETARY
NATIONAL PARK SERVICE
STEPHEN T. MATHER, DIRECTOR

GENERAL INFORMATION

REGARDING

GLACIER

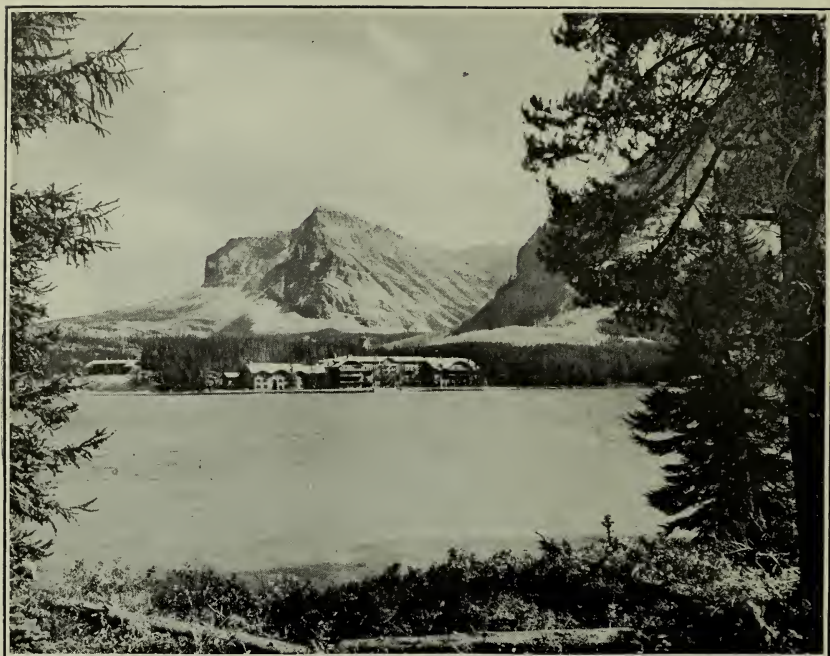
NATIONAL PARK

1919

Season from June 15 to September 15



WASHINGTON
GOVERNMENT PRINTING OFFICE
1919



Photograph by Fred H. Kiser.
MANY GLACIER HOTEL ON LAKE McDERMOTT.



Photograph by Fred H. Kiser.
TOURING A PARK TRAIL.

THE NATIONAL PARKS AT A GLANCE.

[Number, 18; total area, 10,739 square miles.]

National parks in order of creation.	Location.	Area in square miles.	Distinctive characteristics.
Hot Springs..... 1832	Middle Arkansas.....	1½	46 hot springs possessing curative properties—Many hotels and boarding houses—20 bath-houses under public control.
Yellowstone..... 1872	Northwestern Wyo- ming.	3,348	More geysers than in all rest of world together—Boiling springs—Mud volcanoes—Petrified forests—Grand Canyon of the Yellowstone, remarkable for gorgeous coloring—Large lakes—Many large streams and waterfalls—Vast wilderness, greatest wild bird and animal preserve in world—Exceptional trout fishing.
Sequoia..... 1890	Middle eastern Cali- fornia.	252	The Big Tree National Park—12,000 sequoia trees over 10 feet in diameter, some 25 to 36 feet in diameter—Towering mountain ranges—Startling precipices—Cave of considerable size.
Yosemite..... 1890	Middle eastern Cali- fornia.	1,125	Valley of world-famed beauty—Lofty cliffs—Romantic vistas—Many waterfalls of extraordinary height—3 groves of big trees—High Sierra—Waterwheel Falls—Good trout fishing.
General Grant..... 1890	Middle eastern Cali- fornia.	4	Created to preserve the celebrated General Grant Tree, 35 feet in diameter—6 miles from Sequoia National Park.
Mount Rainier..... 1899	West central Wash- ington.	324	Largest accessible single peak glacier system—28 glaciers, some of large size—48 square miles of glacier, 50 to 500 feet thick—Wonderful sub-alpine wild flower fields.
Crater Lake..... 1902	Southwestern Oregon.	249	Lake of extraordinary blue in crater of extinct volcano—Sides 1,000 feet high—Interesting lava formations—Fine fishing.
Wind Cave..... 1903	South Dakota.....	17	Cavern having many miles of galleries and numerous chambers containing peculiar formations.
Platt..... 1904	Southern Oklahoma...	1½	Many sulphur and other springs possessing medicinal value.
Sullys Hill..... 1904	North Dakota.....	1½	Small park with woods, streams, and a lake; is an important wild-animal preserve.
Mesa Verde..... 1906	Southwestern Colo- rado.	77	Most notable and best preserved prehistoric cliff dwellings in United States, if not in the world.
Glacier..... 1910	Northwestern Mon- tana.	1,534	Rugged mountain region of unsurpassed Alpine character—250 glacier-fed lakes of romantic beauty—60 small glaciers—Precipices thousands of feet deep—Sensational scenery of marked individuality—Fine trout fishing.
Rocky Mountain... 1915	North Middle Colo- rado.	397½	Heart of the Rockies—Snowy range, peaks 11,000 to 14,250 feet altitude—Remarkable records of glacial period.
Hawaii..... 1916	Hawaii.....	118	Three separate areas—Kilauea and Mauna Loa on Hawaii, Haleakala on Maui.
Lassen Volcanic... 1916	Northern California... 1916	124	Only active volcano in United States proper—Lassen Peak 10,465 feet—Cinder Cone 6,879 feet—Hot springs—Mud geysers.
Mount McKinley... 1917	South central Alaska..	2,200	Highest mountain in North America—Rises higher above surrounding country than any other mountain in the world.
Grand Canyon.... 1919	North central Arizona.	958	The greatest example of erosion and the most sublime spectacle in the world.
Lafayette..... 1919	Maine coast.....	8	The group of granite mountains upon Mount Desert Island.

The National Parks Portfolio

By ROBERT STERLING YARD

Chief, Educational Division
National Park Service

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A presentation of the national parks and national monuments in picture. The selection is from the best work of many photographers, professional and amateur. It contains nine sections descriptive each of a national park, and one larger section devoted to other parks and monuments. 260 pages, including 270 illustrations

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GENERAL INFORMATION REGARDING GLACIER NATIONAL PARK

GENERAL DESCRIPTION.

The Glacier National Park, in northwestern Montana, incloses 981,681 acres or 1,534 square miles of the noblest mountain country in America. The park was established by the act of May 11, 1910. Its name is derived from its 60 glaciers. There are more than 90 all told, if one classes as glaciers many interesting snow patches of only a few acres each, which exhibit most of the characteristics of true glaciers. It possesses individuality in high degree. In ruggedness and sheer grandeur it probably surpasses the Alps, though geologically it is markedly different. It resembles the Canadian Rockies more closely than any other scenic country. The general geological structure is the same in both, but the rocks of Glacier are enormously older and much more richly colored. The Canadian Rockies have the advantage of more imposing masses of snow and ice in summer, but, for that very reason, Glacier is much more easily and comfortably traveled.

Glacier strongly differentiates also from other mountain scenery in America. Ice-clad Rainier, mysterious Crater Lake, spouting Yellowstone, exquisite Yosemite, beautiful Sequoia—to each of these and to all other of our national parks Glacier offers a highly individualized contrast.

To define Glacier National Park, picture to yourself two approaching chains of vast tumbled mountains, the Livingston and Lewis Ranges, which pass the Continental Divide back and forth between them in wormlike twistings, which bear living glaciers in every hollow of their loftiest convolutions, and which break precipitately thousands of feet to lower mountain masses, which, in their turn, bear innumerable lakes of unbelievable calm, offspring of the glaciers above; these lakes, in their turn, giving birth to roaring rivers of icy water, leaping turbulently from level to level, carving innumerable sculptured gorges of grandeur and indescribable beauty.

These parallel mountain masses form a central backbone for the national park. Their western sides slope from the summit less precipitately. Their eastern sides break abruptly. It is on the east that their scenic quality becomes titanic.

A ROMANCE IN ROCKS.

To really comprehend the personality of Glacier, one must glance back for a moment into the geological past when the sea rolled over

what is now the northwest of this continent. If you were in the Glacier National Park to-day, you would see broad horizontal bands of variously colored rocks in the mountain masses thousands of feet above your head. These are the very strata that the waters deposited in their depths centuries of centuries ago.

According to one famous theory of creation, the earth has been contracting ever since a period when it was once gas. According to Chamberlain's recent theory, it never was a globe of gas, but a mass of rocks which continually shift and settle under the whirling motion around its axis. Whichever theory you accept, the fact stands that, as it contracted, its sides have bulged in places like the sides of a squeezed orange. This is what must have happened where the Glacier National Park now is. Under urge of the terrible squeezing forces the crust lifted, emerged, and became land. Untold ages

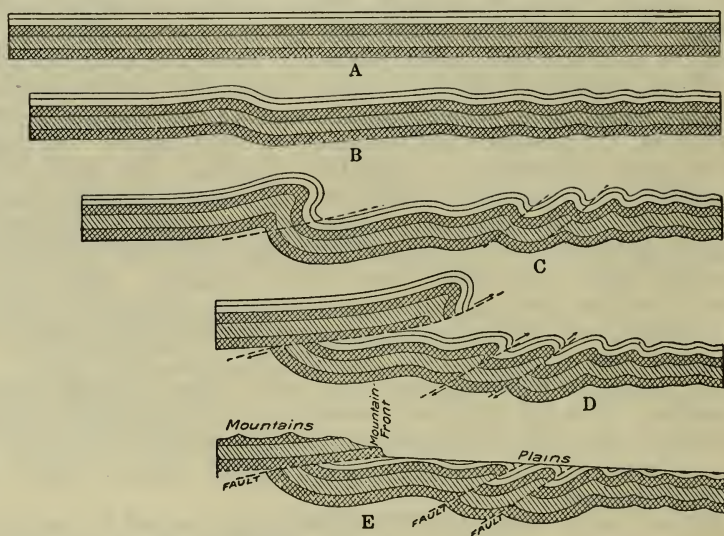


DIAGRAM 1.—How internal pressure transformed level rock into the tumbled masses of the Glacier National Park. The Lewis Overthrust.

passed, and the land hardened into rock. And all the time the forces kept pressing together and upward the rocky crust of the earth.

For untold ages this crust held safe, but at last pressure won. The rocks first yielded upward in long irregular wavelike folds. Gradually these folds grew in size. When the rocks could stand the strain no longer, great cracks appeared, and one broken edge, the western, was thrust upward and over the other. The edge that was thrust over the other was thousands of feet thick. Its crumbling formed the mountains and the precipices.

When it settled, the western edge of this break overlapped the eastern edge 10 to 15 miles. A glance at diagram 1 will make it clear. A represents the original water-laid rock; B the first yieldings to internal pressure; C the great folds before the break came; D and E the way the western edges overlapped the eastern edges when the movement ceased.

THE LEWIS OVERTHRUST.

This thrusting of one edge of the burst and split continent over the other edge is called faulting by geologists, and this particular fault is called the Lewis Overthrust. It is the overthrust which gives the peculiar character to this amazing country, that and the inconceivably tumbled character of the vast rocky masses lying crumbling on its edges.

It is interesting to trace the course of the Lewis Overthrust on a topographic map of the park. The Continental Divide, which represents the loftiest crest of this overthrust mass, is shown on the map. These two irregular lines tell the story; but not all the story, for the snow and the ice and the rushing waters have been wonderfully and fantastically carving these rocks with icy chisels during the untold ages since the great upheaval.

MAGNIFICENTLY COLORED STRATA.

To understand the magnificent rocky coloring of Glacier National Park, one must go back a moment to the beginnings of things. The vast interior of the earth, more or less solid rock according to Chamberlain, is unknown to us because we have never been able to penetrate farther than a few thousand feet from the surface. The rock we do not know about, geologists call the Archean. What we do know a good deal about are the rocks above the Archean. Of these known rocks the very lowest and consequently the oldest are the rock strata which are exposed in Glacier National Park. Geologists call these strata the Algonkian. They were laid as an ocean bottom sediment at least 80,000,000 years ago. Some of the rocks of this age appear in the Grand Canyon of the Colorado, but nowhere in the world are they displayed in such area, profusion, and variety and magnificence of coloring as in Glacier National Park.

These Algonkian rocks lie in four differently colored strata, all of which the visitor at Glacier may easily distinguish for himself. The lowest of these, the rock that actually lay next to the old Archean, is called the Altyn limestone. This is about 1,600 feet thick. It is faint blue inside, but it weathers a pale buff. There are whole yellow mountains of this on the eastern edge of the park.

Next above the Altyn limestone lies a layer of Appekunny argillite, or green shale. This is about 3,400 feet thick. It weathers every possible shade of dull green.

Next above that lies more than 2,200 feet of Grinnell argillite, or red shale. This weathers every possible shade of deep red and purple, almost to black. Both the shales have a good deal of white quartzite mixed with them.

Next above that rises more than 4,000 feet of Siyeh limestone, very solid, very massive, very gray, and running in places to yellow. Horizontally through the middle of this is seen a broad dark ribbon or band; one of the characteristic spectacles in all parts of Glacier National Park. This is called the diorite intrusion. It is as hard as granite. In fact it is very much like granite, indeed. It got there by bursting up from below when it was fluid hot and spreading a layer all over what was then the bottom of the sea. When this cooled and hardened more limestone was deposited on top of it,

which is why it now looks like a horizontal ribbon running through those lofty gray limestone precipices.

In some parts of the park, near the north, there are remnants of other strata which surmounted the Siyeh limestone, but they are so infrequent that they interest only the geologists. The four strata mentioned above are, however, plain to every eye.

Now, when these vividly colored rocks were lifted high in the air from their first resting place in the sea bottom, and then cracked and one edge thrust violently over the other, they sagged in the middle just where the park now lies. If a horizontal line, for instance, were drawn straight across Glacier National Park from east to west it would pass through the bottom of the Altnyn limestone on the east and west boundaries; but in the middle of the park it would pass through the top of the Siyeh limestone. Therefore it would, and does, cut diagonally through the green and the red argillities on both sides of the Continental Divide. That is why all this colorful Glacier country appears to be so upset, twisted, inextricably mixed. Bear in mind



DIAGRAM 2.—Showing form of a stream-cut valley (A) and of the same valley (B) after it has been occupied by a glacier.

this fact and you will soon see reason and order in what, to the untutored eye, seems a disorderly kaleidoscope.

Thus was formed, in the dim days before man, for the pleasure of the American people of to-day, the Glacier National Park.

CARVED BY WATER AND ICE.

It probably took millions of years for the west edge of the cracked surface to rise up and push over the east edge. When this took place is, geologically speaking, quite clear, because the ancient Algonkian rock at this point rests on top of rocks which have been identified by their fossils as belonging to the much younger Cretaceous period. How much younger can not be expressed in years, or millions of years, for no man knows. It is enough to say here that the whole process of overthrusting was so slow that the eroding of all the strata since which lay above the Algonkian may have kept almost abreast of it.

Anyway, after the fault was fully accomplished, the enormously thick later strata all washed away and the aged Algonkian rocks wholly exposed, it took perhaps several million years more to cut into and carve them as they are cut and carved to-day.

This was done, first, by countless centuries of centuries of rainfall and frost; second, by the first of three ice packs which descended from the north; third, by many more centuries of rainfall, frost, and glacier; fourth, by the second ice pack; fifth, by many more centuries of rainfall, frost, and glacier; sixth, by the third ice pack; and seventh, by all the rains and frosts down to the present time, the tiny glaciers still remaining doing each its bit.

The result of all this is that in entering Glacier National Park to-day the visitor enters a land of enormous hollowed cirques separated from each other by knife-edged walls, many of which are nearly perpendicular. Many a monster peak is merely the rock remains of glacial corrodings from every side, supplemented by the chipping of the frosts of winter and the washing of the rains and the torrents.

Once upon the crest of the Continental Divide, one can often walk for miles along a narrow edge with series of tremendous gulfs on both sides. Where glaciers have eaten into opposite sides of the Continental Divide so far that they have begun to cut down the dividing

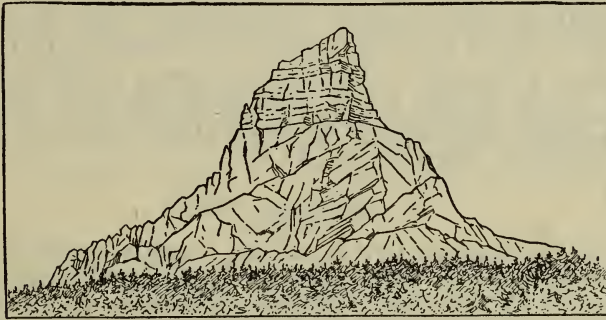


DIAGRAM 3.—Diagram showing structure of Chief Mountain. Limestone in upper part not disturbed, but that in lower part duplicated by many minor oblique thrust faults. After Bailey Willis.

wall, passes are formed; that is, hollows in the mountain wall which permit of readier passage from side to side. Gunsight Pass is of this kind. So are Dawson, Swiftcurrent, Triple Divide, Red Eagle, Ptarmigan, Piegan, and many others.

Any visitor to Glacier National Park can identify these structural features with ease, and a knowledge of them will greatly increase his pleasure in the unique scenery. Even the casual visitor may identify the general features from the porches of the hotels and chalets, while a hiking or horseback trip from the Many Glacier Hotel to Iceberg Lake, over Swiftcurrent Pass to Granite Park, over Piegan Pass to St. Mary Lake, or over Piegan and Gunsight Passes to Lake McDonald, will serve to fix the glacier geological conformation in mind so definitely that the experience will always remain one of the happiest and most enlightening in one's life.

ADVANTAGES OF CAMPING OUT.

It is to the more leisurely traveler, however, that comes the greater joy. He who travels from hotel to chalets, from chalets to hotel, and then, having seen the things usually seen, engages a really competent

guide, takes horses and camping outfit, and embarks upon the trails to wander and to linger where he will, is apt to find a month or more in Glacier National Park an experience wonderfully rich in knowledge and in pleasure.

Notwithstanding the excellent equipment of the Saddle Horse Co., such an experience is not unadventurous. Once off the excellent trails in the developed parts of the park, the trails are little better than the original game trails. Unimproved wilderness is as rough in Glacier National Park as anywhere else. But compensations are many. Wild animals are more frequent and tamer, fishing is finer, and there is the joy, by no means to be despised, of feeling oneself far removed from human neighborhood. On such trips one may venture far afield, may explore glaciers, may climb divides for extraordinary views, may linger for the best fishing, may spend idle days in spots of inspirational beauty.

The Saddle Horse Co. provides excellent small sleeping tents and a complete outfitting of comforts. But insist on two necessities—a really efficient guide and a Government contour map. Learn to read the map yourself, consult it continually, and Glacier is yours.

This advice about the map applies to all visitors to Glacier who at all want to understand. To make sure, get your Government map yourself. It can be had for 25 cents from the park superintendent at Belton, Mont., or by mail at the same price from the United States Geological Survey, Washington, D. C.

A GENERAL VIEW.

From the Continental Divide, which, roughly speaking, lies north and south through the park, descend 19 principal valleys, 7 on the east side and 12 on the west. Of course there are very many smaller valleys tributary to each of these larger valleys. Through these valleys run the rivers from the glaciers far up on the mountains.

Many of these valleys have not yet been thoroughly explored. It is probable that some of them have never yet been even entered unless possibly by Indians, for the great Blackfeet Indian Reservation, one of the many tracts of land set apart for the Indians still remaining in this country, adjoins the Glacier National Park on the east.

There are 250 known lakes. Probably there are small ones in the wilder parts which white men have not yet even seen.

The average tourist really sees a very small part of the glorious beauties of the region, though what he does see is eminently typical. He usually enters at the east entrance, visits the Two Medicine Lakes, and passes on to St. Mary Lake, believed by many travelers the most beautiful lake in the world. After seeing some of the many charms of this region, he passes on to Lake McDermott, in the Swiftcurrent Valley. The visitor then usually crosses over the famous Gunsight Pass to the west side, where he usually but foolishly contents himself with a visit to beautiful Lake McDonald and leaves by the Belton entrance.

THE WEST SIDE.

But the west side contains enormous areas which some day will be considered perhaps the finest scenery in the accessible world. To the north of Lake McDonald lie valleys of unsurpassed grandeur. At

the present time they may be seen only by those who carry camp outfits with them.

Bowman Lake and its valley, Kintla Lake and its valley—these are names which some day will be familiar on both sides of the sea.

CREATURES OF THE WILD.

Glacier, whose lower valleys once were hunted and trapped by Blackfeet, and which now for 9 years has been strictly preserved, has a large and growing population of creatures of the wild. Its rocks and precipices fit it especially to be the home of the Rocky Mountain sheep and the mountain goat.

Both of these large and hardy climbers are found in Glacier in great numbers. They are a familiar sight in many of the places most frequented by tourists.

Trout fishing is particularly fine. The trout are of half a dozen western varieties, of which perhaps the cutthroat is the most common. In St. Mary Lake, Mackinaw trout up to 20 pounds in weight are caught. So widely are trout distributed that it is difficult to name lakes of special fishing importance. Many of the best fishing lakes are seldom visited.

Nor is this scenic wonderland merely a sample of the neighborhood. North of the park the mountains rapidly lose their scenic interest. South and west there is little of greater interest than the mountains commonly crossed in a transcontinental journey. To the east lie the plains.

HISTORY.

This region appears not to have been visited by white men before 1853, when A. W. Tinkham, a Government engineer, exploring a route for a Pacific railroad, ascended Nyack Creek by mistake and retraced his steps when he discovered the impracticability for railroad purposes of the country he had penetrated.

The next explorers were a group of surveyors establishing the Canadian boundary line. This was in 1861. 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 for relief. In 1896 this was purchased from the Indians for \$1,500,000, but not enough copper was found to pay for the mining. Thereafter it was visited only by big game hunters and occasional lovers of scenery. It was made a national park May 11, 1910.

EAST SIDE VALLEYS.

Glacier National Park is best studied valley by valley. There are 7 principal valleys on its eastern side, 12 on its west. Let us consider its eastern side first, beginning at the south as you enter from the railroad entrance at Glacier Park Station.

TWO MEDICINE VALLEY.

Because of its location, Two Medicine Valley is one of the best known sections of Glacier. It is a capital illustration of the characteristic effect of glacial action on valleys as shown by diagram 2.

The automobile stage skirts the eastern side of the range for half an hour, and turning west past Lower Two Medicine Lake, penetrates the range south of noble Rising Wolf Mountain. The road stops at the chalets at the foot of Two Medicine Lake, fronting a group of highly colored, ornately carved mountains which has become one of the country's celebrated spectacles. Back of triangular Mount Rockwell across the water is seen the Continental Divide.

Most tourists content themselves with a visit of two or three hours, including luncheon at the chalets. But the few who take horse and explore the noble cirque system west of the lake, and, climbing the divide, look over Dawson Pass upon the tumbled snow-daubed peaks of the lower west side, have an unforgettable experience. Another trail route leads from the chalets up Dry Fork to Cut Bank Pass, from the top of which one trail leads into the west side valley of Nyack Creek, disclosing the same view as that from Dawson Pass but at a different angle, and another trail drops into the noble lake-studded cirque which is the head of North Fork of Cut Bank Creek. There are few finer spots in America than the top of Cut Bank Pass, with its indescribable triple outlook.

CUT BANK VALLEY.

Cut Bank Valley, next to the north, is another glacier-rounded valley. It is one of the easiest to explore. It is entered by trail from the south, as described above, or by automobile from east of the park boundary; the road ends at the Cut Bank Chalets, picturesquely situated on North Fork of Cut Bank Creek at the foot of Amphitheater Mountain. Cut Bank Valley has also a northern cirque at the head of which is one of the most interesting passes in the Rocky Mountains. From Triple Divide Peak the waters flow in three directions, to the Gulf of Mexico by Cut Bank Creek and the Missouri River, to Hudson Bay by St. Mary River, and to the Pacific Ocean by Flathead River. Triple Divide Pass crosses a spur which connects Mount James with the Continental Divide, but it does not cross the divide itself. The Pass leads down into Norris Creek Basin and thence into Red Eagle Valley. Cut Bank Chalets afford excellent accommodations. Large trout are abundant in the neighborhood.

RED EAGLE VALLEY.

Red Eagle Valley, still farther north, is one of the most picturesque in the park. Its glacier was once 2,000 feet deep. One of its several existing glaciers may be seen from any point in the valley. This important valley originates in two principal cirque systems. The lesser is the Norris Creek Basin, above referred to. The greater is at the head of Red Eagle Creek, a magnificent area lying almost as high as the Continental Divide and carrying the picturesque Red Eagle Glacier and a number of small unnamed lakes. Mount Logan guards this cirque on the west, Almost-a-Dog Mountain on the north. The valley from this point to the mouth of Red Eagle Creek in St. Mary Lake near the park boundary is very beautiful, broad, magnificently forested and bounded on the north by the backs of the mountains whose superb front elevations make St. Mary Lake famous. Red Eagle Lake is celebrated for its large cutthroat trout.

ST. MARY VALLEY.

St. Mary Valley, the next to the north, is one of the largest and most celebrated. Its trail to Gunsight Pass is the principal highway across the mountains to the western slopes. It is one of the loveliest of lakes, surrounded by many imposing mountain peaks, among them Red Eagle Mountain, whose painted argillites glow deeply; Little Chief Mountain, one of the noblest personalities in Glacier; Citadel Mountain, whose eastern spur suggests an inverted keel boat; Fusilade Mountain, which stands like a sharp tilted cone at the head of the lake; Reynolds Mountain, which rises above the rugged snow-flecked front of the Continental Divide; and, on the north, Going-to-the-Sun Mountain, one of the finest mountain masses in any land. The view west from the Going-to-the-Sun Chalets is one of the greatest in America.

SWIFTCURRENT VALLEY.

Swiftcurrent Valley, next to the north, was famous in the mining days and is famous to-day for the sublimity of its scenery. It is by far the most celebrated valley in the park so far, and will not diminish in popularity and importance when the more sensational valleys in the north become accessible. Its large and complicated cirque system centers in one of the wildest and most beautiful bodies of water in the world, Lake McDermott, upon whose shores stand the Many Glacier Hotel and the Many Glacier Chalets. No less than four glaciers are visible from the lake shore and many noble mountains. Mount Grinnell, the monster of the lake view, is one of the most imposing in the park, but Mount Gould, up the Cataract Creek Valley, vies with it in magnificence and, as seen from the lake, excels it in individuality. The view westward up the Swiftcurrent River is no less remarkable, disclosing Swiftcurrent Peak, the Garden Wall in its most picturesque aspects, and jagged Mount Wilbur, inclosing the famous Iceberg Gorge. From Lake McDermott, trail trips are taken to Ptarmigan Lake, to Iceberg Lake, over Swiftcurrent Pass to Granite Park, where an amazing view may be had of the central valley, to Grinnell Glacier, over Piegan Pass to St. Mary Lake, and up Canyon Creek to the wonderful chasm of Cracker Lake, above which Mount Siyeh rises almost vertically 4,000 feet.

There are more than a dozen lakes, great and small, in the Swiftcurrent Valley. The most conspicuous are the two Sherburne Lakes, Lake McDermott, Lake Josephine, Grinnell Lake, the three Swiftcurrent Lakes, Iceberg Lake, and Ptarmigan Lake. These all have remarkable beauty. The Lewis Overthrust may be observed at the falls of the Swiftcurrent River just below Lake McDermott. Eastward from the foot of the main fall is rock of the Cretaceous period. West and north from the foot of the fall is old Algonkian rock lying on top of the much younger Cretaceous.

THE KENNEDY VALLEYS.

The North and South Kennedy Valleys, next above Swiftcurrent, are remarkable for the fantastic and beautiful effects of the great fault. Their trout-haunted streams originate in cirques east of the

picturesque red and yellow mountains which form the east walls of Swiftcurrent, and rush turbulently to the plains. Here the evidences of the Lewis Overthrust are most apparent. Principal of these is Chief Mountain, a tooth-shaped monster of yellow Altnyn limestone sitting alone and detached upon rocks millions of years younger. It is a single block of limestone rising nearly vertically on one side 1,500 feet from its base.

THE BELLY RIVER VALLEY.

The Belly River Valley, which occupies the northeastern corner of the park, is little visited because of its inaccessibility, but it is destined to become one of the most celebrated. It contains many lakes of superb scenery, overlooked by many majestic mountains. Eighteen glaciers feed its streams. The Belly River rises in a cirque which lies the other side of the northern wall of Iceberg Lake, and just over Ptarmigan Pass. Its walls are lofty and nearly vertical. Its cirque inclosing Helen Lake is one of the wildest spots in existence and well repays the time and labor of a visit. The Middle Fork, which skirts for some miles the south side of that tremendous aggregation of mountain masses called Mount Cleveland, originates in a double cirque system of positively sensational beauty. The glaciers in which these originate, only two of which, the Chaney and Shepard Glaciers, are named, are shelved just under the Continental Divide, and from them their outlet streams descend by lake-studded steps to their junction in Glens Lake. Between the Middle Fork and the Belly River rises one of the most remarkable mountain masses in the park, a rival even of Cleveland, which consists of Mount Merritt and Crossley Ridge with their four impressive hanging glaciers. Below the meeting of the two forks the Belly River, now a fine swelling stream noted for its fighting trout, rushes headlong through the most luxuriant of valleys northward to the plains of Canada.

THE CENTRAL VALLEY.

Of Little Kootenai Valley, also, little is known to the public. It is the northern part of a magnificent central valley which splits Glacier National Park down from the top as far as Mount Cannon and carries on its sides parallel mountain ranges of magnificent grandeur, the Livingston Range bordering its west side, the Lewis Range its east side. In this Avenue of the Giants, about at its center, rises a fine wooded tableland known as Flattop Mountain, which, low as it is, bridges the Continental Divide over from the Livingston to the Lewis Range. From this tableland drop, north and south, the two valleys which, end to end, form the great avenue; Little Kootenai Creek running north, McDonald Creek running south. The Little Kootenai Valley is one of unusual forest luxuriance, and is bordered by glacier-spattered peaks of extraordinary majesty; Mount Cleveland, whose 10,438 feet of altitude rank it highest in the park, lies upon its east side. It ends in Waterton Lake, across whose waters, a little north of their middle, passes the international boundary line separating our Glacier National Park from Canada's Waterton Lakes Park.

The southern limb of this Avenue of the Giants, which follows McDonald Creek till it swings westward around Heavens Peak to empty into Lake McDonald, is only a little less majestic. It is upon the side of this superb valley that the Granite Park Chalets cling, from the porches of which the eye may trace the avenue northward even across the Canadian borders.

THE PRINCIPAL PASSES.

There are several passes of more or less celebrity connecting the east and west sides of Glacier National Park, several of which are not used except to afford magnificent west side views to east side tourists. So far, four passes over the Continental Divide are in practical use as crossing places.

GUNSIGHT PASS.

The most celebrated of these passes is Gunsight Pass. From the east it is reached directly from St. Mary Lake, and, by way of Piegan Pass, from Lake McDermott. From the west it is reached from Lake McDonald. It is a U-shaped notch in the divide between Gunsight Mountain and Mount Jackson. Just west of it lies Lake Ellen Wilson, one of Glacier's greatest celebrities for beauty. Just east of it lies Gunsight Lake, one of Glacier's greatest celebrities for wildness. From the foot of Gunsight Lake an easy trail of 2 miles leads to Blackfoot Glacier, the largest in the park, the west lobe of which is readily reached and presents, within less than a mile of ice, an admirable study of practically all the phenomena of living glaciers.

SWIFTCURRENT PASS.

Swiftcurrent Pass crosses the divide from Lake McDermott on the east. On the west side, one trail leads north to the Waterton Lakes and Canada, another south to Lake McDonald. Four beautiful shelf glaciers may be seen clinging to the east side of this pass, and from the crest of the pass, looking back, a magnificent view is had of the lake-studded Swiftcurrent Valley. From the Granite Park Chalets, just west of the pass, a marvelous view of west side and north side mountains may be obtained. A horse trail from the chalet takes the visitor to Logan Pass on the south. A foot trail leads him to the top of the Garden Wall where he may look down upon the Swiftcurrent and the Grinnell Glaciers. A foot trail involving an hour's climb to the top of Swiftcurrent Peak will spread before the tourist one of the broadest and most fascinating views in any land, a complete circle including all of Glacier National Park; also generous glimpses of Canada on the north, the Great Plains on the east, and the Montana Rockies on the west.

LOGAN PASS.

As you look south from the Granite Park Chalets your eye is held by a deep depression between beautiful Mount Oberlin and the towering limestones of Pollock Mountain. Through this and beyond

it lie the Hanging Gardens dropping from a rugged spur of lofty Reynolds Mountain. Desire is strong within you to enter these inviting portals.

This picturesque depression is Logan Pass. From the east side of the Divide it is approached from the trail which connects St. Mary Lake and Lake McDermott by way of Piegan Pass. On the west side of the Divide, one trail leads directly to Lake McDonald through the McDonald Creek Valley and another to the Granite Park Chalets.

This new route makes possible a delightful variety of trail combinations. It opens a third route between Lake McDonald and the east side. From Lake McDonald it offers a round trip in both directions by way of Logan and Gunsight Passes and the Sperry Glacier; also a round trip including Granite Park. From St. Mary Lake it offers a direct route to Granite Park and Waterton Lake. From Lake McDermott it offers another route to St. Mary Lake by way of Swiftcurrent and Logan Passes, and a round trip by way of Swiftcurrent, Logan, and Piegan Passes.

BROWN PASS.

Brown Pass, the trail to which has been little improved since the old game days because so few use it, is destined to become one of the celebrated passes of America. The trail from the east side passes from Waterton Lake up Olson Valley amid scenery as sensational as it is unusual, along the shores of lakes of individuality and great beauty, and enters, at the pass, the amazingly wild and beautiful cirques at the head of Bowman Lake. From here, a trail drops down to Bowman Lake which it follows to its outlet, and thence to a junction with the Flathead River road. This road leads south to Lake McDonald and Belton. A second trail is planned to connect Brown Pass, across sensational summits, with the head of Kintla Valley.

SOUTH AND WEST SIDE VALLEYS.

M'DONALD VALLEY.

The western entrance to the park is at Belton, on the Great Northern Railroad, 3 miles from the foot of beautiful Lake McDonald, the largest lake in the park. Glacier Hotel (Lewis's), with its outlying cottages, is reached by automobile stage from the railroad to the foot of the lake and from there by connecting boat. It is also reached from the east side by trail over Gunsight and Swiftcurrent Passes. The lake is nearly 9 miles long and is wooded everywhere to the water's edge. It heads up among lofty mountains. The view from its waters, culminating in the Continental Divide, is among the noblest in the world. Lake McDonald was the first lake to be opened and settled. Within easy distance of its hotel by trail are some of the finest spectacles of the Rocky Mountains, among them the Sperry Glacier, Lake Ellen Wilson and its magnificent cascades into Little St. Mary Lake, the Gunsight Pass, the celebrated Avalanche Basin, and the fine fishing lakes of the Camas Creek Valley. At the foot of the lake passes the west side road from which may be entered, at their outlets, all the exquisite valleys of the west side.

VALLEYS SOUTH OF M'DONALD.

The west side valleys south of Lake McDonald are not yet sufficiently developed to be of tourist importance.

The Harrison Valley, next to the south, is inaccessible above the lake. It lies between Mount Jackson and Blackfeet Mountain, rising abruptly 4,000 feet to the Continental Divide and the great Harrison Glacier.

The Nyack Valley, still farther south, carries another stream of large size. It is surmounted by lofty mountains, of which Mount Stimson, 10,155 feet, is the highest. Other peaks are Mounts Pinchot and Phillips, and Blackfeet Mountain. Pumpelly is the largest of the several glaciers.

The valleys south of Nyack have little comparative interest.

VALLEY'S NORTH OF M'DONALD.

The valley next north of McDonald, that of Camas Creek, contains six exquisite lakes. The chain begins in a pocket gorge below Longfellow Peak.

Logging Valley, next in order, a spot of great charm, does not suffer by comparison with its more spectacular neighbors. Quartz Valley contains four most attractive lakes, one of which, Cerulean Lake, sheltered by some of the most imposing peaks in the entire region, deserves to be better known. Rainbow Glacier, the largest of several at its top, hangs almost on the crest of Rainbow Peak, a mountain of remarkable dignity and personality.

BOWMAN VALLEY.

Bowman Valley, next to the north, is, second to McDonald, the principal line of travel on the west side of the park. Bowman Lake, though known to few, possesses remarkable beauty. Its shores are wooded like those of Lake McDonald, which it suggests in many ways. When its trail reaches the level of Brown Pass, there is disclosed a lofty cirque area of great magnificence. Mount Peabody, Boulder Peak, Mount Carter, the Guardhouse, and the serrated wall of the Continental Divide are topped and decorated with glaciers, their rocky precipices streaked perpendicularly with ribbons of frothing water. Hole-in-the-Wall Falls, outlet of a perpetual snow field, is a beautiful oddity.

KINTLA VALLEY.

The Kintla Valley, which occupies the northwestern corner of the park, is in many respects Glacier's climax. The Boundary Mountains, the northern side of the steep canyon which cradles its two superb lakes, are here exceedingly steep and rugged. The south side mountains, Parke Peak, Kintla Peak, Kinnerly Peak, Mount Peabody, and Boulder Peak, are indescribably wild and impressive. Kintla Peak, especially, rising 5,730 feet abruptly from the waters of upper Kintla Lake and bearing a large glacier on either shoulder like glistening wings, is one of the stirring spectacles of America.

The time is coming when Kintla will be a familiar name even abroad. The Kintla and Agassiz Glaciers are next in size to the Blackfoot Glacier.

Up to the present time it has been possible to reach Kintla only by a long forest trail from the Flathead River, or by a difficult and obscure trail from the Canadian side; hence its few visitors. The trail planned from Brown Pass crosses the Boulder Glacier and passes in its descent the tongue of the Kintla Glacier, a remarkable spectacle. Its completion will make a supreme American beauty spot readily accessible by trail.

ADMINISTRATION.

The Glacier National Park was established by the act of May 11, 1910 (36 Stat., 354). The representative of the National Park Service in immediate charge of the park is the superintendent, Mr. W. W. Payne. A force of rangers assists this officer in protecting the reservation. Exclusive jurisdiction over the park was ceded to the United States by act of the Montana Legislature of February 17, 1911, and accepted by Congress by act approved August 22, 1914 (38 Stat., 699). Mr. C. N. Davidson is United States commissioner for the park.

The tourist season extends from June 15 to September 15. The address of the superintendent is Belton, Mont. General information may be obtained from the superintendent, and all complaints should be addressed to him.

HOW TO REACH THE PARK.

The park entrances are on the main transcontinental line of the Great Northern Railroad. Glacier Park Station, Mont., the principal and eastern entrance, is 1,081 miles west of St. Paul, a ride of 34 hours. Belton, Mont., the western entrance, is 637 miles east of Seattle, a ride of 22 hours. Good train service is available from Chicago, St. Paul, Minneapolis, St. Louis, Kansas City, Omaha, Denver, Portland, Seattle, and Spokane, connecting with trains from all other sections.

During summer season round-trip excursion tickets at reduced fares are sold at practically all points in the United States and Canada, to Glacier Park as a destination; also to Glacier and Yellowstone National Parks, enabling tourists to make circuit tours of these two parks and, if journeying through Colorado, side trips to Rocky Mountain and Mesa Verde National Parks, if desired.

Passengers wishing to visit Glacier National Park en route to other destinations may stop over at Glacier Park Station or at Belton on round-trip or one-way tickets.

Storage charges on baggage at Glacier Park Station and at Belton will be waived while passengers are making park tours.

For further information regarding railroad fares, service, etc., apply to railroad ticket agents, or address Howard H. Hays, Manager, Bureau of Service, National Parks and Monuments, 646 Transportation Building, Chicago, Ill. This bureau is maintained by the United States Railroad Administration.

EASTERN ENTRANCE.

The eastern entrance is at Glacier Park Station. Here excellent accommodations are offered to 400 guests by the Glacier Park Hotel, an imposing structure, nearly as long as the Capitol at Washington, and built of massive logs.

From here automobile roads lead to Two Medicine Lake, to Cut Bank Chalets, to St. Mary Lakes, and eventually to Lake McDermott, from which point horse trails lead up into the mountain fastnesses, and, at three points, across the Continental Divide to the glorious country on the western slopes.

WESTERN ENTRANCE.

Belton, Mont., is the western entrance to the national park and the address of the superintendent. The road from Belton runs to Fish Creek on Lake McDonald and up the Flathead River. Trails lead to points of interest, skirting beautiful lakes, and trips may be taken on trails leading from the Flathead River Road to Logging, Quartz, Bowman, and Kintla Lakes, and reach great glacial amphitheatres, rock pinnacles, ridges, and hanging glaciers. The Bowman Trail crosses the mountain range through Brown Pass. The ambitious explorer may make many interesting excursions with guide and proper equipment.

HOW TO DRESS.

As a rule tourists are inclined to carry too much. A very inexpensive and simple outfit is required—old clothes and stout shoes are the rule. For a week's to two weeks' trip, either afoot or horseback, the following list is about all that is required:

- | | |
|--|--|
| 1 suit of old clothes. | 2 pairs of cotton gloves. |
| 1 sweater or mackinaw wool jacket. | 1 old felt hat. |
| 2 suits of wool underwear (medium weight). | 1 rubber blanket or raincoat, if on walking tour. Waterproof slickers are furnished free with saddle horses. |
| 3 pairs of wool socks (heavy). | |
| 1 pair of stout lace shoes or hunting boots. | |
| 1 pair of canvas leggings (if shoes are worn). | |

The above, together with toilet articles, will go in a compact bundle and can be put in haversack or bag. Women should have either stout shoes or boots and short divided riding skirts.

Essential articles of clothing of good quality, including boots, shoes, haversacks, slickers, blankets, camping equipment, provisions, etc., may be purchased at well-stocked commissaries at Glacier Park Station and at St. Mary and Many Glacier Chalets. The Glacier Park Hotel Co., which operates these commissaries, also makes a practice of renting, at a nominal figure, slickers, riding trousers, mackinaw coats, and other overgarments.

Stores carrying a similar general line of articles most useful in making park trips are located at Belton, Mont., the western entrance to the park, and at Glacier Hotel (Lewis') at the head of Lake McDonald.

An overnight stopping place is maintained at Christensen's ranch on the Flathead River road about 2 miles south of Logging Creek,



MAP SHOWING RAILROAD ROUTES TO GLACIER AND YELLOWSTONE NATIONAL PARKS.

where travelers and horses are accommodated. A small store carrying some provisions, principally lunch stuff, cigars, tobacco, and fisherman's supplies, is at the foot of Lake McDonald.

POST OFFICES.

United States post offices are located at Glacier Park, Mont., Belton, Mont., and (during summer season) Lake McDonald, Mont.

Tourists stopping at Glacier Park Hotel, the eastern entrance, or intending to visit Many Glacier Hotel, Going-to-the-Sun Chalets, Two Medicine, St. Mary, Sperry, or Granite Park Chalets should have mail addressed to Glacier Park, Mont., in care of the Glacier Park Hotel Co. Mail will be forwarded to other hotels or chalets if forwarding address is left with the clerk.

Tourists stopping at Glacier Hotel (Lewis's) on Lake McDonald should have mail addressed to Lake McDonald post office, care of Glacier Hotel (Lewis's). Tourists stopping at Belton Chalets, the western entrance of the park, should have mail addressed to Belton, Mont.

Correspondence with the National Park Service administrative office should be addressed to W. W. Payne, superintendent, Glacier National Park, Belton, Mont.

TELEGRAMS.

Telegrams may be sent to all parts of the world from Belton and Glacier Park. All hotels will send and receive telegrams by telephone connection with these offices.

EXPRESS.

The American Railway Express, operating on the Great Northern Railroad and giving connecting service throughout the United States, maintains express offices at Belton and Glacier Park. Express shipments received at either of these offices will, upon the payment of charges, be forwarded by the transportation company to the various hotels in the park, for which service a nominal charge is made.

HOTELS AND CHALETS.**HOTELS AND CHALETS OF GLACIER PARK HOTEL CO.**

The following hotels and chalet groups are operated by the Glacier Park Hotel Co.:

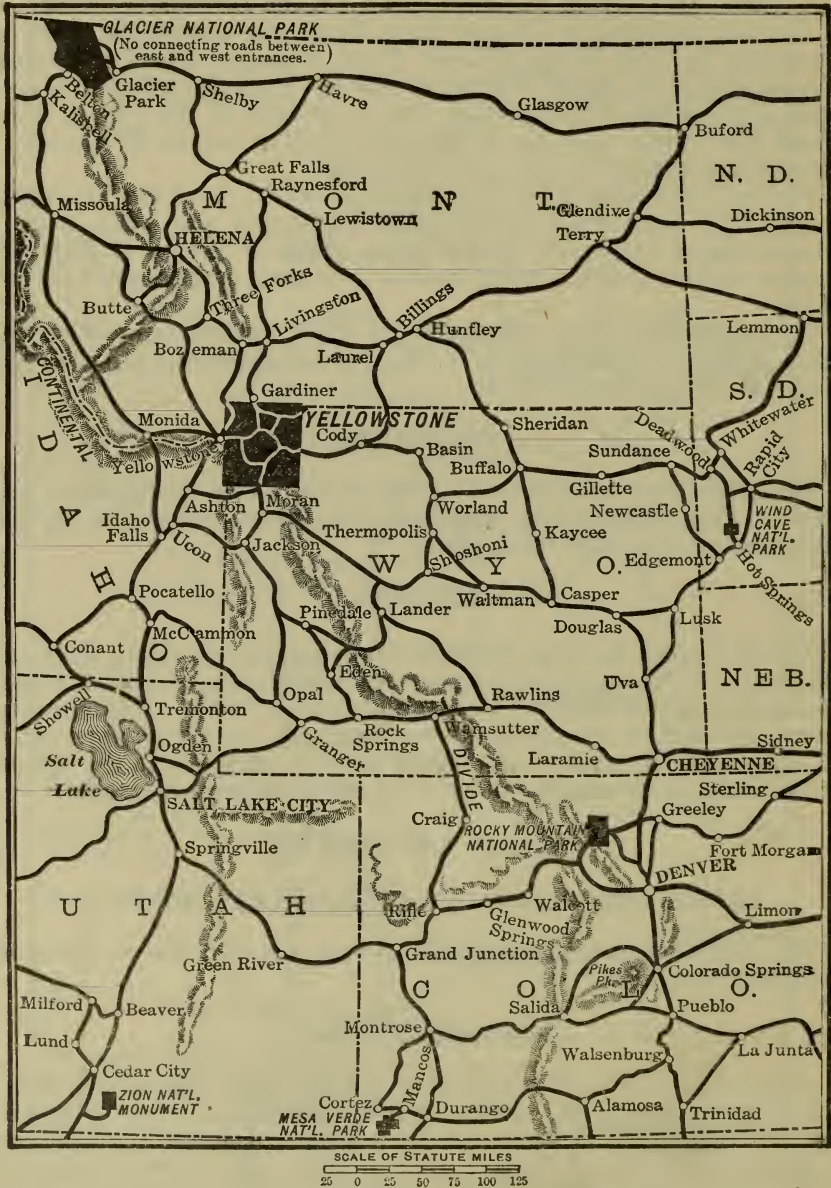
GLACIER PARK HOTEL.

Located at Glacier Park Station, on the main line of the Great Northern Railroad; 200 rooms, accommodations for over 400 people; electric lighted, steam heat, running water, rooms with private bath, cuisine and service of highest order, plunge pool, shower baths, sun parlor, open camp fire in lobby, lounging and music room. Large verandas face the mountains of Glacier Park.

NEW MANY GLACIER HOTEL.

Beautifully located on the east shore of Lake McDermott, 55 miles north of Glacier Park Hotel, on scenic automobile highway. Automobile bus service to and from Glacier Park Station daily.

This hotel contains accommodations for upward of 500 guests; electric lighted, steam heated, running water, rooms with private



AUTOMOBILE ROADS BETWEEN GLACIER, YELLOWSTONE, ROCKY MOUNTAIN, AND MESA VERDE NATIONAL PARKS.

bath; dining service the same high standard as at Glacier Park Hotel; open camp fires in lobby; and café in which a la carte service is furnished.

The spacious observation verandas on this new hostelry command a view of one of the most beautiful mountain and lake panoramas in all América—Altyn Peak, Mount Henkel, Mount Wilbur, Swiftcurrent Peak, Mount Grinnell, Mount Gould, and Allen Mountain.

Authorized Rates at Glacier Park and Many Glacier Hotels.

Rooms without bath, including meals, American plan, per day, per person, \$4.50 and \$5.

Rooms, with bath, including meals, American plan, per day, per person, \$5.50, \$6, \$7, and \$8.

Room use for any part of a day without bath, \$1.

Room use for any part of a day with bath, \$2.

Hotel rates will be computed on the basis of \$1 for each meal and \$1.50 and upward for lodging, according to class of accommodations; for instance, on the basis of \$5 per day, one-half day, consisting of lodging and breakfast, will be \$3, viz, \$2 for room and \$1 for meal. Similarly at \$4.50 per day dinner and lodging will be \$2.50, viz, \$1 for dinner and \$1.50 for lodging. All fractions of a day will be arrived at on this basis.

Children 5 years of age and over, full rate.

Children under 5 years of age, one-half rate.

GLACIER PARK HOTEL CO.'S CHALET GROUPS.

Throughout Glacier National Park, distant from 8 to 16 miles from each other, the Glacier Park Hotel Co. maintains and operates the following permanent Swiss chalets, taking them in the order in which they may be reached from Glacier Park Station.

*Two Medicine Chalets,*¹ *on Two Medicine Lake.*—Commands a view of the mountains and lakes of the Two Medicine country, reached by automobile, horseback, or afoot from Glacier Park Hotel.

Cut Bank Chalets, on Cut Bank River.—Located in the Cut Bank Valley, a popular rendezvous for fishermen. From this camp it is a day's side trip to Triple Divide Mountain, where the water flows three ways.

*St. Mary Chalets,*¹ *on St. Mary Lake.*—Located on lower end of St. Mary Lake. The popular going-in point for all tourists visiting the Going-to-the-Sun and Lake McDermott regions. Side trip is made from here to Red Eagle Lake, a popular fishing trip.

*Going-to-the-Sun Chalets,*¹ *on St. Mary Lake.*—Located on the northwest shore of St. Mary Lake, commanding a view of the Continental Divide. Reached by boat from St. Mary Chalets or afoot or horseback from interior points.

*Many Glacier Chalets,*¹ *on Lake McDermott.*—Located one-eighth of a mile from the new Many Glacier Hotel. Side trips from this point same as from Many Glacier Hotel.

Granite Park Chalets.—Located on the west side of the Continental Divide in Granite Park. Reached by horseback or afoot from Many Glacier Hotel via Swiftcurrent Pass.

¹ Detached shower or tub baths at these hostelries, 50 cents.

Sperry Glacier Chalets, in the Sperry Glacier Basin.—Located on the west side of the Continental Divide near Sperry Glacier. Reached by horseback or afoot from Going-to-the-Sun Chalets or Lake McDonald.

*Belton Chalets.*¹—Located on the main line of the Great Northern Railroad at Belton station, on the west side of the Continental Divide, 58 miles west of Glacier Park Station.

Each of these chalet groups consist of log or stone buildings, attractively grouped, in the vicinity of a central structure used for a dining and lounging room. Most of the dormitory chalets have one or more attractive lounging rooms equipped with large stone fireplaces. The service is less conventional than at the hotels, the aim being to furnish clean, comfortable beds, plain food, well cooked, plenty of it, and served in family style.

Authorized Rates at the Chalet Groups.

Board and lodging, American plan, per day, per person, \$4.

Chalet rates will be computed on the basis of \$1 for each meal and \$1 for lodging.

Children 5 years of age and over, full rate.

Children under 5 years of age, one-half rate.

OTHER HOTELS.

The following hotels and camps in or adjacent to the park are located on patented lands. The National Park Service exercises no control over the rates and operations of these hotels. The rates given below are published for the information of the public, but the Service assumes no responsibility for their correctness.

Glacier Hotel, near head of Lake McDonald.—Proprietor, J. E. Lewis, Lake McDonald, Mont. Log hotel of pleasing style of rustic architecture containing 64 rooms. Spacious lounging room; open fire in lobby; large veranda facing Lake McDonald. Hotel is equipped with private baths and laundry, and additional accommodations furnished in 20 log cabins. Reached by stage from Belton (3 miles), thence by launch (8 miles). Rates, \$4, \$5, and \$6 per day.

Dow Hotel, at Belton, Mont.—Proprietor, E. E. Dow, Belton, Mont. Frame building. Rate, \$2.50 per day.

National Park cabin resort, at foot of Lake McDonald.—Proprietor, E. E. Dow, Belton, Mont. Log cabins and a central dining room. Reached by stage from Belton (3 miles). Rates, \$2 to \$3 per day.

Park Cabin Resort (Geduhn's), at head of Lake McDonald.—Proprietor James Conlon, trustee, Belton, Mont. Ten log cabins and a general dining room. Reached by stage from Belton (3 miles), thence by launch (9 miles). Laundry. Rates, \$2.50 to \$3 per day.

¹ Detached shower or tub baths at these hostleries, 50 cents.

TRANSPORTATION WITHIN THE PARK.

STAGE AND AUTOMOBILE SERVICE.

All regular stage fares include transportation of one piece of baggage weighing not more than 20 pounds.

Glacier Park Station, St. Mary Chalets, and Many Glacier Hotel on Lake McDermott.—Daily automobile service is maintained on the following schedules:

Automobile schedule, Glacier Park Station to St. Mary Chalets and Many Glacier Hotel.

- Leave Glacier Park Hotel at 8 a. m.
- Arrive St. Mary Chalets at 10.45 a. m.
- Leave St. Mary Chalets at 11 a. m.
- Arrive Many Glacier Hotel at 12.45 p. m.

Automobile schedule, Many Glacier Hotel to St. Mary Chalets and Glacier Park Station.

- Leave Many Glacier Hotel at 1.30 p. m.
- Arrive St. Mary Chalets at 3.15 p. m.
- Leave St. Mary Chalets at 3.30 p. m.
- Arrive Glacier Park Hotel at 6.15 p. m.

Automobile rates.

Between—	One way.	Round trip.
Glacier Park Hotel and St. Mary Chalets.....	\$3.50	\$7.00
Glacier Park Hotel and Many Glacier Hotel.....	6.50	13.00
St. Mary Chalets and Many Glacier Hotel.....	3.00	6.00
Glacier Park Hotel and Two Medicine Chalets.....	1.50	3.00
Glacier Park Hotel and Cut Bank Chalets ¹50	5.00
Belton and Lake McDonald.....	.50	1.00

¹ No regular daily service between these points; rate applies only for minimum of 4 round-trip fares.

Glacier Park Station and Two Medicine Chalets.—Daily automobile service is maintained between Glacier Park Station and Two Medicine Chalets.

- Leave Glacier Park Hotel at 10 a. m.
- Arrive at Two Medicine Chalets at 11.30 a. m.
- Leave Two Medicine Chalets at 4 p. m.
- Arrive at Glacier Park Hotel at 5 p. m.

Automobile rental.—Tourists desiring to rent private automobiles for special trips from Glacier Park Hotel or Many Glacier Hotel may secure them from the Glacier Park Transportation Co. This service may be had only when cars are available without interrupting regular service. Charge is on the basis of 80 cents a mile for the round trip, with a minimum charge of \$40. No cars will be chartered for more than one day, except by special arrangement with the automobile company. Cars will not be chartered for one-way trips.

A flat charge between Glacier Park and other points for special cars operating in charter service will be as follows:

Glacier Park Hotel to Two Medicine Chalets and return.....	\$20
Glacier Park Hotel to Cut Bank Chalets and return.....	35
Glacier Park Hotel to St. Mary Chalets and return.....	50
Glacier Park Hotel to Many Glacier Hotel and return.....	85

There will be an additional charge of \$4 per hour for touring cars chartered by special parties for every idle hour during the company's

working day, which is from 7 a. m. to 7 p. m. No charge will be made after 7 p. m. until 7 a. m. the following morning.

Belton, foot of Lake McDonald, and Fish Creek.—The Glacier Park Transportation Co. maintains an auto service between Belton Station, the foot of Lake McDonald, and Fish Creek, connecting with launches for all points on the lake and with all Great Northern passenger trains at Belton.

Stage fares between Belton, Lake McDonald, and Fish Creek.

Belton and Lake McDonald, each way-----	\$0. 50
Belton and Fish Creek, each way-----	. 75

At times other than the period established by the Secretary of the Interior as the park season, Mr. John Weightman has authority to transport passengers, baggage, and freight between Belton and the foot of Lake McDonald at the prescribed rates for this service published herein. Mr. Weightman also conducts a general livery business with stables in Belton.

BOAT SERVICE.

All regular boat fares include transportation of one piece of baggage weighing not more than 20 pounds.

St. Mary Lake.—Two round trips a day will be made between St. Mary and Going-to-the-Sun Chalets, connecting with the automobile service between Glacier Park Station, St. Mary Chalets, and Many Glacier Hotel at Lake McDermott. Fare between St. Mary and Going-to-the-Sun Chalets, 75 cents in each direction.

Launch schedule between St. Mary and Going-to-the-Sun Chalets.

Leave Going-to-the-Sun Chalets at 8.45 a. m. and 2 p. m.
Arrive St. Mary Chalets at 9.45 a. m. and 3 p. m.
Leave St. Mary Chalets at 11.15 a. m. and 5 p. m.
Arrive Going-to-the-Sun Chalets at 12.15 p. m. and 6 p. m.

Lake McDonald.—Launch service is maintained by Miller & Kelly (Belton, Mont.) on Lake McDonald, connecting with all stages at the foot of the lake for points on the lake.

Rates for Lake McDonald launch service.

One way, in either direction.	Distance in miles.	Fare.
Foot of lake to head of lake-----	10	\$1. 00
Foot of lake to Park Cabin resort-----	10	1. 00
Foot of lake to Glacier Hotel (Lewis's)-----	8	. 75
Fish Creek to head of lake-----	8	. 75
Fish Creek to Park Cabin resort-----	8	. 75
Fish Creek to Glacier Hotel-----	6	. 50
Glacier Hotel to head of lake-----	2	. 25
Glacier Hotel to Park Cabin resort-----	2	. 25
Foot of lake to Fish Creek-----	2	. 25

BAGGAGE AND FREIGHT.

Passengers touring the park will be permitted to carry with them free on automobiles, stages, or launches one piece of hand baggage weighing not to exceed 20 pounds.

The following rates apply for the transportation of baggage between points in Glacier National Park via auto or launch. Autos and stages are not equipped to handle heavy baggage and right is reserved to forward such baggage by freighting outfit.

Baggage rates.

Between—	Trunk.	Suit case or grip.
Glacier Park Hotel and Two Medicine Chalets.....	\$1. 00	\$0. 50
Glacier Park Hotel and St. Mary Chalets.....	2. 00	. 50
Glacier Park Hotel and Many Glacier Chalets.....	4. 00	1. 00
Glacier Park Hotel and Going-to-the-Sun Chalets.....	2. 50	1. 00
St. Mary Chalets and Going-to-the-Sun Chalets.....	. 50	. 25
St. Mary Chalets and Many Glacier Chalets.....	2. 00	. 50
Belton and Glacier Hotel (Lewis's).....	1. 00	. 50
Belton and foot of Lake McDonald.....	. 50	. 25
Belton and Fish Creek.....	. 50	. 25
Foot of Lake McDonald and head of Lake McDonald.....	. 50	. 25

Freight rates.

	Cents per hundred pounds.
Belton to or from Lake McDonald:	
1,000 pounds and under.....	25
1,000 to 1,500 pounds.....	20
1,500 to 3,500 pounds.....	15
3,500 pounds and over.....	10
On Lake McDonald, either direction:	
1,000 pounds and under.....	25
1,000 to 2,500 pounds.....	20
2,500 pounds and over.....	15
On St. Mary Lake:	
1,000 pounds or less.....	25
Over 1,000 pounds.....	20
	Cents per pound.
Between Belton and Logging Creek ranger station or other points between McGee Meadow and Logging Creek.....	1½
Between Belton and Indian Creek ranger station.....	2
Between Belton and Kishenehn ranger station.....	2

These freight rates are to be construed as maximum rates only.

HORSES AND GUIDES.

The Park Saddle Horse Co. furnishes saddle and pack horse service, guides, and camp outfits.

Guides, saddle, and pack horses can be secured, or released, at Glacier Park Station, Many Glacier Hotel, Going-to-the-Sun Chalets, and Glacier Hotel on Lake McDonald, for nonscheduled, indefinite trips, at the following rates:

Rates for guides and horses.

Guides, including horse and board, per day.....	\$8
Saddle and pack horses, per day.....	3

Park rules require 1 guide for every 10 persons. Pack horses are not needed for short one-day trips, but are necessary for long trips of several days.

All saddle horses are required to be equipped with waterproof slickers, which outfitters supply free.

The guides in charge of a party shall at all times precede the party and the assisting guides shall follow the party.

It shall be the duty of the assisting guide to handle the pack horses, to prevent their crowding each other or the horses of the tourists on mountain trails.

A complete horseback tour of Glacier National Park from Glacier Park Hotel, visiting all chalet-groups, with several side trips to principal points of interest, such as Iceberg Lake, Cracker Lake, Sperry Glacier, etc., can be made in from 10 to 14 days. Tourists using such horseback tours can travel at their own convenience without the necessity of following a fixed schedule.

RATES FOR SCHEDULED TRIPS FROM HOTELS AND CHALETs.

The following schedule of rates covers saddle-horse trips from the various hotels and chalets under the conditions mentioned therein. The charge includes horse and guide service:

Saddle-horse trips.	Rate.	Minimum number required in party.
FROM GLACIER PARK HOTEL.		
¹ Glacier Park Hotel to Mount Henry and return—1-day trip.....	\$4.00	3
¹ Glacier Park Hotel to Two Medicine and return—2-day trip via Mount Henry in one direction.....	8.00	3
Inside Trail trip, via Two Medicine, Mount Morgan, Cut Bank Chalets, Triple Divide, Red Eagle Lake, St. Mary Chalets, Going-to-the-Sun Chalets, Piegan Pass to Many-Glacier Hotel—a 5-day scenic trip.....	18.00	5
Same trip as far as St. Mary Chalets only—3-day trip.....	13.25	5
FROM MANY GLACIER HOTEL.		
¹ Iceberg Lake and return—1-day trip.....	3.50	1
Granite Park and return—2-day trip.....	8.00	1
Granite Park and return—1-day trip.....	5.00	1
¹ Cracker Lake and return—1-day trip.....	3.50	1
¹ Ptarmigan Lake and return—1-day trip.....	4.00	3
¹ Grinnell Lake and return—1-half day trip (afternoon).....	3.50	3
Grinnell Glacier and return—1-day trip.....	4.00	3
Morning Eagle Falls and return—1-day trip.....	4.00	1
Going-to-the-Sun Chalets via Piegan Pass—1 way.....	4.00	1
² Logan Pass Triangle trip, by Swiftcurrent Pass, Granite Park, Logan Pass, Going-to-the-Sun Chalets, and Piegan Pass—round trip—3-day trip.....	12.50	1
FROM GOING-TO-THE-SUN CHALETs.		
¹ Sexton Glacier and return—one-half day trip.....	3.50	3
¹ Gunsight Lake and return—1-day trip.....	4.00	3
¹ Roes Basin and return—1-day trip.....	4.00	3
Many-Glacier Hotel via Piegan Pass—1-day trip.....	4.00	1
Lake McDonald via Sperry Chalets and Gunsight Pass—2-day trip.....	8.00	5
² Logan Pass Triangle trip by Piegan Pass, Many-Glacier Hotel, Swiftcurrent Pass, Granite Park, and Logan Pass—round trip—3-day trip.....	12.50	1
FROM ST. MARY CHALETs.		
¹ Red Eagle Lake and return—1-day trip.....	4.00	3
Glacier Park Hotel via Red Eagle, Triple Divide, Cut Bank Chalets, Two Medicine (Inside Trail trip)—3-day trip.....	13.25	5
FROM LAKE M'DONALD—GLACIER HOTEL (LEWIS'S).		
¹ Sperry Glacier and return—1-day trip.....	4.00	3
Lincoln Peak and return—1-day trip.....	4.00	3
¹ Avalanche Basin and return—1-day trip.....	4.00	3
Snyder Lake and return—1-day trip.....	4.00	3
Going-to-the-Sun Chalets via Sperry Chalets and Gunsight Pass—2-day trip.....	8.00	5

¹ Made daily during season. Other trips available July 1 to Sept. 1.

² Logan Pass Triangle trip made daily between July 1 and Sept. 1. Parties once started on this trip will not be allowed refund in case of withdrawal.

ALL-EXPENSE INDEPENDENT CAMPING TOURS.

The following rates are quoted for trips of 10 days or more. Special arrangements may be made for trips of less than 10 days:

	Cost per day per person.
1 person.....	\$25. 00
2 persons.....	15. 75
3 persons.....	12. 65
4 persons.....	12. 40
5 persons.....	11. 30
6 persons.....	10. 60
7 persons or more.....	10. 00

Foregoing rates include the necessary guides, cooks, saddle horses, pack horses, provisions, tents, cooking utensils, stoves, and everything except blankets. Tourists are advised to bring their own blankets or bedding; or they can rent blankets from the outfitters at \$1 per pair.

USEFUL INFORMATION REGARDING AUTOMOBILE, SADDLE HORSE, AND WALKING TRIPS FROM HOTELS AND CHALETs.

Below are given the principal trips from the hotels and chalets. Road trips can be made on horseback or on foot unless otherwise indicated; trail trips can be made on horseback or on foot. Where horseback rates are given, they are special flat rates for scheduled trips and include charges for both guide and horses. Where no rates are given the regular per diem charges apply.

FROM GLACIER PARK HOTEL (GLACIER PARK STATION AND POST OFFICE).

(Altitude 4,800 feet.)

St. Mary Chalets (4,500 feet).—Road; 32 miles; automobile stage fare, \$3.50 in each direction. A one-day trip to St. Mary and Going-to-the-Sun Chalets by automobile and launch may be made for \$8.50 for the round trip; for schedule, see page 39.

Inside trail.—Guide and horses may be obtained for a three-day trip over the inside trail from Glacier Park Hotel, via Two Medicine Chalets, thence via Mount Morgan Pass to Cut Bank Chalets, thence via Triple Divide, Red Eagle Lake, to St. Mary Chalets, at the rate of \$13.25 for each person, if five or more make the trip. This trip may be made in either direction.

Many Glacier Hotel (4,900 feet).—Road; 55 miles; automobile stage fare, \$6.50 in each direction; for schedule, see page 27.

Inside trail.—Guide and horses may be obtained for a five-day trip over the inside trail from Glacier Park Hotel, via Two Medicine Chalets, thence via Mount Morgan Pass to Cut Bank Chalets, thence via Triple Divide, Red Eagle Lake, to St. Mary Chalets, thence via boat across St. Mary Lake to Going-to-the-Sun Chalets, thence via Piegan Pass to Many Glacier Hotel, at the rate of \$18 for each person, including boat fare, if five or more make the trip. This trip may be made in either direction.

Two Medicine Chalets (5,200 feet) on Two Medicine Lake.—Road; 12 miles; automobile stage fare, \$1.50 in each direction; for schedule, see page 39.

Guide and horses may be obtained for a two-day trip to Two Medicine Chalets, Trick Falls, and return, via Mount Henry Trail or Road, for \$8 each person, if three or more go together; guide and horses one way, \$5.

Mount Henry (8,870 feet).—Trail, 7 miles. From Mount Henry can be obtained a splendid view of the peaks surrounding Two Medicine Lake. Guide and horses can be secured for the round trip to Mount Henry at the rate of \$4 per person if three or more go together.

This trip can be extended to Two Medicine Chalets (5,200 feet), 4 miles farther, and the return made by automobile. Rate for guide and horses Glacier Park Hotel to Two Medicine Chalets, three or more in party, \$5; automobile fare Two Medicine Chalets to Glacier Park Station, 12 miles, \$1.50.

Cut Bank Chalets (5,200 feet).—Road, 22 miles; automobile stage fare, \$5 round trip per person, with a minimum of four persons.

Going-to-the-Sun Chalets (4,500 feet).—A one-day trip to Going-to-the-Sun Chalets, via St. Mary and return, by automobile and launch, may be made for \$8.50; for schedule, see page 39.

FROM TWO MEDICINE CHALETS ON TWO MEDICINE LAKE.

(Altitude, 5,200 feet.)

Trick Falls (5,000 feet).—Road; 2 miles.

Upper Two Medicine Lake (5,600 feet).—Trail, or boat and trail; 4 miles.

Bighorn Basin (6,000 feet).—Trail; 4 miles.

Dawson Pass (7,500 feet).—Trail; 6 miles.

Glacier Park Hotel (4,800 feet).—Road; 12 miles; stage fare, \$1.50 in each direction; for schedule, see page 39. Trail by way of Mount Henry (8,870 feet), 11 miles; rate for horses and guide, three or more in party, \$5.

Mount Henry (8,870 feet).—Trail, 4 miles. From Mount Henry can be obtained a fine view of the peaks surrounding Two Medicine Lake.

Cut Bank Chalets (5,200 feet).—Trail by way of Dry Fork and Mount Morgan Pass (7,600 feet); 18 miles.

Park Creek (5,000 feet).—Trail by way of Two Medicine Pass (7,675 feet). Excellent fishing at Park Creek.

FROM CUT BANK CHALETS ON NORTH FORK OF CUT BANK CREEK.

(Altitude, 5,200 feet.)

Red Eagle Lake.—By way of Triple Divide Mountain; 16 miles.

Cut Bank Pass (7,861 feet).—Trail; 7 miles. From Cut Bank Pass may be obtained a fine view of Stimson Mountain (10,155 feet) and Mount St. Nicholas (9,385 feet). As far as known Mount St. Nicholas has never been scaled.

Triple Divide Peak (8,001 feet).—Distance 8 miles. Triple Divide Peak separates the headwaters of waters flowing into the Atlantic Ocean, the Pacific Ocean, and the Arctic Ocean.

Glacier Park Hotel (4,800 feet).—Road; 22 miles.

St. Mary Chalets (4,500 feet).—Trail and road; 16 miles.

Two Medicine Chalets (5,200 feet).—Trail by way of Mount Morgan Pass (7,600 feet) and Dry Fork; 18 miles.

FROM ST. MARY CHALETS ON ST. MARY LAKE.

(Altitude, 4,500 feet.)

Red Eagle Lake (4,702 feet).—Trail; 8 miles; good fishing. If three or more persons make this trip together, guide and horses may be obtained at the rate of \$4 per person for the round trip.

Red Eagle Pass (7,500 feet) and Glacier.—Trail; 16 miles.

Going-to-the-Sun Chalets (4,500 feet).—Launch; 8 miles; fare, 75 cents in each direction.

Cut Bank Chalets (5,200 feet).—Road, 16 miles; trail, 24 miles.

Many Glacier Hotel on Lake McDermott (4,900 feet).—Road, 23 miles; trail, 16 miles; stage fare, \$3 in each direction.

Glacier Park Station (4,800 feet).—Road; 32 miles; automobile stage fare, \$3.50 in each direction.

Inside trail.—Guide and horses may be obtained for three-day trip over the inside trail from St. Mary Chalets via Red Eagle Lake and the Triple Divide to Cut Bank Chalets, thence via Mount Morgan Pass and Two Medicine Chalets to Glacier Park Hotel, at the rate of \$13.25 for each person, if five or more make the trip. This trip may be made in either direction.

Five hours' advance notice is required for horseback trips from St. Mary Chalets, as no horses are kept there.

FROM GOING-TO-THE-SUN CHALETS ON ST. MARY LAKE.

(Altitude, 4,500 feet.)

Roes Basin (6,500 feet).—Poor trail; 6 miles. Guide and horses may be obtained for the round trip at \$4 per person, if three or more go together.

Sexton Glacier (7,000 feet).—Trail; 7 miles. Guide and horses may be secured for the round trip at \$3.50 per person, if three or more go together.

Piegan Pass (7,200 feet).—Trail; 12 miles.

Many Glacier Hotel on Lake McDermott (4,900 feet).—Trail by way of Piegan Pass (7,200 feet); 18 miles. This trip gives good view of Mount Siyeh and Piegan Mountain, the Garden Wall, and Grinnell Glacier; on this trip Lakes Grinnell, Josephine, and McDermott are passed. Rate for guide and horse, \$4 per person.

St. Mary Chalets (4,500 feet).—Launch; 8 miles; fare, 75 cents in each direction.

Gunsight Lake (5,300 feet).—Trail; 9 miles. Guide and horses may be obtained for the round trip at \$4 per person, if three or more go together.

Glacier Hotel, on Lake McDonald, via Sperry Chalets.—Horses and guides may be obtained for a two-day trip at the rate of \$8 for each person, if five or more make the trip together.

Logan Pass triangle trip.—Three-day trip, made as follows: Going-to-the-Sun Chalets to Many Glacier Hotel, via Glacial Meadows and Piegan Pass; thence to Granite Park Chalets via Swiftcurrent Pass; thence back to Going-to-the-Sun Chalets, via the west side of the Garden Wall and Logan Pass. Rate for guide and horses, \$12.50 per person.

Many Glacier Hotel is also a point of departure for this trip.

Parties once started on this trip will not be allowed a refund in case of withdrawal.

Circle trip.—Guide and horses may be obtained for a five-day trip, starting from Going-to-the-Sun Chalets and going over Piegan Pass to Many Glacier Hotel; thence over Swiftcurrent Pass to Granite Park Chalets; thence via the Garden Wall trail to Glacier Hotel, on Lake McDonald; thence to Sperry Chalets, via Sperry Glacier; thence over Gunsight Pass, returning to Going-to-the-Sun Chalets, at the rate of \$20 for each person, if five or more make the trip together.

This trip can also be started from Many Glacier Hotel and Glacier Hotel, on Lake McDonald, returning to starting point.

Parties once started on this trip will not be allowed a refund in case of withdrawal.

FROM MANY GLACIER HOTEL, ON LAKE McDERMOTT.

(Altitude, 4,900 feet.)

Appokunny Basin.—Trail; 4 miles.

St. Mary Chalets (4,500 feet).—Road; 23 miles; stage fare, \$3 in each direction. Trail, 16 miles.

Going-to-the-Sun Chalets (4,500 feet) by way of Piegan Pass (7,200 feet).—Trail; 22 miles. This trip gives good views of Mount Siyeh and Piegan Mountain, the Garden Wall, Grinnell Glacier, Lakes Grinnell, Josephine, and McDermott. Rate for guide and horses, \$4 for each person.

Iceberg Lake (6,000 feet).—Trail; 7 miles. Rate for guide and horses, \$3.50 per person for the round trip.

Gunsight Lake.—Trail by way of Piegan Pass; 20 miles.

Cracker Lake (6,000 feet).—Trail; 7 miles. Rate for guide and horses, \$3.50 per person for the round trip.

Grinnell Lake (5,000 feet).—Trail; 5 miles; footpath to Grinnell Glacier (5,000 feet); distance, 2 miles from Grinnell Lake. Rate for guide and horses for the round trip, \$3.50 per person, if three or more go together. This trip is made in the afternoon.

Grinnell Glacier.—Rate for guides and horses for round trip to Grinnell Glacier, \$4 for each person, if three or more go together.

Piegan Pass (7,200 feet) and Garden Wall.—Trail; 10 miles.

Swiftcurrent Pass (7,176 feet).—Trail; 7 miles.

Ptarmigan Lake (6,000 feet).—Trail; 7 miles. Rate for guide and horses to Ptarmigan Lake and return, \$3.50 per person, if three or more go together.

Morning Eagle Falls.—Trail; 6 miles. Rate for guide and horses for the round trip, \$4 per person.

Granite Park Chalets (6,500 feet).—Trail by way of Swiftcurrent Pass (7,176 feet); 9 miles. Rate for guide and horses, \$5 per person for the round trip. Guide and horses for a two-day trip to Granite Park and return may be had for \$8 for each person.

Going-to-the-Sun Chalets.—Rate for guide and horses to Going-to-the-Sun Chalets via Piegan Pass, \$4 per person.

Glacier Park Hotel (4,800 feet).—Road 55 miles; automobile stage fare, \$6.50 in each direction. For schedule, see page 27.

Logan Pass Triangle trip.—Three-day trip made as follows: Many Glacier Hotel to Granite Park Chalets via Swiftcurrent Pass, thence along the west side of the Garden Wall through Logan Pass to Going-to-the-Sun Chalets, thence back to Many Glacier Hotel via Glacial Meadows and Piegan Pass. Rate for guide and horses, \$12.50 per person. Going-to-the-Sun Chalets is also a point of departure for this trip.

Parties once started on this trip will not be allowed a refund in case of withdrawal.

Inside Trail.—Guide and horses may be obtained for a five-day trip over the Inside Trail from Many Glacier Hotel via Piegan Pass to Going-to-the-Sun Chalets, thence by boat across St. Mary Lake to St. Mary Chalets, thence via Red Eagle Lake and Triple Divide to Cut Bank Chalets, thence via Mount Morgan Pass and Two Medicine Chalets to Glacier Park Hotel, at the rate of \$18 per person, including boat fare, if five or more make the trip. This trip may be made in either direction.

Circle trip.—Guide and horses may be obtained for a five-day circle trip starting from Many Glacier Hotel and going over Swiftcurrent Pass to Granite Park Chalets, thence via the Garden Wall Trail to Glacier Hotel on Lake McDonald; thence to Sperry Chalets, via Sperry Glacier, thence over Gunsight Pass to Going-to-the-Sun Chalets, returning via Piegan Pass to Many Glacier Hotel, at the rate of \$20 for each person, if five or more make the trip together.

This trip can also be started from Going-to-the-Sun Chalets and Glacier Hotel on Lake McDonald, returning to starting point.

Parties once started on this trip will not be allowed a refund in case of withdrawal.

FROM GRANITE PARK CHALETS.

(Altitude, about 6,300 feet.)

Swiftcurrent Peak.—One mile by footpath from Swiftcurrent Pass, $1\frac{3}{4}$ miles from Chalets. From the top of Swiftcurrent Peak an unexcelled panorama of all the principal peaks of the park and many of the glaciers and lakes may be seen.

Rosenwald Path.—This footpath leads to a reef about one-third mile north of the chalets, from which place an excellent view of the northern portion of park, Mount Cleveland, and the Canadian mountains can be seen.

Piatt Path.—This footpath leaves the Logan Pass trail about 1 mile south of the chalets, and climbs up to and follows along the top of the Garden Wall for about $1\frac{1}{2}$ miles, from which place one may look down upon Grinnell Glacier and the beautiful lakes of the Cataract and Swiftcurrent Valleys. This is the most spectacular trail in the park.

Logan Pass and vicinity.—Logan Pass is 7.7 miles south by horse trail from the chalets. This is a new section of wonders opened up to tourist travel in 1918. The scenery is grand and inspiring and from the pass short trips may be made to the Hanging Gardens, Hidden Lake, Clements Glacier, Reynolds Mountain, and a view of Twin Lakes, Avalanche Basin, etc., may be obtained.

Logan Pass trail.—Leading from Granite Park to St. Mary Valley via Logan Pass and Reynolds Creek. This is the finest view trail open to horse travel in the park; from it may be seen many wonderful waterfalls. Lake McDonald, Heavens Peaks, and the other peaks of the range of mountains to the west. Many wonderful canyons, cliffs, and cataracts may be seen. Distance to Going-to-the-Sun Chalets 16.4 miles.

FROM SPERRY CHALETs.

(Altitude, about 6,500 feet.)

Going-to-the-Sun Chalets (4,500 feet).—Trail by way of Gunsight Pass; 15 miles.

Glacier Hotel (Lewis's), Lake McDonald (3,200 feet).—Trail; 7 miles; 2 miles farther to Park Cabin Resort.

Sperry Glacier (9,000 feet).—Trail; 2 miles. This is a steep trail and horses may be used to the foot of the escarpment under the south rim of the glacier, but walking is recommended. The escarpment may be climbed by means of an iron ladder bolted to the rock, or by way of zigzag goat trails. Whichever method of ascent is attempted, visitors should be accompanied by competent guides provided with ropes. While this glacier is less broken than Blackfeet Glacier, explorations should not be attempted without a guide.

FROM GLACIER HOTEL AT HEAD OF LAKE McDONALD.

(Altitude, 3,200 feet.)

Paradise Canyon.—Trail; 4 miles from Glacier Hotel, 2 miles from Park Cabin Resort.

Avalanche Basin (3,885 feet).—Trail; 9 miles from Glacier Hotel, 7 miles from head of lake. Rate for guide and horses for the round trip, \$4 per person if three or more go together.

Trout Lake (3,880 feet).—Trail; 8 miles from Glacier Hotel, 9 miles from head of lake.

Lake Ellen Wilson (5,914 feet).—Trail; 10 miles from Glacier Hotel, 12 miles from head of lake.

Stanton Mountain (7,744 feet).—Trail to summit; 7 miles from Glacier Hotel, 5 miles from head of lake.

Sperry Chalets (8,000 feet) including Sperry Glacier.—Trail; 7 miles from Glacier Hotel, 9 miles from head of lake. Guide and horses for the round trip, three or more in party, \$4.

Snyder Lake.—Trail; 4 miles from Glacier Hotel, 6 miles from head of lake. Rate for guide and horses, \$4 per person for the round trip, if three or more go together.

Lincoln Peak.—Rate for guide and horses, \$4 per person for the round trip, if three or more go together.

Going-to-the-Sun Chalets via Sperry Chalets.—Guide and horses for two-day trip to Going-to-the-Sun Chalets may be had at the rate of \$8 for each person, where five or more make the trip.

Circle trip.—Guide and horses may be obtained for a five-day circle trip starting from Glacier Hotel and Park Cabin Resort on Lake McDonald and going via Sperry Chalets and Sperry Glacier over Gunsight Pass to Going-to-the-Sun Chalets, thence via Piegan Pass to Many Glacier Hotel, thence over Swiftcurrent Pass to Gran-

ite Park Chalets, returning via the Garden Wall trail to Glacier Hotel, at the rate of \$20 per person, where five or more make the trip.

This trip can also be started from Going-to-the-Sun Chalets and Many Glacier Hotel.

Parties once started on this trip will not be allowed a refund in case of withdrawal.

AMUSEMENTS.

Throughout the park at the various hotels and chalets there are forms of indoor, as well as outdoor, recreation and amusements that may be enjoyed by the tourist. These recreations and amusements are in part as follows:

ROWBOATS.

At Many Glacier Hotel on Lake McDermott rowboats may be hired at 25 cents an hour with a maximum cost of \$1.50 a day for fishing or for taking short trips about the lake. A boatman may also be secured, and, with his assistance, a trip may be made up over the rapids to Lake Josephine and boating enjoyed thereon. From Lake Josephine an excellent view may be obtained of Grinnell Glacier, Mount Gould, and Feather-plume Falls.

Rowboats may also be hired on St. Mary Lake, where there is excellent fishing at all times. Rowboats can be secured either at St. Mary Chalets or at Going-to-the-Sun Chalets. At St. Mary Chalets, by special arrangement, a small power launch may be secured for trips to various points of interest on St. Mary Lake.

On Lake McDonald rowboats, canoes, and Evinrude motor boats can be secured at the Glacier Hotel. Rowboats and air motor boats may also be obtained at the foot of the lake. Fishing boats and boatmen may be hired for fishing trips down McDonald Creek, and down the Middle Fork of Flathead River as far as Columbia Falls.

Rowboats may be hired at the Two Medicine Chalets for use upon Two Medicine Lake, where fishing may be enjoyed and lake trout secured that can be caught only by fishing from boats. Around the shores of the lake are many interesting nooks and promontories, and the ever-changing scenery, as viewed from different points on the lake, makes boating one of the most popular pastimes.

SWIMMING.

Swimming pools and plunges with warmed water are provided at Glacier Park Hotel and Many Glacier Hotel for such of the guests as care for amusement of this sort; a nominal fee being charged for the privilege of using the tanks and for bathing suits when furnished. While it is possible for tourists to indulge in lake bathing at the various hotels it will be found that the water of the lakes, usually just from the melting glaciers, is uncomfortably cold, and for this reason lake bathing is not enjoyed except by the most hardy.

DANCING.

At all of the principal hotels in the park dancing facilities are provided each evening for the guests, good music being furnished for this purpose. At some of the chalets there is opportunity for im-

prompt dancing, as phonographs or pianos are provided for furnishing music. All dancing is, of course, strictly informal and usually occurs in the grill room or sometimes in amusement halls which are operated in conjunction with the hotels.

HORSEBACK RIDING.

The most popular amusement to be found throughout the entire park is that of horseback riding, and at hotels and chalets it is possible to hire horses for the purpose of taking short trips to the various points of interest which may be found in that vicinity; and even though the tourists may take long trail rides from one hotel or chalet group to another they never tire of horseback riding, for it is by this means better than any other that one is able to see the most interesting places in the park.

FISHING.

The lakes and streams of Glacier National Park abound in fish. The varieties are the small flat trout, the cutthroat, Dolly Varden, and rainbow trout, varying in size from half a pound to the large bull and Mackinaw trout weighing up to 20 pounds. Of these the gamest fighter is the cutthroat, so called from the two streaks of red running parallel beneath its gills, which inhabits most of the streams and many of the lakes. Bull trout are found mostly in St. Mary Lake. They can be depended upon to put up a hard fight. Most of the trout rise to a fly during June, July, and August. Grasshoppers are used also at times when they refuse the fly. In September spinners with a piece of fresh meat are effective. All fishing must be in conformity with the park regulations.

Two Medicine Chalets.—Two Medicine Lake, which was stocked with fish in 1915, is now opened to fishing. Good fishing is also found in the Two Medicine River below Trick Falls and in Lower Two Medicine Lake.

Cut Bank Chalets.—This camp is located on the banks of the North Fork of Cut Bank Creek, which may be fished both ways from the camp for a distance of from 3 to 5 miles with good results. Cutthroat trout is the principal variety.

St. Mary Chalets.—St. Mary Lake is the home of the Mackinaw trout, which are caught by trolling from a rowboat. Red Eagle Lake, located a few miles from St. Mary Chalets, has the reputation of being one of the best fishing spots in the park. There is also good fishing in Red Eagle Creek.

Going-to-the-Sun Chalets.—Baring Creek, which empties into St. Mary Lake about a mile above the camp, will be found worthy of a visit. For the large Mackinaw trout the upper end of the lake is a good ground.

Many Glacier Hotel.—Very good fishing is to be had near this hotel in the Swiftcurrent River, in Canyon Creek, in Cracker Lake, and in Lake McDermott.

Lake McDonald.—Good fishing may be had at all times in Lake McDonald. McDonald Creek and Avalanche Lake may also be fished with excellent results.

INFORMATION, UTILITIES, ETC.

INFORMATION.

General information with respect to the park may be obtained by inquiry at the office of the park superintendent near the Belton entrance of the park, or at the offices of the principal hotels; and a topographic map of the park may be secured at the principal hotels or from the park superintendent for 25 cents.

MEDICAL SERVICE.

Qualified or trained nurses are in attendance at all times in the Many Glacier and Glacier Park Hotels, from which places emergency remedies may be secured and such first-aid treatment as may be necessary in most cases. A house physician is usually stationed at Glacier Park Hotel, and it is nearly always possible to find among the registered guests of the various hotels one or more physicians whose assistance may be secured in the case of acute illness or serious injury.

LIVERY.

Horse-drawn livery rigs for trips to various points on the west side of the park may be secured from Mr. John Weightman, at Belton, or at the foot of Lake McDonald.

SPECIAL TOURS.

ONE-DAY TOURS.

Glacier Park Hotel to Two Medicine Chalets and return by automobile.—Daily during season. Transportation, \$3 round trip; luncheon at Two Medicine Chalets, \$1.

Leave Glacier Park Hotel at 10 a. m.
 Arrive at Two Medicine Chalets at 11.30 a. m.
 Leave Two Medicine Chalets at 4 p. m.
 Arrive at Glacier Park Hotel at 5 p. m.

Glacier Park Hotel to Going-to-the-Sun Chalets by automobile and launch.—Daily during season. Transportation, \$8.50 round trip; luncheon at Going-to-the-Sun Chalets, \$1.

Leave Glacier Park Hotel (auto) at 8 a. m.
 Arrive at St. Mary Chalets at 10.45 a. m.
 Leave St. Mary Chalets (launch) at 11.15 a. m.
 Arrive at Going-to-the-Sun Chalets at 12.15 p. m.
 Leave Going-to-the-Sun Chalets (launch) at 2 p. m.
 Arrive at St. Mary Chalets at 3 p. m.
 Leave St. Mary Chalets (auto) at 3.30 p. m.
 Arrive at Glacier Park Hotel at 6.15 p. m.

The above trip takes the tourist to Going-to-the-Sun Chalets at the head of St. Mary Lake, considered one of the finest scenic spots in the park. The ride over the 32-mile auto road and the 10-mile trip by launch on St. Mary Lake enables one to see a 90-mile panorama of Glacier Park scenery in 10 hours.

TWO-DAY TOUR.

Glacier Park to Many Glacier Hotel and St. Mary and Going-to-the-Sun Chalets, automobile, saddle horse, and launch.—Daily during season. Transportation, \$14.50; meals and lodging at hotel or chalets extra at regular rates.

FIRST DAY.

Leave Glacier Park Hotel (auto) at 8 a. m.
 Arrive at St. Mary Chalets at 10.45 a. m.
 Leave St. Mary Chalets (auto) at 11 a. m.
 Arrive at Many Glacier Hotel at 12.45 p. m.
 Luncheon, dinner, and lodging at either Many Glacier Hotel or chalets.

SECOND DAY.

Breakfast at Many Glacier Hotel or chalets.
 Leave Many Glacier Hotel (auto) at 8 a. m.
 Arrive at St. Mary Chalets at 9.45 a. m.
 Leave St. Mary Chalets (launch) at 11.15 a. m.
 Arrive at Going-to-the-Sun Chalets at 12.15 p. m.
 Luncheon at Going-to-the-Sun Chalets.
 Leave Going-to-the-Sun Chalets (launch) at 2 p. m.
 Arrive at St. Mary Chalets at 3 p. m.
 Leave St. Mary Chalets (auto) at 3.30 p. m.
 Arrive at Glacier Park Hotel at 6.15 p. m.

THREE-DAY TOUR.

Glacier Park Hotel to St. Mary Chalets, Many Glacier Hotel, Iceberg Lake, and Going-to-the-Sun Chalets, automobile, saddle horse, and launch.—Daily, June 15 to October 1. Transportation, \$18; meals and lodgings at hotels and chalets extra at regular rates.

FIRST DAY.

Leave Glacier Park Hotel (auto) at 8.15 a. m.
 Arrive at St. Mary Chalets at 10.45 a. m.
 Leave St. Mary Chalets (auto) at 11 a. m.
 Arrive at Many Glacier Hotel at 12.45 p. m.
 Luncheon at Many Glacier Hotel or chalets.
 Afternoon side trip to Grinnell Lake may be made for \$3.50 additional.

SECOND DAY.

Breakfast at Many Glacier Hotel or chalets.
 Many Glacier Hotel to Iceberg Lake and return (horseback). Luncheon carried.
 Supper and lodging at Many Glacier Hotel or chalets.

THIRD DAY.

Leave Many Glacier Hotel (auto) at 8 a. m.
 Arrive at St. Mary Chalets at 9.45 a. m.
 Leave St. Mary Chalets (launch) at 11.15 a. m.
 Arrive at Going-to-the-Sun Chalets at 12.15 p. m.
 Luncheon at Going-to-the-Sun Chalets.
 Leave Going-to-the-Sun Chalets at 2 p. m.
 Arrive at St. Mary Chalets at 3 p. m.
 Leave St. Mary Chalets (auto) at 3.30 p. m.
 Arrive at Glacier Park Hotel at 6.15.

FOUR-DAY TOUR.

Glacier Park Hotel to St. Mary Chalets, Many Glacier Hotel, Granite Park Chalets, Going-to-the-Sun Chalets and return to Glacier Park Hotel; automobile, saddle horse, and launch.—Daily, July 1 to September 1. Transportation, \$22.50; meals and lodging at hotels or chalets, extra at regular rates.

FIRST DAY.

Leave Glacier Park Hotel (auto) at 8.15 a. m.
 Arrive at St. Mary Chalets at 10.45 a. m.
 Leave St. Mary Chalets (auto) at 11 a. m.
 Arrive at Many Glacier Hotel at 12.45 p. m.
 Luncheon at Many Glacier Hotel.
 Side trip to Grinnell Lake in afternoon may be made for \$3.50 per person additional.
 Supper and lodging at Many Glacier Hotel or chalets.

SECOND DAY.

Breakfast at Many Glacier Hotel or chalets.
 Leave Many Glacier Hotel (horseback) at 8 a. m.
 Arrive at Granite Park Chalets at 12.30 p. m.
 Luncheon, supper, and lodging at Granite Park Chalets.

THIRD DAY.

Breakfast and luncheon at Granite Park Chalets.
 Leave Granite Park Chalets (horseback) at 2 p. m.
 Arrive at Many Glacier Hotel at 6.30 p. m.
 Supper and lodging at Many Glacier Hotel or chalets.

FOURTH DAY.

Breakfast at Many Glacier Hotel or chalets.
 Leave Many Glacier Hotel (auto) at 8 a. m.
 Arrive at St. Mary Chalets at 9.45 a. m.
 Leave St. Mary Chalets (launch) at 11.15 a. m.
 Arrive at Going-to-the-Sun Chalets at 12.15 p. m.
 Luncheon at Going-to-the-Sun Chalets.
 Leave Going-to-the-Sun Chalets at 2 p. m.
 Arrive at St. Mary Chalets at 3 p. m.
 Leave St. Mary Chalets (auto) at 3.30 p. m.
 Arrive at Glacier Park Hotel at 6.15 p. m.

FIVE-DAY TOUR.

Glacier Park Hotel to Many Glacier Hotel, Iceberg Lake, Granite Park Chalets, Going-to-the-Sun Chalets, St. Mary Chalets, and return to Glacier Park Hotel; automobile, saddle horse, and launch.—Daily, July 1 to September 1. Transportation, \$26; meals and lodging at hotels or chalets, extra at regular rates.

FIRST DAY.

Leave Glacier Park Hotel (auto) at 8 a. m.
 Arrive St. Mary Chalets at 10.45 a. m.
 Leave St. Mary Chalets (auto) at 11 a. m.
 Arrive at Many Glacier Hotel at 12.45 p. m.
 Luncheon at Many Glacier Hotel or chalets.
 Afternoon side trip may be made to Grinnell Lake for \$3.50 additional.

SECOND DAY.

Breakfast at Many Glacier Hotel or chalets.
 Many Glacier Hotel to Iceberg Lake and return (horseback). Luncheon carried.
 Supper and lodging at Many Glacier Hotel or chalets.

THIRD DAY.

Breakfast at Many Glacier Hotel or chalets.
 Leave Many Glacier Hotel (horseback) at 8 a. m.
 Arrive at Granite Park Chalets at 12.30 p. m.
 Luncheon, supper, and lodging at Granite Park Chalets.

FOURTH DAY.

Breakfast and luncheon at Granite Park Chalets.
 Leave Granite Park Chalets (horseback) at 2 p. m.
 Arrive at Many Glacier Hotel at 6.30 p. m.
 Supper and lodging at Many Glacier Hotel or chalets.

FIFTH DAY.

Breakfast at Many Glacier Hotel or chalets.
 Leave Many Glacier Hotel (auto) at 8 a. m.
 Arrive at St. Mary Chalets at 9.45 a. m.
 Leave St. Mary Chalets (launch) at 11.15 a. m.
 Arrive at Going-to-the-Sun Chalets at 12.15 p. m.
 Luncheon at Going-to-the-Sun Chalets.
 Leave Going-to-the-Sun Chalets (launch) at 2 p. m.
 Arrive at St. Mary Chalets at 3 p. m.
 Leave St. Mary Chalets (auto) at 3.30 p. m.
 Arrive at Glacier Park Hotel at 6.15 p. m.

SIX-DAY TOUR.

Glacier Park Hotel to St. Mary Chalets, Many Glacier Hotel, Iceberg Lake, Granite Park Chalets, Going-to-the-Sun Chalets, Sexton Glacier, and return to Glacier Park Hotel; automobile, launch, and saddle horse.—Daily, July 1 to September 1. Transportation, \$29.75; meals and lodging at hotels or chalets, extra at regular prices.

FIRST DAY.

Leave Glacier Park Hotel (auto) at 8 a. m.
 Arrive St. Mary Chalets at 10.45 a. m.
 Leave St. Mary Chalets (auto) at 11 a. m.
 Arrive at Many Glacier Hotel at 12.45 p. m.
 Luncheon at Many Glacier Hotel or chalets.
 Afternoon side trip to Grinnell Lake may be made for \$3.50 additional.

SECOND DAY.

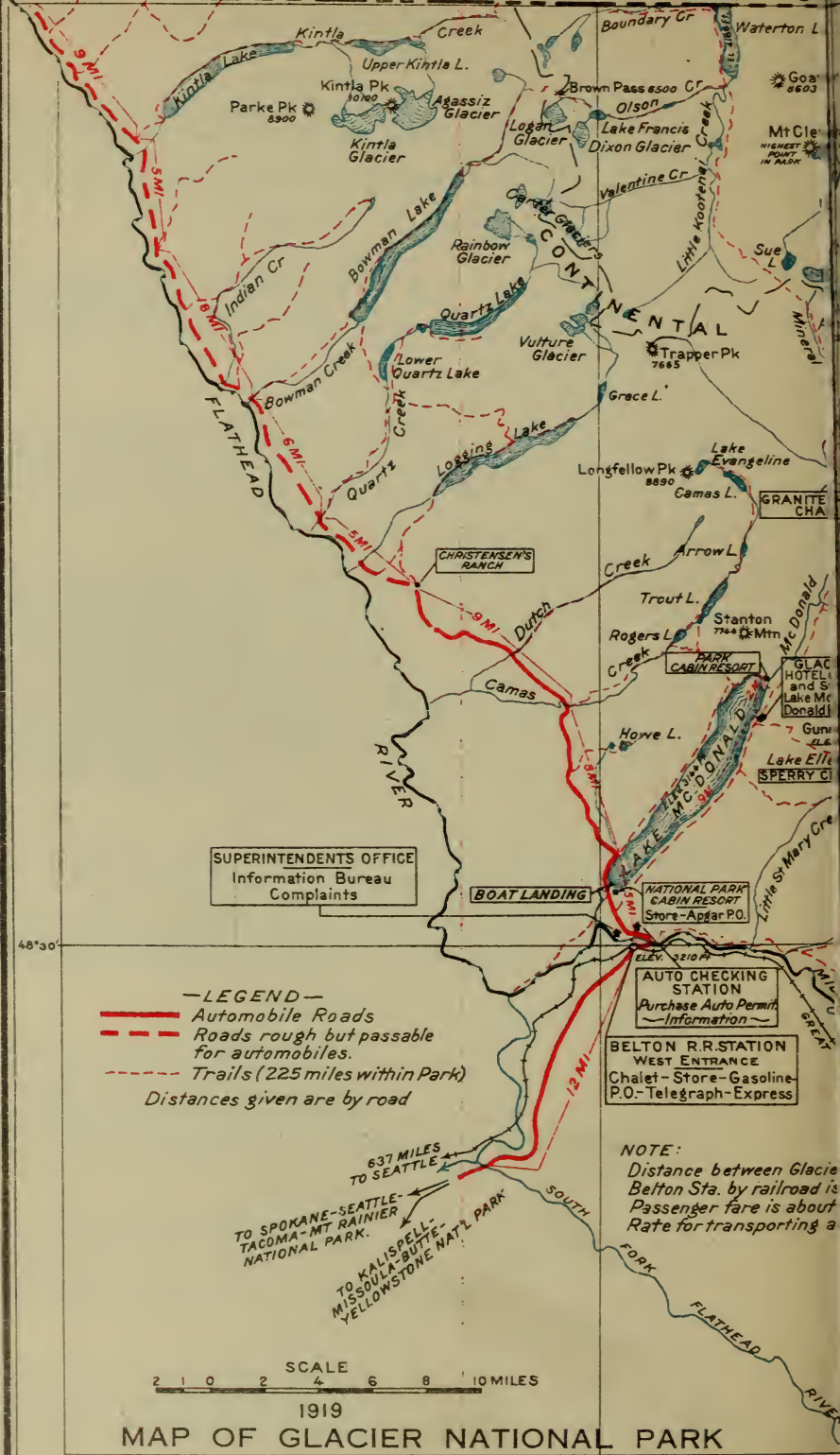
Breakfast at Many Glacier Hotel or chalets.
 Many Glacier Hotel to Iceberg Lake and return (horseback). Luncheon carried.
 Supper and lodging at Many Glacier Hotel or chalets.

THIRD DAY.

Breakfast at Many Glacier Hotel or chalets.
 Leave Many Glacier Hotel (horseback) at 8 a. m.
 Arrive at Granite Park Chalets at 12.30 p. m.
 Luncheon, supper, and lodging at Granite Park Chalets.

WATERTON LAKES PARK (CANADIAN)

114°00' U N I T E D S T A T E S - D O M I N I O N O F C A N A D A



SUPERINTENDENTS OFFICE
Information Bureau
Complaints

BOAT LANDING

NATIONAL PARK CABIN RESORT
Store - Appar. P.O.

AUTO CHECKING STATION
Purchase Auto Permit
Information

BELTON R.R. STATION
WEST ENTRANCE
Chalet - Store - Gasoline
P.O. - Telegraph - Express

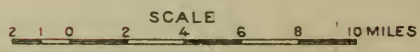
- LEGEND —**
- Automobile Roads
 - - - Roads rough but passable for automobiles.
 - - - - - Trails (225 miles within Park)
- Distances given are by road*

NOTE:
Distance between Glacier and Belton Sta. by railroad is 75 miles. Passenger fare is about 75¢. Rate for transporting a car is about \$1.00.

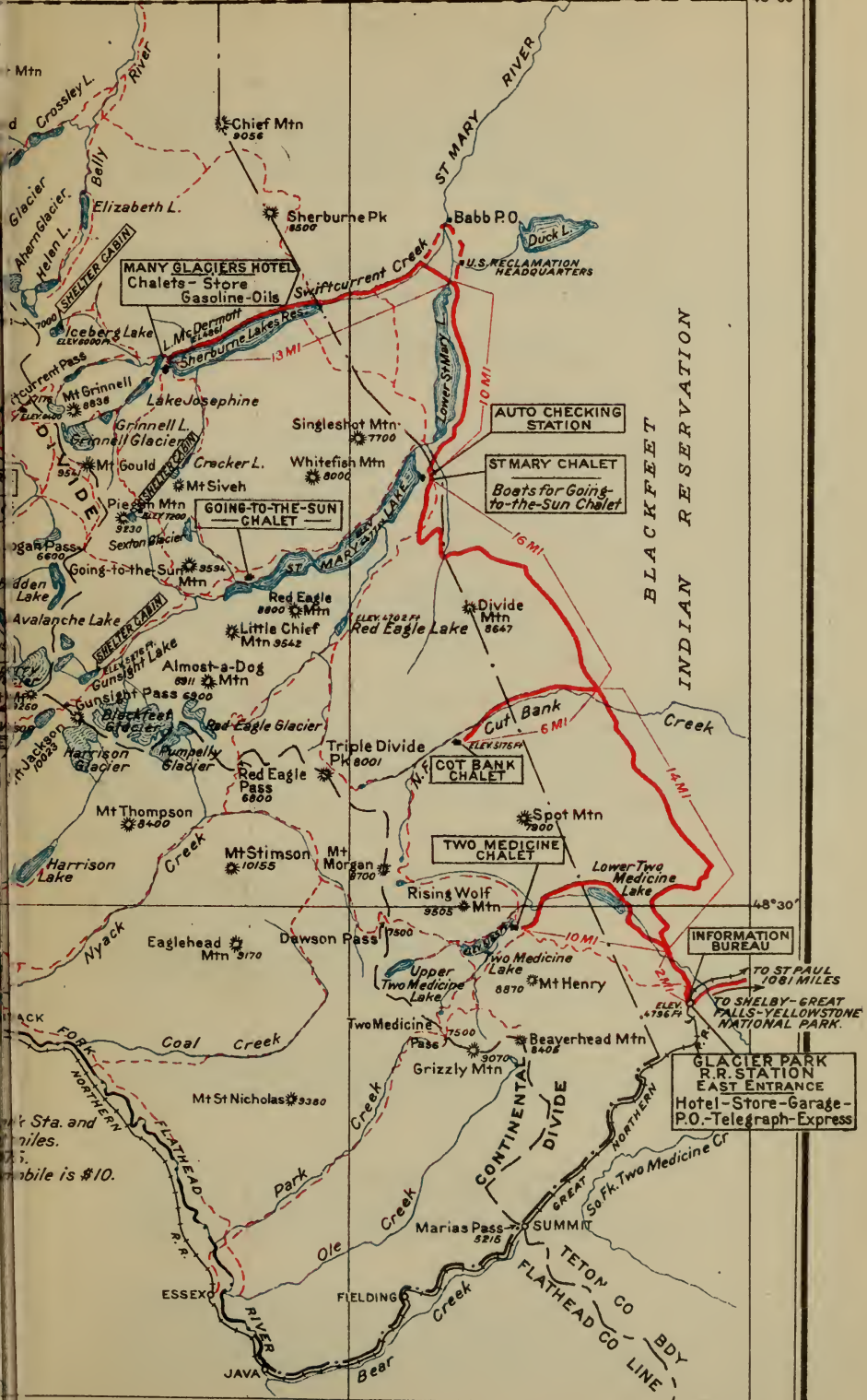
637 MILES TO SEATTLE

TO SPOKANE-SEATTLE-TACOMA-MT RAINIER NATIONAL PARK.

TO KALISPELL-MISSOULA-BUTTE-YELLOWSTONE NAT'L PARK



1919
MAP OF GLACIER NATIONAL PARK



BLACKFEET INDIAN RESERVATION

TO ST PAUL 1081 MILES
 TO SHELBY-GREAT FALLS-YELLOWSTONE NATIONAL PARK.
 GLACIER PARK R.R. STATION EAST ENTRANCE
 Hotel-Store-Garage-P.O.-Telegraph-Express

FOURTH DAY.

Breakfast and luncheon at Granite Park Chalets.
 Leave Granite Park Chalets (horseback) at 2 p. m.
 Arrive at Many Glacier Hotel at 6.30 p. m.
 Supper and lodging at Many Glacier Hotel or chalets.

FIFTH DAY.

Breakfast at Many Glacier Hotel or chalets.
 Leave Many Glacier Hotel (horseback) at 8 a. m.
 Following trail via Grinnell Lake over Piegan Pass to Going-to-the-Sun Chalets. Luncheon carried.
 Arrive at Going-to-the-Sun Chalets at 5 p. m.
 Supper and lodging at Going-to-the-Sun Chalets.

SIXTH DAY.

Breakfast at Going-to-the-Sun Chalets.
 Leave Going-to-the-Sun Chalets (horseback) at 8.30 a. m.
 Arrive at Sexton Glacier at 10.30 a. m.
 Leave Sexton Glacier at 11 a. m.
 Arrive at Going-to-the-Sun Chalets at 1 p. m.
 Luncheon at Going-to-the-Sun Chalets.
 Leave Going-to-the-Sun Chalets (launch) at 2 p. m.
 Arrive at St. Mary Chalets at 3 p. m.
 Leave St. Mary Chalets (auto) at 3.30 p. m.
 Arrive at Glacier Park Hotel at 6.15 p. m.

SEVEN-DAY TOUR.

Glacier Park Hotel to Many Glacier Hotel, Iceberg Lake, Granite Park Chalets, Cracker Lake, Going-to-the-Sun Chalets, Sexton Glacier, and return to Glacier Park Hotel, automobile, saddle horse, and launch.—Daily, July 1 to September 1. Transportation, \$34; meals and lodging at hotels or chalets, extra at regular rates.

FIRST DAY.

Leave Glacier Park Hotel (auto) at 8 a. m.
 Arrive at St. Mary Chalets at 10.45 a. m.
 Leave St. Mary Chalets (auto) at 11 a. m.
 Arrive at Many Glacier Hotel at 12.45 p. m.
 Luncheon at Many Glacier Hotel or chalets.
 Afternoon side trip to Grinnell Lake may be made for \$3.50 additional.

SECOND DAY.

Breakfast at Many Glacier Hotel or chalets.
 Many Glacier Hotel to Iceberg Lake and return (horseback). Luncheon carried.
 Supper and lodging at Many Glacier Hotel or chalets.

THIRD DAY.

Breakfast at Many Glacier Hotel or chalets.
 Leave Many Glacier Hotel (horseback) at 8 a. m.
 Arrive at Granite Park Chalets at 12.30 p. m.
 Luncheon, supper, and lodging at Granite Park Chalets.

FOURTH DAY.

Breakfast and luncheon at Granite Park Chalets.
 Leave Granite Park Chalets (horseback) at 2 p. m.
 Arrive at Many Glacier Hotel at 6.30 p. m.
 Supper and lodging at Many Glacier Hotel or chalets.

FIFTH DAY.

Breakfast at Many Glacier Hotel or chalets.
 Many Glacier Hotel to Cracker Lake and return (horseback). Luncheon carried.
 Supper and lodging at Many Glacier Hotel or chalets.

SIXTH DAY.

Breakfast at Many Glacier Hotel or chalets.
 Leave Many Glacier Hotel (horseback) at 8 a. m.
 Following trail via Grinnell Lake over Piegan Pass to Going-to-the-Sun Chalets. Luncheon carried.
 Arrive at Going-to-the-Sun Chalets at 5 p. m.
 Supper and lodging at Going-to-the-Sun Chalets.

SEVENTH DAY.

Breakfast at Going-to-the-Sun Chalets.
 Leave Going-to-the-Sun Chalets (horseback) at 8.30 a. m.
 Arrive at Sexton Glacier at 10.30 a. m.
 Leave Sexton Glacier at 11 a. m.
 Arrive at Going-to-the-Sun Chalets at 1 p. m.
 Luncheon at Going-to-the-Sun Chalets.
 Leave Going-to-the-Sun Chalets (launch) at 2 p. m.
 Arrive at St. Mary Chalets at 3 p. m.
 Leave St. Mary Chalets (auto) at 3.30 p. m.
 Arrive at Glacier Park Hotel at 6.15 p. m.

WILD ANIMALS.

The following data on the mammals of the park have been collected and prepared for publication by Mr. Vernon Bailey, of the Bureau of Biological Survey of the Department of Agriculture:

The animal life in Glacier National Park is both varied and abundant, but in the height of the tourist season when the greatest number of people are on the trails and anxious to see the game, many of the larger species have apparently vanished. As a matter of fact, they have withdrawn to undisturbed areas, where to be studied at close quarters they must be followed quietly and not by large and noisy parties. Not all can be found at any one time or place, as the moose frequent the deepest forests, the elk the open ridges, and the white goats and mountain sheep the high mountain crests and cliffs. The bear are seen by many of the visitors near the hotels and camps, while the mule deer, white-tail deer, and some of the other large game species occasionally appear along the trails. The more abundant small mammals are to be found about the hotels and camps and along the trails in both forest and open, especially by those who have learned to go quietly and keep their eyes and ears alert for the quick motions and strange voices of the little wild creatures. Often by sitting quietly in the shade for a half hour one will see more of the timid wild life than in a half day's vigorous walking.

Order UNGULATA: Cattle, Sheep, Goats, Antelopes, and Deer.

Family BOVIDAE: Cattle, sheep, and goats.

Bison, or Buffalo.—*Bison bison bison* (Linnaeus).—Old and well-bleached buffalo skulls adorn the hotels and chalets along the eastern edge of the park, where in the past the animals were abundant over

the plains and penetrated the open strips of prairie along the main valleys that reach back into the park. Old skeletons are still found well into the edge of the timber, but they have mostly disappeared in the open within the 35 years since the last of the buffalo were killed. The Swiftcurrent and Belly River Valleys show evidence of having once been especially choice buffalo ranges.

Mountain sheep.—*Ovis canadensis canadensis* Shaw.—Mountain sheep are scattered over the high mountain ranges in summer mainly at timber line or above. In winter they come down on the warm slopes to the valley bottoms and as many as 200 are sometimes counted along a single slope. Their numbers have not been definitely ascertained, but there are evidently more than 1,000 sheep in the area of the park, and they seem to be increasing in spite of constant depredations by coyotes and other predatory animals.

Mountain goat.—*Oreamnos montanus missoula* Allen.—White goats are among the most conspicuous and interesting of the game animals of the park, as they are abundant and are seen by a large number of the tourists and visitors. In summer they keep mainly above the timber line, where they are seen along the open slopes over the passes, and on easily accessible places like Iceberg Lake, Sexton Glacier, and Gunsight, Piegan, and Swiftcurrent Passes. During the day they climb high upon the crests of the ridges or the shelves of steep cliffs, but in the evening come down into the little meadows and open basins to feed and are often found in such places early in the morning. They are often seen as white specks on the faces of what seem to be sheer cliffs, but their trails may usually be followed from one shelf and ledge to another, up steep and intricate but not impossible slopes. Their skill and coolness in climbing to difficult heights is unexcelled by any animal in this country, and it is amazing to watch even the kids follow their leaders over what look from below like impossible heights. A good field glass is of great assistance in studying such animals.

Family ANTILOCAPRIDÆ: Prong-horned antelope.

Prong-horned Antelope.—*Antilocapa americana americana* (Ord).—At the present time there are no antelope in the Glacier Park, but a few still remain on the open prairie country to the eastward. In the days of their abundance over the plains along the eastern base of the mountains they undoubtedly ranged with the buffalo up the open valleys of St. Mary, Swiftcurrent, and Belly Rivers, where the conditions are ideal for them.

Family CERVIDÆ: Moose, elk, and deer.

American Moose.—*Alces americanus americanus* Jardine.—Moose are abundant on the west slope of the park from Lake McDonald northward, and a few are found in several of the valleys along the east slope in the dense timber and thickets at the heads of most of the main lake valleys. They are deep-forest animals, not often seen, except by those who visit their favorite haunts and watch quietly for them along the lake shores and in the open meadows. In summer they may be studied to advantage while the mothers are

leading about their long-legged twin fawns and the bulls are keeping well hidden during the time when their great horns are still soft and covered with velvet. In winter they assemble in droves and keep the deep snow well trodden over sufficient areas to give them plenty of food from the twigs, barks, and browse of willows and other brushes and small trees. A number of extensive moose yards in the valley of the Flathead River are well known to the guides, and some day will doubtless attract snowshoe expeditions for observing and photographing the animals in their winter environment.

American Elk, or Wapiti.—*Cervus canadensis canadensis* Erxleben.—Elk are not numerous in the park, but a few are found scattered along its eastern slope and in the southwestern corner. In summer they keep mainly in the open on the crests of high ridges and in winter migrate to lower levels, where on steep warm slopes, from which the snow has blown away or melted, they can procure dry grass and browse for food. They are shy, and generally succeed in keeping well out of sight of the tourists and as much as possible in unfrequented areas. Special trips and considerable skill in still hunting are necessary to find the elk and observe their habits without disturbing them.

Mule Deer.—*Odocoileus hemionus hemionus* (Rafinesque).—Mule deer are common along the crest of the range and on the eastern slope of the mountains in the park, and occasionally are seen along the trails or near the hotels and chalets. In July, 1917, an old doe with a spotted fawn was regularly seen by many of the visitors for several mornings along the trail past Sun Chalets. Other does were seen along St. Mary Lake and Swiftcurrent Valley, and bucks with horns in the velvet were seen near Piegan and Swiftcurrent Passes up close to timberline. In winter they come down out of the deep snow of the mountains and feed on the warm slopes of steep rough ridges, where they find an abundance of buds and browse among the shrubby vegetation. Many leave the park in fall and winter and are killed by hunters, so their numbers are not rapidly increasing.

Western white-tail Deer.—*Odocoileus virginianus macrourus* (Rafinesque).—The white-tail deer is considerably smaller than the mule deer and is readily distinguished by its long bushy tail, which is thrown up when it runs, showing the great white surface below, in contrast to the little short tail, with the black tip, of the mule deer. The white-tails do not have the white rump patch, which is the conspicuous mark of the mule deer in flight, but their long white tail is even more conspicuous. They are abundant on the west slope of the park from the crest of the range down to the Flathead Valley, where they occupy the densely forested area, but often range up onto the open slopes near timberline in summer.

Order RODENTIA: Gnawing Animals.

Family SCIURIDAE: Squirrels, chipmunks, and woodchucks.

Richardson pine Squirrel.—*Sciurus hudsonicus richardson* (Bachman).—The little dark bushy-tailed pine squirrels of the park are western representatives of the eastern red squirrels, with very similar voices and habits. They are common throughout the coniferous forest of the park from the lowest edge to near timberline, and their

cheery calls are heard from the tree tops along the trails, and their big grassy-nests are seen on the branches of pines and spruces. Early in summer they are quiet and shy, but after the young emerge from the nests the latter part of July they are noisy and conspicuous. The greater part of their food consists of the seeds of cones. As soon as the cones are ripe they are stored for winter food, and falling cones may be heard thumping on the ground through the woods as they are cut off to be buried for winter.

Flying Squirrels.—*Glaucomys sabrinus latipes* Howell.—Flying squirrels are common throughout the timbered area of the park, but being strictly nocturnal animals they are rarely seen except as they get into the traps set for fur-bearing animals or are taken by naturalist collectors. At night they often come around camps and soar from tree to tree on widespread membranes as soft and silent as the wings of an owl. They are beautiful, gentle animals with large black eyes, soft brown fur, and wide-spreading tails, and their method of flight is merely gliding from a high point on one tree to a lower point on another at considerable distance. Their homes are mainly in hollow trees or abandoned woodpecker nests, and a few sharp blows of an ax at the base of a tree will often bring them out of the door to see who is knocking. More violent pounding will sometimes induce them to leave the tree and make a long flight to some other, and once started they may be followed up in flight from tree to tree and induced to give interesting exhibitions of their monoplane flight.

Yellow-bellied Chipmunk.—*Eutamias luteiventris* (Allen).—Of the chipmunks inhabiting the park, the yellow-bellied are the most abundant and conspicuous. They are medium in size between the other two species found here, and may be recognized by their many-striped backs and the suffusion of yellow extending over the lower parts. These are the chipmunks common about hotels and chalets and generally along the trails, where they may be seen running over logs, rocks, and the ground. In many places they come to kitchen doors for crumbs, or to hitching posts to gather the oats scattered by horses. With a little patient coaxing they can be induced to take food from the hands of visitors who have the patience and tact to win their confidence.

Forest Chipmunk.—*Eutamias umbrinus felix* (Rhoads).—The large bright-colored and white-bellied forest chipmunks are generally less common than the yellow-bellied species and less conspicuous, as when alarmed they take to the trees instead of running over the ground or logs for safe retreats. Their alarm note is a sharp birdlike "chipper" easily distinguished from the softer note of the yellow-bellied chipmunk.

Little Mountain Chipmunk.—*Eutamias oreocetes* Merriam.—The rare little mountain chipmunks are found only in the vicinity of timberline. They are tiny animals, pale yellowish in color, with pure white lower parts, and so different from either of the others as to be easily recognized on sight. In Gunsight and Piegan Passes they were found along the trails, gleaning oats that had been scattered by the pack trains, and while at first very timid, they quickly lost their fear and would come close to anyone who kept still for a few minutes. At the slightest motion or sound, however, they would dart in a panic to

the cover of the nearest rock piles, under which their homes were evidently located.

Mantled Ground Squirrel.—*Callospermophilus lateralis cinerascens* (Merriam).—While generally called chipmunks, the mantled ground squirrels are larger than any chipmunks and are of a heavier build, with plain backs and one broad black and one light stripe along each side. They are true ground squirrels, living in burrows or among the rocks, and in autumn becoming very fat for their long winter sleep. They are more phlegmatic in disposition than the chipmunks and are easily tamed so they will come for food when called. Late in summer and in autumn they are eager for any grain or seeds or crumbs that will serve as food or can be stored for winter supplies. Their capacious cheek pouches are rapidly filled, and when well distended the squirrels rush away to their burrows and quickly return with empty pouches for more.

Columbia Ground Squirrel.—*Citellus columbianus* (Ord).—The large ground-squirrels, often called picket pins and incorrectly gophers, have dark gray backs, brown noses, and rusty lower parts. They live in the open and make numerous burrows which serve as homes and safe retreats. Their shrill call note, a single short whistle or loud chirp, is often heard as one rides or walks along the trails, and the animals may be seen standing erect at a little distance watching for their numerous enemies, but as one approaches they quickly dive into their burrows and remain until they think the danger is past. Generally they are very shy, but in places around camps become quite unafraid and in some cases troublesome by helping themselves too liberally to camp supplies. In autumn they become very fat, and with the first freezing weather enter their burrows for a long winter sleep.

Richardson Ground Squirrel.—*Citellus richardsoni* (Sabine).—The Richardson ground squirrels are smaller than the Columbia and plain buffy gray in color, with short bushy tails that are so active as to give them the common name of flickertail. They come into the eastern edges of the park only in the prairie strips at the lower end of St. Mary Lake and in the Swiftcurrent and probably Belly River Valleys, and are conspicuous along the stage road from Glacier Park Station to St. Mary and Swiftcurrent.

Striped Ground Squirrel.—*Citellus tridecemlineatus pallidus* Allen.—The little striped, or thirteen-lined, ground squirrels are prairie animals found only in the few strips of open grassland that enter the eastern edges of the park. They are not often seen, as their finely striped backs and buffy color render them inconspicuous. Their long birdlike trill or bubbling whistle is often heard from the prairie grass.

Glacier Hoary Marmot.—*Marmota caligata nivaria* Howell.—The great hoary marmots, or whistlers, inhabit the timber-line zone of the whole park. They are occasionally seen along the trails in crossing the passes, and their long shrill whistle is heard from cliffs, peaks, and ledges, both above and below timberline. Along some of the trails they have learned to come for grain scattered by the pack trains, and especially in Gunsight Pass they have become comparatively unafraid. In several instances they permitted our approach to within 15 feet along this trail, and would leave the trail only when the horses were close upon them.

Family MURIDAE: Mice and rats.

Gray Bushy-tailed Wood Rat.—*Neotoma cinerea cinerea* (Ord).—The wood rats, pack rats, trade rats, or cliff rats, as variously called, are native bushy-tailed animals, bright and attractive, and quite unlike the common barn or wharf rat of Old World origin. They are common among rocks and cliffs in all suitable situations in the lower levels of the park, and frequently take up their abode in abandoned camps and cabins in the woods or near the cliffs. Stories of their carrying away useful articles and replacing them with some usually of less value, as a stick or stone or piece of bark, have given them the name of trade rats.

Forest White-footed Mouse.—*Peromyscus maniculatus artemisiae* (Rhoads).—The little, white-footed, white-bellied mice are abundant almost everywhere in the park, but, as they are strictly nocturnal, they are rarely seen, except in the evening as they skip about camps and in the firelight. Very active and good climbers, they often find the camp provisions and help themselves to whatever they like best. The crumbs and grains scattered about camp sites usually suffice for their needs, however, and they are such clean, pretty, bright, little animals that no one objects to having them around.

Mountain Lemming Mouse.—*Phenacomys orophilus* Merriam.—These little, gray, short-legged, soft-haired ground mice resemble the meadow mice in general appearance, but are slenderer and in structural characters very different. Apparently they are common throughout the timbered area of the park, as specimens have been collected at a number of places, but they live in burrows under cover of fallen grass and plants, where they make little roadways over the surface of the ground, and are so inconspicuous as to be almost never seen unless collected by experienced naturalists.

Red-Backed Mouse.—*Evotomys gapperi galei* Merriam.—The little, rusty-backed mice with gray sides and bellies are related to the meadow mice, which they somewhat resemble, but are quite different in both structure and habits. They are generally common in the woods where they live under logs and rocks and feed upon the grass and green plant stems and foliage. They are active both winter and summer, and do not lay up stores of food for winter use, as a supply is always available over the surface of the ground, no matter how deep the snow.

Large-footed Meadow Mouse.—*Microtus richardsoni macropus* (Merriam).—The large-footed meadow mice are the largest of the group, measuring sometimes 8 or 10 inches in total length. They are found along the streams and ponds throughout the timbered Canadian zone area of the park, generally close to the water, where they are equally at home in the streams or on the banks. Their soft, dense fur is ample protection from wet and cold, and they are active all the year, gathering food of the green vegetation in the meadows through the summer and over the surface of the ground under the deep snow all winter.

Rocky Mountain Meadow Mouse.—*Microtus mordax mordax* (Merriam).—These medium-sized, long-tailed meadow mice are common throughout the park region, living mainly in the meadows and along the stream banks, where they find abundant food among the green

stems of grass and meadow plants. Like all of the meadow mice, they are good swimmers and are active throughout the year, and seemingly as comfortable and happy when covered by a deep layer of snow as at any season.

Drummond Meadow Mouse.—*Microtus pennsylvanicus drummondi* (Audubon and Bachman).—These little, dusky, short-tailed mice are the smallest of the three species of meadow mice in the park, and, while often numerous, are generally little noticed. They are common at St. Mary Lake, in the Swiftcurrent Valley, and probably in all of the open valleys penetrating the park from the eastern plains region, where they are abundant and widely distributed. They live in grassy places, usually in the open, and their runways are found by parting the grass and examining the surface of the ground. They are readily caught in traps and their trails may be followed and burrows located and explored by anyone interested in studying their home life.

Muskrat.—*Fiber zibethicus osoyoosensis* Lord.—Muskrats are not very common in the park, but a few are found in most of the lakes and streams at the lower levels. On the shores may be seen their tracks and scattered remains of food where they have eaten grass and plant stems and roots. Occasionally a long-pointed wake is seen as one swims through the water or a brown furry ball noticed in the morning or evening sitting on a log or the bank munching crisp water plants or juicy bulbs from the bottom.

Family CASTORIDÆ: Beavers.

Beaver.—*Castor canadensis canadensis* Kuhl.—Beavers are scattered over the park in many of the lakes, streams, and ponds. Their dams and houses may often be seen from the trails, and by a little patient watching mornings and evenings glimpses may be had of the animals as they swim, feed, and work. Well-made dams and houses are found on Appekunny Creek a mile east of Many Glacier Hotel, and equally interesting beaver works along the Swiftcurrent River above and below McDermott Lake, along Belly River and its branches, and on the shores of almost any of the lakes and quiet streams in the park. Even at Gunsight Lake, near timberline, several beavers were busily engaged in cutting willows for food during the early mornings and just before dark on pleasant evenings in August.

Family ERETHIZONTIDÆ: Porcupines.

Yellow-haired Porcupine.—*Erethizon epixanthum epixanthum* Brandt.—Porcupines are fairly common throughout most of the park region and are occasionally seen by visitors as on their short legs they shuffle slowly along the trails or scratch noisily up the sides of the trees to get out of the way of passers-by. In old camps or cabins they are often caught gnawing tables and boxes that probably have a trace of salt or grease from former contact with food of camping parties, and frequently they come about hotels and camps for tastes of salt or for scraps of food that are thrown out. They are quiet and never aggressive and may be safely approached if one is careful to keep out of reach of the powerful strokes of the muscular tail, which

will drive the sharp quills through the thickest leather or clothing with very painful results. The quills are not thrown, but an upward stroke of the tail should always be avoided.

Family ZAPODIDAE: Jumping mice.

Jumping Mouse.—*Zapus princeps princeps* Allen.—Jumping mice are graceful little animals with long slender tails, long hind feet, tiny front feet, and soft colors of buff, gray, and white. They are common over most of the park, and although nocturnal are occasionally seen as, startled from their grassy nests, they go bounding away through the weeds and grass in long froglike leaps. They are gentle little animals and when caught in the hands rarely attempt to bite or make violent efforts to escape.

Family GEOMYIDAE: Pocket gophers.

Saskatchewan Pocket Gopher.—*Thomomys talpoides talpoides* (Richardson).—The large gray pocket gophers, from their wide range over the western plains country, extend into the park along the Swift-current and Belly River Valleys and possibly in other open strips of country that carry plains species into the timbered mountain region. Living underground, they are rarely seen, their presence being made known by the fresh black mounds of earth thrown up over the grassy prairie.

Brown Pocket Gopher.—*Thomomys fuscus fuscus* (Merriam).—Little brown pocket gophers are scattered over the mountain area of the park in a few places, but seem to have no continuous range. They are generally found on open slopes or in scattered timber, but not in the heavily forested area. Their presence may always be recognized by the little mounds of fresh earth thrown up from below the surface and left to mark the course of their underground tunnels.

Order LAGOMORPHA: Conies and Rabbits.

Family OCHOTONIDAE: Conies.

Cony.—*Ochotona princeps princeps* (Richardson).—These little tailless, rabbitlike animals, the size and much the build of a guinea pig, are common in suitable rocky places throughout the Hudsonian, or timberline, zone of the park. Their soft gray fur blends well with the gray-brown rocks and but for their call note, a nasal lamb-like bleat, or yamp, they would rarely be discovered. This is often heard where the trails cross the passes or run close to the talus slopes of the high cliffs and crests of the range. By a little patient watching the animals can usually be seen at close quarters, for while very timid, they soon reappear after their first fright has sent them diving out of sight among the rocks.

Family LEPORIDAE: Rabbits and hares.

Snowshoe Rabbit.—*Lepus bairdi bairdi* Hayden.—The snowshoe rabbits, or western varying hares, are common throughout the timbered area of the park, but are so protectively colored that in the

deep shadows of the woods their summer coats of dark brown are almost invisible. In winter they are equally well protected as they change to pure white and are not easily seen on the drifted snow, over the surface of which they travel freely on their big furry feet. In summer they occasionally hop out into the trails or roads in the early morning or late evening and are then most often seen, but they are very timid and fleet, and usually a few bounds put them well out of sight in the thick brush or timber.

Prairie Jack Rabbit.—*Lepus townsendi campanius* Hollister.—The big, white-tailed jack rabbits with gray summer and white winter coats are common over the plains along the eastern edge of the park, and occasionally are seen in the open valley country. Their large size and long ears render them almost as conspicuous as an antelope as, with surprising speed, they bound over the prairie grass in long high leaps.

Order CARNIVORA: Flesh Eaters.

Family FELIDÆ: Cats.

Mountain Lion.—*Felis hippestes* Merriam.—There are still a few mountain lions in the park, mainly on the west slope, where the white-tail deer, upon which they feed, are most numerous. Their tracks are occasionally seen along the trails, but the animals are rarely seen except as hunted with dogs or trapped. During the winter of 1916-17 one hunter killed 11 of these big cats in the Flathead River Valley, and considerable numbers are usually destroyed each year for the protection of the large game animals of the park.

Canada Lynx.—*Lynx canadensis canadensis* Kerr.—These short-tailed, long-legged, big-footed, tassel-eared cats are fairly common over the park region. They subsist largely upon the snowshoe rabbits, but undoubtedly also destroy many of the young of game animals. Their fur constitutes an important part of the annual catch of the trappers around the borders of the park, and fortunately their numbers are in this way somewhat reduced. So sly and stealthy is the lynx that it is rarely seen by visitors to the park, and its presence is always a menace in a region well stocked with large game.

Bobcat.—*Lynx uinta* Merriam.—The large northern bobcat, or wildcat, while practically as heavy as the Canada lynx, is, on account of its smaller feet, shorter legs, and shorter fur, seemingly a much smaller animal. It is usually a darker gray and more mottled and can always be distinguished by the short stubby tail, the tip of which has a white lower half and black upper half, while in the Canada lynx the tip is solid black. The bobcat is reported as occasionally found in some of the lower levels of the park, but is by no means so common or generally distributed as the Canada lynx.

Family CANIDÆ: Dogs, wolves, and foxes.

Gray Wolf.—*Canis nubilus* Say.—A few of the large light-gray buffalo, or plains, wolves are found along the eastern slope of the park and occasionally a few occur in the timber on the west slope. Fortunately for the large game, they are not abundant, and it is to be

hoped that their numbers can be still further reduced. They are rarely seen even by hunters and trappers, unless caught in traps, and their presence in the park contributes nothing to the interest of those visiting the region.

Northern Coyote.—*Canis latrans latrans* Say.—The large northern coyotes are surprisingly common throughout the park, where their tracks and signs may be seen along almost every trail and over every pass and even on the trails of mountain goats and mountain sheep up to and sometimes above timberline. Goats, sheep, and deer are constantly hunted by them during the summer months and probably also during a part of the winter when the snow is sufficiently packed to carry them over its surface. The number of both young and old game animals thus killed is undoubtedly the greatest check on the increase of the most attractive life of the park, and every effort is being made to reduce the number of coyotes and thus protect the game.

Mountain Red Fox.—*Vulpes fulvus macrourus* Baird.—The large red or cross foxes are occasionally seen in the park, mainly in the open areas of the Hudsonian zone, just below timberline. While beautiful animals with valuable fur, they are fortunately rather scarce, as their food, in addition to such small game as mice and ground squirrels, undoubtedly includes many ptarmigan, grouse, and other interesting birds of the park.

Kit Fox; Swift.—*Vulpes velox hebes* Merriam.—The little buffy-gray foxes with black-tipped tails are common over the plains along the eastern edge of the park, and undoubtedly into its area, which they can enter through the open prairie valleys. There seems to be no actual record for the park, however, although the foxes are occasionally seen along the roads to and from the main points of entrance.

Family MUSTELIDAE: Otters, martens, minks, weasels, etc.

Otter.—*Lutra canadensis canadensis* Schreber.—A few otters are reported along most of the streams in the park, but the animals are scarce and not often seen. Their dark-brown fur, large size, and graceful seal-like habits in the water make them conspicuous and extremely interesting, and it is greatly to be hoped that their increase under the protection of the park rangers will render them a more important object of interest in the future. While they live partly upon fish, yet in well-stocked streams there are usually enough sick, and injured, and undesirable kinds of fish to supply them, so that their depredations in this line are of little consequence. In other ways they are harmless and wonderfully attractive animals.

Mink.—*Lutreola vison energumenos* (Bangs.)—Minks are found along most of the streams and lakes in the park region and form an important part of the fur crop around the borders. Largely nocturnal and very secretive in habits, they are not often seen, but occasionally in the morning or evening a glimpse is caught of a little dark-brown furry animal loping along the shores of a stream or lake. As they are great hunters for small game, it is perhaps well that they are not more abundant.

Arizona Weasel.—*Mustela arizonensis* (Mearns).—In summer these medium-sized weasels have buffy brown backs and white lower parts

and in winter they are pure white except for the tip of the tail, which is black at all seasons. They are scattered over the park but are not numerous anywhere. As they are largely diurnal in habits and are often bold and inquisitive, occasionally one may be seen running among the logs or rocks or along the shore of a lake or stream. Their prey consists chiefly of such small game as mice, chipmunks, ground squirrels, and gophers. While they may catch a few grouse, their food habits are generally very beneficial in serving as a check on the superabundance of rodents.

Long-tailed Weasel.—*Mustela longicauda longicauda* Bonaparte.—The large, long-tailed, yellow-bellied weasels, which also turn white in winter except the black tip of the tail, are common over the plains along the eastern edge of the park and probably extend up all the open valley tongues from the east. Their range is largely coincident with that of the Richardson ground squirrels, upon which they prey extensively. They do little harm and are very beneficial in keeping down rodent pests.

Bonaparte Weasel.—*Mustela cicognanii cicognanii* Bonaparte.—A very small weasel commonly reported in the park is probably the Bonaparte weasel, but no specimens are available for actual determination. This form is dark brown in summer with white belly, and in winter pure white except for the black tip of the tail. It is a tiny animal, little larger than a chipmunk and very quick and graceful in its movements. Occasionally one is seen hunting among old logs and rocks in the woods and will sometimes approach very close in response to a good imitation of a mouse squeak, as mice are its principal prey.

Marten.—*Martes americana caurina* (Merriam).—The long yellow-brown fur and bushy tail of the marten give it the appearance of being slightly larger than the mink, although it is about the same size. A few of these beautiful animals are scattered through the dense timber of the park region, and on rare occasions one may be seen running through the woods or climbing rapidly up a tree near the trails. They are woods animals, rarely found along the streams or shores of lakes and are more arboreal in habits than most of the members of their family.

Fisher.—*Martes pennanti pennanti* (Erxleben).—Fishers are much larger than martens, of darker color and coarser fur, but rank high among the valuable fur bearers. In the past a few have been taken in the park region, and although at best rare, they will doubtless hold their own here for many years to come. In habits they are much like the martens, and much of their prey is obtained through the forest.

Wolverine.—*Gulo luscus* (Linnaeus).—The wolverine, while considerably larger than the fisher, has a shorter tail and heavier build and a broad yellowish band on each side of the dusky brown back. Its fur while coarse is very attractive and valuable. One is occasionally taken around the edges of the park, and as they have disappeared over much of the country which they originally inhabited, it is to be hoped that a few may be preserved here as a matter of national interest. They are forest animals, but so scarce as to be rarely seen.

Northern Skunk.—*Mephitis hudsonica* Richardson.—The large northern skunks are common throughout the lower levels of the park, and while the animals themselves are occasionally seen, one more frequently encounters their powerful odor. If understood and

treated with due respect they are harmless and extremely interesting members of the park fauna.

Badger.—*Taxidea taxus* (Schreber).—While common over the plains country along the eastern edge of the park, badgers apparently do not occur in the timbered or mountainous area. Most of their time is spent in digging out ground squirrels, which form the principal part of their food. Along the roads they are often seen loping through the grass, or on warm days sunning themselves on mounds of fresh earth at the mouths of their burrows. Although very useful and practically harmless, they are too often the target of wanton destruction.

Family URSIDAE: Bears.

Black and Cinnamon Bears.—*Ursus americanus* (?) Pallas.—Black and brown bears are common over practically all of the Glacier Park and often range to or above timberline. During midsummer they feed extensively in the valleys upon the many species of berries then ripe. They often come to the vicinity of hotels and camps in search of food, and in many places where garbage is thrown out for them they gather in considerable numbers and feed upon almost anything of an edible nature. They are generally rather shy, and usually may be watched at a safe distance, but they are not so tame as not to be dangerous to overinquisitive visitors.

Grizzly Bear; Silvertip.—*Ursus horribilis* (?) Ord.—Several forms of grizzly bears occur in the Glacier Park region, but just how many and of what species remains to be determined. The region was long famous as a hunting ground for grizzly bears, but before it was set aside as a park and hunting prohibited they had become scarce and now are rarely seen. They are great wanderers and some are probably killed outside of the park each year, so that their increase is slow and uncertain. They are among the shyest and most difficult of the denizens of the park to get sight of and are rarely seen by visitors.

Order INSECTIVORA: Insect Eaters.

Family SORICIDAE: Shrews.

Water Shrew.—*Neosorex palustris navigator* Baird.—The large white-bellied water shrews are found throughout the Canadian zone of the park area, but are rarely seen unless trapped for specimens. They are generally found along the edges of little cold streams or pools in which they swim and dive and hunt for their prey.

Dusky Shrew.—*Sorex obscurus obscurus* Merriam.—Little dusky-brown shrews are common all over the park, but are so tiny and dull colored that they are rarely noticed, except by naturalists who obtain them by setting mousetraps under logs, stones, or the cover of leaves and fallen vegetation in the woods or along the banks of streams. Their food consists chiefly of insects, but they are eager for any kind of fresh meat used as bait for the traps and, being easily caught, a little is thus learned of their habits. Their minute eyes are probably of less use to them than the long, pointed flexible nose, which guides them in the selection of food in their dark covered runways.

Dobson Shrew.—*Sorex vagans dobsoni* Merriam.—These little brown shrews are scarcely distinguishable from the dusky shrews by external characters, and their habits are practically the same. A few

have been trapped in the park and while they are probably scattered all over it they seem to be less common than the dusky shrews.

Masked Shrew.—*Sorex personatus* I. Geoffroy St. Hilaire.—These are the smallest shrews in the park, but in general appearance resemble the others so closely that their diminutive size is their principal distinguishing character. A few have been taken in the park, and they are probably distributed over most of its area.

Order CHIROPTERA: Bats.

Family VESPERTILIONIDÆ: Bats.

Long-legged Bat.—*Myotis lucifugus longicrus* (True).—The small quick-flying bats about the hotel at Lake McDonald in August of 1917 were probably of this species, as specimens have been taken lower down in the valley, although not actually within the park area. They begin to fly early in the dusk of evening and may be seen darting in quick zigzags across the patches of sky between the trees in their nocturnal pursuit of winged insects. Before daylight they creep away to hang up in dark corners or cling to the walls until evening returns.

Brown Bat.—*Eptesicus fuscus fuscus* (Beauvois).—Large brown bats seen flying in the evenings about Many Glacier Hotel in July, 1917, were apparently of this species, although no specimens were obtained. They inhabit the surrounding country and probably occupy the lower levels of the park as well.

Silver-haired Bat.—*Lasiorycteris noctivagans* (LeConte).—A number of very dark-colored medium-sized bats seen flying through the timber at Lake McDonald in the dusk of evening are apparently of this species, but as no bats have been taken with the park the actual determination remains unsatisfactory.

Hoary Bat.—*Nycteris cinerea* (Beauvois).—A big hoary bat, which probably had been disturbed in its leafy cover on the shore, was seen flying about in the bright sunlight at the north end of Waterton Lake on August 15, 1917, and for a short time circled about over the water so near that its identification was unmistakable. This wide-ranging boreal species is undoubtedly found throughout the timber of the park region, and, like all of our northern bats, is a harmless and extremely interesting and useful animal.

BIRDS.¹

The following data on the birds of the park has been collected and prepared for publication by Mrs. Florence Merriam Bailey, the author of "Handbook of Birds of the Western United States":

Order PYGOPODES: Diving Birds.

Family COLYMBIDÆ: Grebes.

Western Grebe.—*Echmophorus occidentalis*.—The beautiful swan grebe, the largest of this strange-voiced family of divers, distinguished by long slender bill, blackish upper parts, and long snow-

¹ In the nomenclature of the 1910 A. O. U. check list, the sixteenth and the proposed changes, including those in the April, 1918, Auk.

white neck and underparts, has been found on Lake McDonald and the Flathead River; and one of its floating nests has been reported in the park.

Holbøll Grebe.—*Columbus holboelli*.—Next to the western grebe in size the Holbøll, with long rufous neck and white throat patch, has been recorded from Lake McDonald and seen on Waterton Lake, across the Canadian boundary line.

Horned Grebe.—*Colymbus auritus*.—This active little rufous-throated grebe, with puffy side crests, has been found on the St. Mary Lakes, and one of its floating nests discovered on a pond above the Swiftcurrent Lakes.

Eared Grebe.—*Colymbus nigricollis californicus*.—The quiet little-eared grebe, with the pointed median crest and blackish neck, should be looked for carefully, as it has been reported from a number of lakes, among them the Swiftcurrent and Lake McDonald.

Family GAVIDAE: Loons.

Loon.—*Gavia immer*.—The great northern diver, which not only dives expertly but swims long distances under water, and is recognized at a glance by its large size, long slender bill, and black upper parts spotted with white, nests rather commonly, especially on the remote quiet lakes of the park, where its loud wild cry should be listened for.

Order LONGIPENNES: Long-winged Swimmers.

Family LARIDAE: Gulls and Terns.

Ring-billed Gull.—*Larus delawarensis*.—This medium-sized, white-headed and white-breasted gull has been reported from the lower St. Mary, and a gull presumably of this species is a summer visitor to the park.

Bonaparte Gull.—*Larus philadelphia*.—The small Bonaparte, the summer adults of which have black heads and the young a conspicuous dusky ear spot, has been reported in the park.

Forster Tern.—*Sterna forsteri* (?).—A small tern with black crown and forked tail has been reported near the inlet of the lower St. Mary, which is crossed by the boundary line of the park.

Order STEGANOPODES: Totipalmate Swimmers.

Family PHALACROCORACIDAE: Cormorants.

Double-crested Cormorant.—*Phalacrocorax auritus auritus*.—One of these black, snaky-necked cormorants has been recorded from the St. Mary Lake.

Family PELECANIDAE: Pelicans.

White Pelican.—*Pelecanus erythrorhynchos*.—A few of these great white birds with long bills and large orange fish pouches have been reported as wanderers after the breeding season.

Order ANSERES: Lamellirostral Swimmers.

Family ANATIDAE: Ducks, geese, and swans.

Merganser.—*Mergus americanus*.—The narrow-billed, round-headed, and white-breasted male merganser and the brown-headed and crested female breed in the park, generally nesting in hollow trees, some staying through the winter where there is open water for fishing.

Red-breasted Merganser.—*Mergus serrator*.—The thinly crested and red-breasted merganser has been reported from the lower parts of the park.

Hooded Merganser.—*Lophodytes cucullatus*.—Easily recognized by their wheel-shaped crests and known locally though incorrectly as wood ducks, because they nest in hollow trees; the hooded mergansers are seen especially in the fall.

Mallard.—*Anas platyrhynchos*.—Green-headed, quacking mallards, the brown female known by the inclosing white bands of her purple wing patch, breed about lakes and ponds in the lower levels of the park.

Gadwall.—*Chauliastur streperus*.—Noisy brown mottled gadwalls, the male of which has brown and white wing patches and the female a white patch and white wing linings, have been found with downy young in the park.

Baldpate.—*Mareca americana*.—The baldpate, with patches of white and green on head and wing, was the most abundant duck on Lake McDonald April 21, 1918.

Green-winged Teal.—*Nettion carolinense*.—This prettily marked little whistler, the commonest of the teals of the park, is said to breed and is also seen in great flocks during the migrations.

Blue-winged Teal.—*Querquedula discors*.—This striking teal, with white eye crescent, brown body, and large blue wing patch, is apparently rather a rare migrant.

Cinnamon Teal.—*Querquedula cyanoptera*.—The bright cinnamon-colored teal, with blue, white, and green wing patch, is reported as a spring migrant, and by Prof. P. E. Kretzmann as seen on St. Mary Lake August 10, 1917.¹

Shoveller.—*Spatula clypeata*.—The large spoonbills are reported as spring and fall migrants, and large numbers were seen on Lake McDonald in April, 1918.

American Pintail.—*Dafila acuta tzitzihoa*.—Known only as a spring and fall migrant, the pintail, with brown head and long white neck, in September, when the breeding season is over, comes from the prairie to the mountain lakes.

Redhead.—*Marila americana*.—This large red-headed, black-breasted, and brown-backed duck is apparently an uncommon migrant through the park.

Canvasback.—*Marila valisineria*.—The canvasback, with high, straight bill, red head, black breast, and white back, is apparently a rare migrant.

¹ Kretzmann, P. E., Some birds along the trails of Glacier National Park, Wilson Bull. XXX, 84-87, 1918.

Scaup Duck.—*Marila marila*.—One of the bluebills, taken for the scaup, with black fore parts, gray-barred back, and white belly, was found in large numbers on Lake McDonald in April, 1918.

Lesser Scaup Duck.—*Marila affinis*.—The smaller scaup, with head glossed with purple instead of green, is apparently an abundant fall migrant.

Ring-necked Duck.—*Marila collaris*.—The brown-collared ringneck is reported from swampy ground in the park in summer.

Barrow Golden-eye.—*Clangula islandica*.—Numerous broods of young golden-eyes following brown-headed, white-necked and golden, or brass-eyed, mothers, are seen in the lakes of the park; but the green-headed father, distinguished by the crescentic or "spread-wing shaped white patch" at the base of his bill, is not seen with the family, as, like most other drakes, he goes into hiding during the molting season, reappearing in time for the fall migration.

Ruffle-head.—*Charitonetta albeola*.—The puffy, white-banded iridescent head of the drake and the single white head patch of the duck may both be caught sight of in the park, as there are rumors of nests, and the birds are said to be common in spring and fall.

Harlequin Duck.—*Histrionicus histrionicus pacificus*.—Young families of the rare and remarkable brown harlequins, with two white spots on the side of the head, may be found on mountain streams, especially in the neighborhood of rapids, where their interesting performances should be carefully watched. One of the handsome drakes, with his gray and brown plumage strikingly marked with white, has been discovered with his mate on Iceberg Lake before his retirement.

White-winged Scoter.—*Melanitta deglandi deglandi*.—Four of these large black-bodied sea ducks, with white eye and wing patches, have been reported from the park in fall, and Mr. A. A. Saunders writes that he saw two on the upper Two Medicine Lake on August 5, 1914.

Ruddy Duck.—*Erismatura jamaicensis*.—The droll little blue-billed and rufous-bodied ruddy ducks are said to be rather common on Sherburne Lake during the spring migration, and some have been seen in the Flathead River region in summer. Great numbers were on Lake McDonald in April, 1918.

Snow Goose.—*Chen hyperborea hyperborea*.—White geese are said to pass over the park in thousands during migrations, especially in spring.

Ross Goose.—*Chen rossi*.—The smaller Ross goose was reported by Dr. George Bird Grinnell in 1887 as migrating in large flocks over the St. Mary Lakes and crossing the mountains on their way south.¹

Canada Goose.—*Branta canadensis canadensis*.—The gray goose with black head and white neckband is one of the notable birds to be looked for, as it nests in quiet places among the lakes of the park.

Whistling Swan.—*Olor columbianus*.—The large white whistling swan is seen almost every year during the spring and fall migrations on the Swiftcurrent Lakes.

Trumpeter Swan.—*Olor buccinator*.—Trumpeter swans, now practically extinct, were abundant in 1887 at the extreme upper end of

¹ Some Autumn Birds of the St. Mary Lakes Region. By Dr. George Bird Grinnell, Forest and Stream, Vol. XXX, p. 365, May 31, 1888.

the lower St. Mary Lake, and Dr. Grinnell saw them cross the park on their southward flight.

Order HERODIONES: Herons, Storks, Etc.

Family ARDEIDAE: Herons, bitterns, etc.

Bittern.—*Botaurus lentiginosus*.—The brown striped bittern with long-pointed bill has been reported from several rushy creeks on the west side of the park.

Great blue heron.—*Ardea herodias herodias*.—The tall grayish-blue heron has been reported as occasionally seen in the park.

Order PALUDICOLAE: Cranes, Rails, Etc.

Family GRUIDAE: Cranes.

Sand-hill Crane.—*Grus mexicana mexicana*.—The all too conspicuous sand-hill crane is now seen only as a rare migrant passing over the park.

Family RALLIDAE: Rails, coots, etc.

Sora Rail.—*Porzana carolina*.—The secretive little sora rail with spotted back and black face has been reported from McGee Meadow, near Lake McDonald, and its descending chromatic scale should be listened for in the marshes.

Coot.—*Fulica americana*.—While not common, the familiar gray coot or mud hen with its black head and white bill has been found in a number of localities on the lower edges of the park.

Order LIMICOLAE: Shore Birds.

Family PHALAROPODIDAE: Phalaropes.

Northern Phalarope.—*Lobipes lobatus*.—In its fall dress of gray and white the slender-billed little phalarope has apparently been seen on the high lakes of the park.

Family RECURVIROSTRIDAE: Avocets, etc.

Avocet.—*Recurvirostra americana*.—The light cinnamon-fronted avocet with its long recurved bill is reported as a rare migrant from the prairie patches on the west side of the park.

Family SCOLOPACIDAE: Snipes, sandpipers, etc.

Wilson Snipe.—*Gallinago delicata*.—The striped, long-billed jack-snipe is supposed to nest along the Flathead River, and was flushed from the willows near Glacier Park Hotel August 2, 1914, by Mr. A. A. Saunders.

Pectoral Sandpiper.—*Pisobia maculata*.—The pectoral with its white chin and belly and dark finely-streaked chest is reported as a fall migrant in the higher parts of the park.

Greater Yellow-legs.—*Totanus melanoleucus* (?).—One of the yellow-legs, presumably the greater, with bill over 2 inches long, and white rump and tail, is given as a rare migrant in the park.

Western Solitary Sandpiper.—*Helodromas solitarius cinnamomeus.*—This small black-winged sandpiper is reported on its early fall migrations as seen on the Flathead River.

Upland Plover.—*Bartramia longicauda.*—This large prairie plover with black rump and white bars on the outside wing quill, can be recognized in the air at a distance by the bubbling quality of its note; and it should be looked for on the prairie patches of the Flathead River where it has already been found.

Spotted Sandpiper.—*Actitis macularia.*—The small sandpiper or "tip-up," with spotted breast and back and white line down the wing, is commonly seen along the lake shores from which it flies with its sweet "peet-weet, peet-weet."

Canadian Curlew.—*Numenius americanus occidentalis.*—In 1895 several curlews with long decurved bills were reported by Messrs. Bailey and Howell from the plains, and one from the St. Mary Lake.

Family CHARADRIIDAE: Plovers.

Killdeer.—*Oxyechus vociferous vociferous.*—The killdeer, known by his two black chest bands and his light brown rump, as well as his call of "Kill-dee', kill-dee'," while not common, is reported from a number of localities in the lower parts of the park.

Order GALLINAE: Gallinaceous Birds.

Family ODONTOPHORIDAE: Bobwhites, etc.

Bobwhite.—*Colinus virginianus virginianus.*—Introduced into the Flathead Valley, the familiar quail of the East is said to have followed up the river into the park.

Family TETRAONIDAE: Grouse, ptarmigans, etc.

Richardson Grouse.—*Dendragapus obscurus richardsonii.*—The large, sooty grouse is common in the higher, timbered regions of the park, and occasionally broods of young will be flushed along the trails.

Franklin Grouse.—*Canachites franklinii.*—The smaller, black, and rusty Franklin, the cock with strikingly black and white banded tail, lives in cool, moist parts of the most thickly timbered forest; but when discovered it can be easily watched, as it is the true "fool hen" of Montana.

Gray Ruffed Grouse.—*Bonasa umbellus umbelloides.*—Easily recognized by its black shoulder ruffs and banded fan tail, this drummer of the forest may be found in pines and quaking aspens down to the lake shores.

White-tailed Ptarmigan.—*Lagopus leucurus altipetens.*—This small timber-line grouse, snow white to go with the snows of winter and mixed brown and black to go with the variegated rock and flower-strewn Arctic-Alpine slopes of summer, may be found near the passes, sometimes close to the trails; and it is so delightfully tame that when found it can be easily photographed and studied.

Columbian Sharp-tailed Grouse.—*Pedioecetes phasianellus columbianus.*—This brown, thickly marked grouse while spending the summer below the park on the plains and in the willowy ravines of the foothills, in winter comes up the open ridges well inside the park.

Order COLUMBAE: Pigeons.

Family COLUMBIDAE: Pigeons.

Mourning Dove.—*Zenaidura macroura marginella*.—The well-known turtle dove, with long, graduated tail, is rarely seen even in the lower levels of the park.

Order RAPTORES: Birds of Prey.

Family CATHARTIDAE: Vultures.

Turkey Vulture.—*Cathartes aura septentrionalis*.—The bare, crimson-headed vulture, once common over the prairies of the St. Mary Lakes region, has been accidentally caught by the fur trappers until now almost unknown in the park.

Family BUTEONIDAE: Hawks, eagles, etc.

Marsh Hawk.—*Circus cyaneus hudsonius*.—The white-rumped mouse hawk seen beating low over the ground looking for small mammals, is confined to the open, lower margins of the park.

Sharp-shinned Hawk.—*Accipiter velox*.—This small, long-tailed hawk, bluish gray above and barred reddish brown below, one of the most expert of the bird catchers, has been noted in a number of localities.

Cooper Hawk.—*Accipiter cooperi*.—The larger cooper, closely resembling the sharp-shin, but living on larger birds, is recorded from two localities.

Western Goshawk.—*Astur gentilis striatulus*.—The large blue darter, with gray underparts streaked with darker, one of the greatest enemies of game birds, is reported for the park.

Western Red-tail.—*Buteo borealis calurus*.—This large hawk, which soars around overhead with rufous fantail spread, is occasionally seen among the foothills and on the plains.

Swainson Hawk.—*Buteo swainsoni*.—This prairie hawk with the dark chest patch sometimes follows the plains up to the lower edges of the park.

Squirrel Hawk; ferruginous roughleg.—*Archibuteo ferrugineus*.—Larger than the buteos, and with legs feathered to the toes like the golden eagle, in normal plumage the squirrel hawk has a white tail and reddish-brown flanks and upper parts; but in its melanistic phase is chocolate colored, marked with rusty. Like the Swainson, a bird of the prairie, it comes up into the lower edges of the park where it can find abundant ground squirrels.

Golden Eagle.—*Aquila chrysaetos*.—The dark brown golden eagle, the noblest bird of the National Parks, is seen occasionally throughout the mountains.

Bald Eagle.—*Haliaeetus leucocephalus leucocephalus*.—Our national emblem, the more handsomely marked of the two eagles, its snow-white head and tail contrasting strikingly with its brown body, is now apparently very rare in the park, but the fish hawk with white head and underparts is often mistaken for it.

Family FALCONIDAE: Falcons, etc.

Prairie Falcon.—*Hierofalco mexicanus*.—The small, compactly built prairie falcon found flying about the cliffs where it makes its home has been recorded from the St. Mary Lake and also found on the Kootenai Trail.

Long-eared Owl.—*Asio wilsonianus*.—The only record of the medium-sized long-eared owls is that of Mr. A. A. Saunders, who writes that on August 9, 1914, his camp fire at Red Eagle Lake was visited by several, apparently adults and young.

Duck Hawk.—*Rhynchodon peregrinus anatum*.—The duck hawk, whose black head and cheeks contrast sharply with its white throat and breast, has been seen on a bluff overlooking Red Eagle Creek.

Pigeon Hawk.—*Tin nunculus columbarius columbarius*.—The pigeon hawk, distinguished in the field from the young sharp-shinned hawk by its tail, which is brown with narrow, whitish bands, is reported for the park.

Desert Sparrow Hawk.—*Cerchneis sparveria phalana*.—The handsome little blue and rufous sparrow hawk has been found feeding young in the lower levels of the park.

Family PANDIONIDAE: Ospreys.

Osprey; Fish Hawk.—*Pandion haliaëtus carolinensis*.—The osprey, with white head and underparts and dark eye streak and upper parts is said to nest throughout the park where there are fish; and its large tree-top nests may be seen on St. Mary Lake, on the Swiftcurrent above Sherburne Lake, and at the head of Waterton Lake. Other nests are specifically reported from Lakes McDonald and Bowman, and Flathead River.

Family BUBONIDAE: Horned owls, etc.

Short-eared Owl.—*Asio flammeus flammeus*.—This brown-streaked owl may be seen flying about in the daytime on the flats or napping in heavy willows or dense brush.

Great Gray Owl.—*Scotiaptex nebulosa nebulosa*.—This large owl, called locally saucer-faced owl, easily recognized by its size and its grayness, is said to be resident in the park.

Richardson Owl.—*Cryptoglaux funerea richardsoni*.—This small dark-brown owl is said to be common and to get caught in marten traps.

Saw-whet Owl.—*Cryptoglaux acadica acadica*.—The little dark, round-headed saw-whet, with white underparts streaked vertically with reddish brown, while rare, has been found in the deep forest.

MacFarlane Screech Owl.—*Otus asio macfarlanei*.—Known by its ears and gray coloration, when seen, the small screech owl may also be recognized by its low quavering cry, which is heard in the lower parts of the park.

Western Horned Owl.—*Bubo virginianus occidentalis*.—This great owl with large, conspicuous ear tufts, is said to be common in the park, and its loud hooting may be heard in the mountains on moonlight nights.

Arctic Horned Owl.—*Bubo virginianus subarcticus*.—Every few years, it is said, these white arctic winter visitors come into the park in numbers.

Snowy Owl.—*Nyctea nyctea*.—This round-headed, white arctic migrant visits the park only in winter.

Hawk Owl.—*Surnia ulula caparoch*.—This medium-sized diurnal, hornless owl, with long, graduated tail and heavily barred underparts, should be watched for in the open in the tops of dead trees, from which it rapidly swoops down on its prey.

Rocky Mountain Pygmy Owl.—*Glaucidium gnoma pinicola*.—Only 6 or 7 inches long, this little hornless owl is hard to find, but it should be looked for in the pines, for it is supposed to nest in the park.

Order COCCYGES: Cuckoos, Kingfishers, Etc.

Family ALCEDINIDAE: Kingfishers.

Belted Kingfisher.—*Streptoceryle alcyon alcyon*.—The high-crested, long-billed kingfisher, with bluish upper parts and belt, is one of the delightfully familiar birds of the park, and his loud rattle may occasionally be heard over the lakes and trout streams.

Order PICI: Woodpeckers, Etc.

Family PICIDAE: Woodpeckers.

Rocky Mountain Hairy Woodpecker.—*Dryobates villosus monticola*.—This black and white woodpecker, with red on the back of the crown and a white stripe down the back, has been reported from a number of places in the park.

Batchelder Woodpecker.—*Dryobates pubescens homorus*.—Several of the downy woodpeckers, like the hairy but smaller, have been noted in the lower parts of the park.

Arctic Three-toed Woodpecker.—*Picoides arcticus*.—A squarish yellow patch over the bill distinguishes the three-toed woodpeckers from all others, and a solid black back marks the arctic form of these hardy northerners which are among the most important conservators of the coniferous forests of the park.

Alaska Three-toed Woodpecker.—*Picoides americanus fasciatus*.—The ladder-backed three-toed, so called because the white stripe down its back is barred with black, is frequently seen hunting for wood borers in the timber.

Red-naped Sapsucker.—*Sphyrapicus varius nuchalis*.—While the hairy and downy have a red patch on the back of the crown, the sapsucker has a red crown and red nape, separated by a black area, and its under parts instead of being white are red, black, and yellow. Bands of small holes girdling the trees are seen in many places testifying to its presence.

Williamson Sapsucker.—*Sphyrapicus thyroideus natalia*.—While in other woodpeckers the female merely lacks the bright color patches of the male or is generally duller, in the Williamson she is barred, while the male is black above the white rump and wing patches, and below, black, red, and yellow. There are a number of records for this handsome woodpecker in the lower parts of the park.

Western Pileated Woodpecker.—*Phlæotomus pileatus picinus*.—The only woodpecker with red crest and black body, the large size of the pileated is also enough to identify it; and its large borings in dead trees—sometimes a foot long or over—prove that it has worked in various parts of the forest. One of the great birds has been seen near Baring Falls, at Sun Chalets, and it is reported from the Flat-head River.

Red-headed Woodpecker.—*Melanerpes erythrocephalus*.—While many woodpeckers have red on the head, no other has the entire head and neck red down to the white of the breast and the black of the back. It has been reported from the lower edges of the park.

Red-shafted Flicker.—*Colaptes cafer collaris*.—Known by the white rump patch and general brown coloration, the western flicker has red instead of yellow wing and tail linings. Like other flickers it is seen largely in the open where it can find ants on the ground.

Order **MACROCHIRES**: Nighthawks, Swifts, and Humming Birds.

Family **CHORDEILIDÆ**: Nighthawks.

Pacific Nighthawk.—*Chordeiles minor hesperis*.—In the lower parts of the park, on rare occasions, the familiar nighthawk cry of "Peent, pe-auk" may be heard and the bird with white bands on its long slender wings seen high in air chasing about after insects.

Family **MICROPODIDÆ**: Swifts.

Vaux Swift.—*Chaetura vauxi*.—Three individuals of the western form of chimney swift, with slender wings and tails tipped with spines, have been noted in the sky near Many Glacier Hotel in mid-summer.

White-throated Swift.—*Aëronautes melanoleucus*.—This large swift with the white throat has been recorded near the park and there are two possible records from the western side of the park.

Family **TROCHILIDÆ**: Humming birds.

Black-chinned Humming Birds.—*Archilochus alexandri*.—The green-backed humming bird with the black and purple throat has apparently been seen in the park.

Broad-tailed Humming Bird.—*Selasphorus platycercus*.—This humming bird, with bronzy-green upper parts and deep rose-pink gorget, was taken in 1895 by Messrs. Bailey and Howell near St. Mary Lake.

Rufous Humming Bird.—*Selasphorus rufus*.—The noisy bright reddish-brown hummer with gorget that flashes fire-red, orange, and brassy green is one of the rare but delightful sights of the park.

Say Phoebe.—*Sayornis saya*.—This brown billed phoebe has been reported by Prof. Kretzmann as seen below Squaw Mountain, July 19, 1915.

Calliope Humming bird.—*Stellula calliope*.—This little humming bird, measuring only about 3 inches—one of the smallest of the family in the United States—green above and with purplish elongated gor-

get, is a mountain species and should be looked for in the park, as one specimen was taken in 1895 by Messrs. Bailey and Howell at St. Mary Lake.

Order PASSERES: Perching Birds.

Family TYRANNIDAE: Tyrant flycatchers.

Kingbird.—*Tyrannus tyrannus tyrannus*.—The eastern kingbird, black above, white below, and marked by a white band on the tail, while very rare, is said to breed along the Flathead River.

Olive-sided Flycatcher.—*Nuttallornis borealis*.—A little smaller than the kingbird, this solitary bird, occasionally seen in the edge of the forest perched on the tip of an evergreen spire, its dark-gray breast showing a white median line, may be recognized, when not seen, by its sweet forest call "Pew-pew-pe'oh, pew-pew-pe'oh."

Western Wood Pewee.—*Myiochanes richardsonii richardsonii*.—Like the eastern wood pewee, the long, thin western bird, with dark grayish-brown back, sits erect on a branch, darting out after passing insects or calling "Twee" while it waits for them.

Western Flycatcher.—*Empidonax difficilis difficilis*.—The dull yellow under parts of this little olive-colored flycatcher identify it when seen close at hand as it has been at Gunsight and Lake McDonald.

Traill Flycatcher.—*Empidonax traillii traillii*.¹—This small, gray flycatcher, with white chin, gray breast, and white wing bars, may be occasionally seen among the willows, where its "Pip, pip" and its explosive "Ka-weé-ur" are heard as it darts out from its perch after insects.

Hammond Flycatcher.—*Empidonax hammondi*.—This dark-breasted olive-backed flycatcher was presumably seen by Mr. H. C. Bryant in open woods near Lake McDonald in 1917, and has been seen by Mr. Saunders.

Family ALAUDIDAE: Larks.

Desert Horned Lark.—*Otocoris alpestris leucolaema*.—This cinnamon-colored ground bird with black hornlike tufts and black chest patch has been seen on the high, barren ridges of the park and on the Big Prairie of Flathead River.

Family CORVIDAE: Crows, jays, magpies.

Magpie.—*Pica pica hudsonia*.—The large, strikingly black and white magpie, with long, graduated tail, is said to come into the park for food during the summer, but the bulk of the birds are said to come into the lower parts of the park from the surrounding plains in early fall and to remain through the winter.

Black-headed Jay.—*Cyanocitta stelleri annectens*.—This distinguished-looking, high-crested blue jay with dark-blue under parts, purplish wings and tail is now apparently rather rare in the park, perhaps, like the eagles and other meat eaters, having been unduly attracted by the bait of the fur trappers.

¹ Formerly the Alder Flycatcher: *Empidonax traillii alnorum*.

Rocky Mountain Jay.—*Perisoreus canadensis capitalis*.—This big, companionable camp bird, with white head, sooty nape, and fluffy gray body, known familiarly as lumber jack or moose bird, may be met with throughout the timbered portions of the park.

American Raven.—*Corvus corax sinuatus*.—The raven, told from the crow by its larger size and hoarse croak, is said to come to the reclamation camps on the east side for food, but to be commoner on the west side of the park.

Western Crow.—*Corvus brachyrhynchos hesperis*.—Crows are occasionally seen along the lower edges of the park.

Clark Nutcracker; Clark Crow.—*Nucifraga columbiana*.—The crow-like form of the nutcracker, with ash-gray body and black and white wings and tail, may be seen almost anywhere in the park, but especially at the higher altitudes.

Wright Flycatcher.—*Empidonax Wrightii*.—The Wright flycatcher has been added to the park list by Mr. Saunders, who found it fairly common in the foothills of the park on both sides of the divide.

Family ICTERIDÆ: Blackbirds, etc.

Sagebrush Cowbird.—*Molothrus ater artemisiae*.—The short-billed cowbird, the male with brown head and glossy black body, the female with streaked brownish-gray plumage, has been seen in the Many Glacier horse pasture walking around among the saddle horses catching insects, and may be found in corrals in other places.

Thick-billed Redwing.—*Agelaius phoeniceus fortis*.—The redwing, while rare, is reported from the swamps of the Flathead River and the Belly River country, and may be found in other suitable locations.

Western Meadowlark.—*Sturnella neglecta neglecta*.—The brown-backed, yellow-breasted, and black-collared meadowlark, noted for its beautiful song, is reported from the outer edges of the park.

Brewer Blackbird.—*Euphagus cyanocephalus*.—The yellow-eyed, glossy Brewer comes into the low outer edges of the park.

Family FRINGILLIDÆ: Finches, sparrows, etc.

Northwestern Evening Grosbeak.—*Hesperiphona vespertina brooksi*.—These great-beaked birds, with black crown, wings, and tail and green and yellow body colors, come to the cottages on Lake McDonald for food and are reported in winter, though they are said to be most plentiful during the spring migration.

Rocky Mountain Pine Grosbeak.—*Pinicola enucleator montana*.—In winter this large carmine-red grosbeak is rather common in the park and has come to the Many Glacier ranger cabin for food. Some have apparently been seen in summer, and a few may breed in the mountains.

Cassin Purple Finch.—*Carpodacus cassinii*.—This dull-pinkish finch with the bright crimson crown patch has been found with his streaked dusky mate at Granite Park picking up grain dropped by the horses.

Bendire Crossbill.—*Loxia curvirostra bendirei*.—Mixed flocks of the dull red and greenish or yellowish crossbills are frequently seen in the park going about feeding on cone seeds in the tree tops, their crossed bills enabling them to extract the seeds with ease.

White-winged Crossbill.—*Loxia leucoptera*.—This crossbill with the two white wing bands has been reported as sometimes breeding in the park.

Gray-crowned Leucosticte.—*Leucosticte tephrocotis tephrocotis*.—The rosy finch, with black crown bordered by gray, is found around the rocky peaks of the mountains, where they pick up insects on the stony slopes, on the dwarfed firs of timberline, and on the snow banks below the glaciers.

Redpoll.—*Acanthis linaria linaria*.—Redpolls have been seen in the park in winter, and a specimen of *linaria* with black chin, crimson crown, and body largely streaked was taken in the region. Redpolls are said to migrate north along the Flathead in great numbers.

Pale Goldfinch.—*Astragalinus tristispallidus*.—The yellow and black goldfinch has been reported from St. Mary Lake and below Squaw Mountain by Prof. Kretzmann.

Pine Siskin.—*Spinus pinus pinus*.—The brown-striped siskins with yellow wing and tail patches are frequently seen crossing overhead with undulating flight, and are sometimes found on birch tops picking seeds from the catkins.

Snow Bunting.—*Plectrophenax nivalis nivalis*.—The white snowflake, marked with rusty and black, comes in large flocks in winter, and their advent is said to be a "sure sign of snow."

Alaska Longspur.—*Calcarius lapponicus alascensis*.—This longspur with black fore parts, white belly, and chestnut nape has been found on the ridges with the rosy finches.

Chestnut-collared Longspur.—*Calcarius ornatus*.—The longspur with bright rufous nape, light throat, and dark breast has presumably been seen close to the park line, if not actually within its boundaries.

McCown Longspur.—*Rhyncophanes mccowni*.—This longspur with rufous shoulder patch and black crescentic chest patch—like the strong markings of all the longspurs obscured in winter—has been seen in May in St. Mary Lakes region, where they nest on the prairie, and in migration seen so near the park boundary that they should be included in the park list.

Western Vesper Sparrow.—*Pooecetes gramineus confinis*.—The pale streaked vesper sparrow with the white outer tail feathers has been found singing between Glacier Park and St. Mary and on the prairie near St. Mary Lake.

Western Savannah Sparrow.—*Passerculus sandwichensis nevadensis*.—This small, darkly streaked sparrow, which darts up from underfoot in the prairie grass or weed thickets and, after zigzagging a short distance, drops down again out of sight, is reported from the prairie patches on the east and west sides of the park, and has presumably been singing between Glacier Park and Many Glacier Hotel.

Western Lark Sparrow.—*Chondestes grammacus strigatus*.—There is a sight record for the lark sparrow, with chestnut and white striped head and white tail corners, on the prairie patches of the Flathead River.

White-crown Sparrow.—*Zonotrichia leucophrys*.—This sparrow, with the handsome black and white striped crown, black between eye and bill, is one of the two sparrows most commonly heard in the park, and its song, of four slow, clear notes, followed by grace notes, comes from the willow borders of lakes and streams from the lowest levels to the timberline.

Gambel Sparrow.—*Zonotrichia gambelii*.—The Gambel, with white eye stripe reaching to bill, was noted by Messrs. Bailey and Howell in 1895 at St. Mary Lake.

Western Tree Sparrow.—*Spizella monticola ochracea*.—This small, light-billed sparrow, with more or less rufous on crown and sides of chest, and with a small, dusky chest spot and two white wing bars, was found by Dr. Grinnell in 1887 in the St. Mary Lake region abundant during the coldest part of October.

Western Chipping Sparrow.—*Spizella passerina arizonae*.—The black-billed chipping sparrow, with rufous cap and grayish-white underparts, is common along the lower edges of the park, and seen higher up after the breeding season.

Montana Junco.—*Junco oreganus montanus*.—This junco, with slate-colored fore parts, white belly, pinkish sides, and brownish back abounds in the park.

Mountain Song Sparrow.—*Melospiza melodia fallax*.—The brown-streaked song sparrow, with characteristic brown chest blotch, easily recognized by its sweet familiar voice, has been found in a number of localities, mainly on the lower edges of the park.

Lincoln Sparrow.—*Melospiza lincolni lincolni*.—The buffy chest band and finely penciled breast characterize this small sparrow reported from the brush and willow patches in several parts of the mountains.

Slate-colored Fox Sparrow.—*Passerella iliaca schistacea*.—This large sparrow, with big bill, dark, slaty head, and reddish-brown wings and tail, is one of the commonest sparrows of the park, being heard from the willows bordering the green lakes till its loud, cheery notes phrase themselves "Green-green-wa'ter, see-it-there."

Arctic Towhee.—*Pipilo maculatus arcticus*.—In 1895 Messrs. Bailey and Howell reported a towhee, the male distinguished by black fore parts, white belly, and rufous sides, the female by brown instead of black, caught in a trap, and a few others observed near St. Mary Lake.

Black-headed Grosbeak.—*Zamelodia melanocephala melanocephala*.—The heavy bill and black and light-brown coloration identify this grosbeak, which is said to nest on the Flathead River.

Lazuli Bunting.—*Passerina amoena*.—Recognized at a glance by his bright blue back and brownish breast, the little lazuli may be found near Glacier Park Hotel, Many Glacier Hotel, and in other of the lower parts of the park.

Family TANGARIDÆ: Tanagers.

Western Tanager.—*Piranga ludoviciana*.—The red or orange head and black and yellow body of the male and the greenish body of the female distinguish the tanagers from all other birds seen in the forest. They have been noted at St. Mary Lake, Lake McDonald, and the Flathead River.

Family HIRUNDINIDÆ: Swallows.

Cliff Swallow.—*Petrochelidon lunifrons lunifrons*.—Swallows taken for the cliff, with its light forehead and rump patches and its black chest patch have been seen at St. Mary Lake, over the Swiftcurrent Flats, and on the Flathead River.

Barn Swallow.—*Hirundo rustica erythrogastris*.—This familiar swallow, with its long forked tail, has been noted on the plains edge of the park.

Tree Swallow.—*Iridoprocne bicolor*.—The white-bellied, steel-backed tree swallow nests in hollow trees at St. Mary Lake and doubtless other localities on the edge of the park.

Northern Violet-green Swallow.—*Tachycineta thalassina lepida*.—This remarkably colored swallow may be recognized by its white under parts and the flat purple and green of its upper parts. It has been recorded from McDonald Creek.

Bank Swallow.—*Riparia riparia riparia* (?).—A colony of nests attributed to this small dull-backed swallow with the dark chest band has been found in a cut bank of the Swiftcurrent.

Rough-winged Swallow.—*Stelgidopteryx serripennis*.—The uniformly gray-breasted rough wing has been added to the park list by Mr. Saunders, who found a pair feeding young out of the nest along the Middle Fork of the Flathead at Belton in August, 1915.

Family BOMBYCILLIDAE: Waxwings.

Bohemian Waxwing.—*Bombycilla garrula pallidiceps*.—The northern and larger of the two waxwings of the park, high-crested, fawn-colored birds with red waxlike wing appendages and yellow tail bands, can be distinguished not only by size but by its yellow and white wing markings. It has been found at Granite Park in summer and in other parts of the park in fall and winter, when large flocks are to be seen.

Cedar Waxwing.—*Bombycilla cedrorum*.—The familiar cedar bird of the east nests in the lower levels of the park.

Family LANIIDAE: Shrikes.

White-rumped Shrike.—*Lanius ludovicianus excubitorides*.—The gray shrike with black eye stripe and strikingly black and white marked wings and tail has been recorded from the vicinity of St. Mary Lake.

Family VIREONIDAE: Vireos.

Red-eyed Vireo.—*Vireosylva olivacea*.—This gray-capped greenish bird is added to the park list by Mr. Saunders, who writes that he has seen it in the cottonwoods of Lake McDonald.

Western Warbling Vireo.—*Vireosylva gilva swainsonii*.—The low warbling song of this inconspicuous leaf-colored bird with the white line over the eye may often be heard from the willow thickets in passing.

Cassin Vireo.—*Lanivireo solitarius cassini*.—This vireo with the white eye ring has been seen by Mr. Saunders between Gunsight and St. Mary Lake and on the Iceberg Lake Trail.

Family MNIOTILTIDAE: Wood warblers.

Black and White Warbler.—*Mniotilta varia*.—This black and white striped creeper has been seen at Lake McDonald.

Mountain Orange-crowned Warbler.—*Vermivora celata orestera*.—The dull olive-green, orange-crowned warblers have been seen in flocks during the fall migration on the Kootenai Trail and at Lake McDonald.

Yellow Warbler.—*Dendroica aestiva aestiva*.—The rufous streaking of the yellow under parts of this familiar warbler identify it wherever seen in the brushy lower edges of the park.

Audubon Warbler.—*Dendroica auduboni auduboni*.—This conspicuous warbler with bright yellow throat, crown patch, and rump, and black, white, and yellow under parts is one of the commonest birds of the park forests.

Townsend Warbler.—*Dendroica townsendi*.—The handsome Townsend, with black head strikingly marked with yellow, presumably breeds in the park, and may be seen in wandering flocks during the fall migration.

Grinnell Water-thrush.—*Seiurus noveboracensis notabilis*.—The water-thrush, a dark-brown bird streaked below, which walks along the muddy borders of lakes and streams tilting its tail as it hunts for food, is recorded from St. Mary Lake and Lake McDonald.

Macgillivray Warbler.—*Oporornis tolmiei*.—This western representative of the mourning warbler with its slaty head and neck offset by its green back and bright yellow under parts, may be recognized by its slow throaty song "tur-tur-tur-ty-tah," given not only from the willow thickets but from the chaparral of the mountain slopes. While the Audubon is the most abundant warbler of the forests, the Macgillivray is the commonest warbler of the open.

Western Yellow-throat.—*Geothlypis trichas occidentalis*.—This black-masked yellow-breasted little warbler is occasionally heard giving its characteristic "witch-a-weé, witch-a-weé, witch-a-weé," near Glacier Park Hotel, and from the brushy borders of Lake McDermott, the Swiftcurrent, and St. Mary, in all of which places it undoubtedly breeds.

Long-tailed Chat.—*Icteria vireus longicauda*.—The large yellow-breasted olive-backed chat has been reported by Prof. Kretzmann from Cut Bank and McDonald Valleys in late July and early August.

Pileolated Warbler.—*Wilsonia pusilla pileolata*.—This jaunty little black-capped golden warbler has been found in thickets in a variety of places in the park, and one has been seen carrying food at Many Glacier Hotel.

American Redstart.—*Setophaga ruticilla*.—This handsome warbler, the male of which is black with salmon or orange patches, and the female and immature of which are grayish olive instead of black, and lemon yellow instead of salmon or orange, has been met with in a number of places along lake and stream borders.

Family MOTACILLIDAE: Wagtails.

American Pipit.—*Anthus spinoletta rubescens*.—The dark-brown pipit, with a band of streaking across the chest, walks and tilts its tail like a water-thrush, but its outside tail feather is largely white, and it is found on the timber-line slopes with the ptarmigan and rosy finch, though more generally seen than either of its associates.

Family CINCLIDÆ: Dippers.

Northern Water Ouzel; Dipper.—*Cinclus mexicanus unicolor*.—The slate-gray, short-tailed water ouzel, with a wrenlike bob that gives it the name of dipper, is found nesting in the park beside foaming waterfalls, and seen flying low over rushing mountain streams.

Family MIMIDÆ: Mockingbirds, catbirds, etc.

Catbird.—*Dumetella carolinensis*.—The familiar catbird with dark slaty body, black crown, and long much-rounded tail, has been recorded from St. Mary Lake and some of the low valleys of the park.

Family TROGLODYTIDÆ: Wrens.

Rock Wren.—*Salpinctes obsoletus obsoletus*.—This pale gray wren with a black crescent on its tail has been reported by several observers.

Western House Wren.—*Troglodytes ædon parkmanii*.—The songful little house wren that sings with tail hanging and, sometimes, wings raised, has been reported from the Swiftcurrent Flats and Lake McDonald.

Western Winter Wren.—*Nannus hyemalis pacificus*.—This tiny dark-brown wren, which goes about with tail cocked over its back exploring old logs in dark forests, nests in the park, which it brightens with its gay, tinkling song.

Family CETHIIDÆ: Creepers.

Rocky Mountain Creeper.—*Certhia familiaris montana*.—This brown-streaked little tree-trunk creeper, with long bill decurved to reach bark insects, and long tail sharply pointed to brace with as it rocks up the trees, is one of the few birds living in the dark depths of the forest, and, when quite invisible itself, may be detected by its thin, finely drawn pipe.

Family SITTIDÆ: Nuthatches.

Rocky Mountain Nuthatch.—*Sitta carolinensis nelsoni*.—The bluish-gray nuthatch, with short black-and-white-marked tail, also a bird of the tree trunks, walks head down instead of up, and is much oftener seen than the creeper.

Red-breasted Nuthatch.—*Sitta canadensis*.—The more northern nuthatch, with the reddish-brown under parts and black and white lines below its black crown, is sometimes found with the white-cheeked in the park, and was seen at Lake McDonald in the early fall.

Family PARIDÆ: Titmice.

Long-tailed Chickadee.—*Penthestes atricapillus septentrionalis*.—These gray chickadees, with top of head and throat black, and cheeks solid white, closely resembling the eastern form, while breeding generally in the valleys, after the nesting season are found wandering in families in the deep forest.

Mountain Chickadee.—*Penthestes gambeli gambeli*.—A white line over the eye of the mountain chickadee marks him at a glance, and he is the chickadee commonly heard in the forest. His “Phoe’de-de, phoe’de-de-de,” or “phoe’de-de, phoe’de-de,” being one of the most cheering sounds of the forest.

Hudsonian Chickadee.—*Penthestes hudsonicus hudsonicus*.—A specimen of the uniformly brown-backed Hudsonian chickadee was taken by Dr. Grinnell in 1888, at the St. Mary Lakes.

Chestnut-backed Chickadee.—*Penthestes rufescens rufescens*.—This chickadee, with the top and back of the head hair brown and the back, sides, and flanks dark reddish brown, was apparently seen in the dense forest on the edge of Lake McDonald, in 1917, and by Mr. Saunders, August 5, 1915.

Family SYLVIIDAE: Kinglets, etc.

Western Golden-crowned Kinglet.—*Regulus satrapa olivaceus*.—This tiny olive-greenish bird, is crown marked with black, yellow, and orange, has been seen both on the east side of the park and at Lake McDonald, where it was found after the breeding season going about with a flock of chickadees.

Ruby-crowned Kinglet.—*Corthylio calendula calendula*.—This little bird, with bright red crown patch, is the kinglet of the park, and his loud rippling song may frequently be heard in the firs and spruces.

Family TURDIDAE: Thrushes, solitaires, bluebirds, etc.

Townsend Solitaire.—*Myadestes townsendi*.—This remarkable songster of the mountains can sometimes be seen near Many Glacier Hotel and Going-to-the-Sun Chalets, where it apparently nests, and may be recognized by its gray body, very short bill, and, in flight, by a light line down the wing.

Willow Thrush.—*Hylocichla fuscescens salicicola*.—The uniform olive-brown upper parts and the pale buffy chest with triangular spots identify this thrush of the willows, the western form of the veery, whose mysterious, beautiful song has suggested descending “silver rings.”

Olive-backed Thrush.—*Hylocichla ustulata swainsoni*.—The Swainson, while also uniformly tinted above, has a bright buffy chest, marked more heavily with black, and is especially recognized by its buffy eye ring and cheeks. Its song, which will often be heard in the park when it can not be seen, resembles that of the hermit thrush, but can be distinguished from it by its ascending cadences and rapid rendering.

Audubon Hermit Thrush.—*Hylocichla guttata auduboni*.—The reddish-brown tail of the Audubon distinguishes it at a glance when it is seen, and when heard, as it may be in the higher parts of the park, its song may be recognized by its descending, slowly uttered serene cadences.

Western Robin.—*Planesticus migratorius propinquus*.—Robins nest familiarly at Many Glacier and Glacier Park Hotels but where hotels fail them accept the shelter proffered by the forest.

Northern Varied Thrush.—*Ixoreus naevius meruloides*.—The robin-like varied thrush, with a dark necklace across its rusty chest, may be found in a few of the most secluded parts of the park, but it is so rarely seen that its notes should be listened for—two remarkable single notes which make up its famous song, one a split, vibrant note, and the other a long swelling note whose quality places the thrush in the ranks of the foremost musicians of the forest.

Mountain Bluebird.—*Sialia currucoides*.—Bluebirds nest at Glacier Park and at Many Glacier Hotels, and if bird boxes were provided might easily be induced to add their charm of color and voice to the chalets in other parts of the park.

RULES AND REGULATIONS.

GENERAL REGULATIONS.

(In effect Apr. 15, 1918.)

The following rules and regulations for the government of the Glacier National Park are hereby established and made public, pursuant to authority conferred by the acts of Congress approved May 11, 1910 (36 Stat., 354), and August 22, 1914 (38 Stat., 699):

1. *Preservation of natural features.*—The destruction, injury, or defacement in any way of the public property, or the trees, vegetation, rocks, minerals, animal and bird or other life, or other natural conditions and curiosities in the park is prohibited.

2. *Camping.*—No camp will be made along roads except at designated localities. Blankets, clothing, hammocks, or any other article likely to frighten teams must not be hung near the road.

Many successive parties camp on the same sites during the season; therefore camp grounds must be thoroughly cleaned before they are abandoned. Tin cans, bottles, cast-off clothing, and all other débris must be placed in garbage cans or pits provided for the purpose. When camps are made in unfrequented localities where pits or cans may not be provided, all refuse must be burned or hidden where it will not be offensive to the eye.

Campers may use dead or fallen timber only for fuel.

3. *Fires.*—Fires constitute one of the greatest perils to the park; they must not be kindled near trees, dead wood, moss, dry leaves, forest mold, or other vegetable refuse, but in some open space on rocks or earth. Should camp be made in a locality where no such open space exists or is provided, the dead wood, moss, dry leaves, etc., must be scraped away to the rock or earth over an area considerably larger than that required for the fire.

Fires no longer needed must be completely extinguished, and all embers and bed smothered with earth or water, so that there remains no possibility of reignition.

Especial care must be taken that no lighted match, cigar, or cigarette is dropped in any grass, twigs, leaves, or tree mold.

4. *Hunting.*—The park is a sanctuary for wild life of every sort and no one may frighten, hunt or kill, wound or capture any bird or wild animal in the park except dangerous animals when it is necessary to prevent them from destroying life or inflicting injury.

The outfits, including guns, traps, teams, horses, or means of transportation used by persons engaged in hunting, killing, trapping, ensnaring, or capturing birds or wild animals, or in possession of game killed on the park lands under circumstances other than prescribed above, must be taken up by the superintendent and held subject to the order of the Director of the National Park Service, except in cases where it is shown by satisfactory evidence that the outfit is not the property of the person or persons violating this regulation, and the actual owner was not a party to such violation. Firearms will be permitted in the park only on written permission of the superintendent. Visitors entering or traveling through the park to places beyond must, at entrance, report and surrender all firearms, traps, nets, seines, or explosives in their possession to the first park officer and in proper cases may obtain his written leave to carry them through the park sealed.

Note: The foregoing regulation is in effect a declaration of the law on this subject contained in section 4 of the act of Congress approved August 22, 1914 (38 Stat., 700) accepting cession by the State of Montana of exclusive jurisdiction over Glacier National Park, wherein among other things it is provided that: Possession within said park of the dead bodies, or any part thereof, of any wild bird or animal shall be prima facie evidence that the person or persons having the same are guilty of violating this Act.

This act by its terms applies to all lands within the park, whether in public or private ownership.

5. *Fishing*.—Fishing is permitted with hook and line only, and never for profit or merchandise. Fishing in particular water may be suspended, or the number of fish that may be taken by one person in any one day from the various streams or lakes may be regulated by the superintendent. All fish hooked less than 8 inches long shall be carefully handled with moist hands and returned at once to the water if not seriously injured. Fish retained should be killed. Twenty fish shall constitute the limit for a day's catch.

6. *Private operations*.—No person will be permitted to reside permanently, engage in any business, operate a moving-picture camera, or erect buildings upon the Government lands in the park without permission in writing from the Director of the National Park Service, Washington, D. C. Applications for such permission may be addressed to the director or to the superintendent of the park.

7. *Saloons, gambling, etc.*.—No drinking saloon or barroom will be permitted in the park. Gambling in every form, or the operation of gambling devices, whether for merchandise or otherwise, is prohibited.

8. *Advertisements*.—Private notices or advertisements shall not be posted or displayed within the park, excepting such as the park superintendent deems necessary for the convenience and guidance of the public.

9. *Mining claims*.—The location of mining claims is prohibited on Government lands in the park.

10. *Patented lands*.—Owners of patented lands within the park limits are entitled to the full use and enjoyment thereof. The boundaries of such lands, however, must be determined and marked and

defined so that they may be readily distinguished from the park lands. While no limitations or conditions are imposed upon the use of private lands so long as such use does not interfere with or injure the park, private owners must provide against trespass by their live stock upon the park lands, and all trespasses committed will be punished to the full extent of the law. Stock may be taken over the park lands to patented private lands with the written permission and under the supervision of the superintendent, but such permission and supervision are not required when access to such private lands is had wholly over roads or lands not owned or controlled by the United States.

11. *Grazing.*—The running at large, herding, or grazing of live stock of any kind on the Government lands in the park, as well as the driving of live stock over same, must be avoided, except where authority therefor has been granted by the superintendent. Live stock found improperly on the park lands may be impounded and held until claimed by the owner and the trespass adjusted.

12. *Concessioners.*—All persons, firms, or corporations holding concessions in the park must keep the grounds used by them properly policed and maintain the premises in a sanitary condition to the satisfaction of the superintendent. No concessioner shall retain in his employment a person whose presence in the park may be deemed by the superintendent subversive of good order and management of the park.

All concessioners will require each of their employees to wear a metal badge with a number thereon, or other mark of identification, the name and the number corresponding therewith, or the identification mark, being registered in the superintendent's office. These badges must be worn in plain sight on the hat or cap.

13. *Dogs and cats.*—Cats are not permitted on the Government lands in the park and dogs only to those persons passing through the park to the territory beyond, in which instances they must be kept tied while crossing the park.

14. *Dead animals.*—All domestic or grazed animals that may die on the Government lands in the park, at any tourist camp, or along any of the public thoroughfares, must be buried immediately by the owner or person having charge of such animals, at least 2 feet beneath the ground and in no case less than one-fourth mile from any camp or thoroughfare.

15. *Travel on trails.*—Pedestrians on trails, when saddle or pack animals are passing them, must remain quiet until the animals have passed.

Persons traveling on the trails of the park, either on foot or on saddle animals, must not make short cuts, but must confine themselves to the main trails.

16. *Travel—General.*—(a) Saddle horses, pack trains, and horse-drawn vehicles have right of way over motor-propelled vehicles at all times.

(b) On sidehill grades throughout the park motor-driven vehicles must take the outer side of the road when meeting or passing vehicles of any kind drawn by animals; likewise, freight, baggage, and heavy camping outfits must take the outer side of the road on side-

hill grades when meeting or passing passenger vehicles drawn by animals.

(c) Wagons used in hauling heavy freight over the park roads must have tires not less than 4 inches in width.

(d) All vehicles must be equipped with lights for night travel. At least one light must be carried on the left front side of horse-drawn vehicles in a position such as to be visible from both front and rear.

17. *Miscellaneous.*—(a) Campers and others must not wash clothing or cooking utensils in the waters of the park, or in any way pollute them; or bathe in any of the streams near the regularly traveled thoroughfares in the park without suitable bathing clothes.

(b) Stock must not be tied so as to permit their entering any of the streams of the park. All animals should be kept a sufficient distance from camping grounds not to litter the ground and make unfit for use the area which may be used later as tent sites.

(c) Campers and all others, save those holding licenses from the Director of the National Park Service, are prohibited from hiring their horses, trappings, or vehicles to tourists or visitors in the park. No pack trains will be allowed in the park unless in charge of a duly registered guide.

(d) All complaints by tourists and others as to service, etc., rendered in the park should be made to the superintendent, in writing, before the complainant leaves the park. Oral complaints will be heard daily during office hours.

18. *Fines and penalties.*—Persons who render themselves obnoxious by disorderly conduct or bad behavior will be subjected to the punishment hereinafter prescribed for violation of the foregoing regulations, or they may be summarily removed from the park by the superintendent and not allowed to return without permission in writing from the Director of the National Park Service or the superintendent of the park.

Any person who violates any of the foregoing regulations shall be deemed guilty of a misdemeanor, and shall be subject to a fine of not more than \$500 or imprisonment not exceeding six months, or both, and be adjudged to pay all costs of the proceedings.

AUTOMOBILE AND MOTORCYCLE REGULATIONS.

Pursuant to authority conferred by the acts of Congress approved May 11, 1910 (36 Stat., 354), and August 22, 1914 (38 Stat., 699), the following regulations governing the admission of automobiles and motorcycles into the Glacier National Park are hereby established and made public:

1. *Entrances.*—Automobiles and motorcycles may enter and leave the park by the western or Belton entrance, or by any of the several entrances on the east side of the park. There is no road connecting the Glacier Park station entrance on the east side with the Belton entrance on the west side.

2. *Automobiles.*—The park is open to automobiles operated for pleasure, but not to those carrying passengers who are paying, either directly or indirectly, for the use of machines (excepting, however, automobiles used by park concessioners).

Careful driving is demanded of all persons using the roads.

The Government is in no way responsible for any kind of accident.

3. *Motorcycles*.—Motorcycles are admitted to the park under the same conditions as automobiles and are subject to the same regulations, as far as they are applicable.

4. *Hours*.—Automobiles will not be permitted to enter or leave the park or to use the park roads before 6.30 a. m. or after 10.30 p. m., except in case of emergency.

5. *Permits*.—The permit must be secured at the ranger station where the automobile enters. It is good for the entire season, expiring on December 31 of the year of issue, but east side and west side permits are good only in the section of the park for which they are issued. The permit must be conveniently kept so that it can be exhibited to park rangers on demand. Each permit must be exhibited to the checking ranger for verification on exit from the park.

6. *Fees, east-side road system*.—The fees for an automobile or motorcycle permit are \$2.50 and \$1, respectively.

West-side road system.—The fee for automobile permits is 50 cents; no charge for motorcycles. All fees are payable in cash only.

7. *Distance apart; gears and brakes*.—Automobiles while in motion must not be less than 50 yards apart, except for purpose of passing, which is permissible only on comparative levels or on slight grades. All automobiles, except while shifting gears, must retain their gears constantly enmeshed. The driver of each automobile will be required to satisfy the ranger issuing the permit that all parts of his machine, particularly the brakes and tires, are in first-class working order and capable of making the trip; and that there is sufficient gasoline in the tank to reach the next place where it may be obtained. The automobile must carry at least one extra tire.

8. *Speeds*.—Speed is limited to 8 miles per hour ascending and descending grades and when approaching sharp curves. On good roads, with straight stretches, and when no team is nearer than 200 yards, speed may be increased to not exceeding 25 miles per hour.

9. *Horns*.—The horn will be sounded on approaching curves or stretches of road concealed for any considerable distance by slopes, overhanging trees, or other obstacles, and before meeting or passing other machines, riding or driving animals, or pedestrians.

10. *Lights*.—All automobiles must be equipped with head and tail lights, the headlights to be of sufficient brilliancy to insure safety in driving at night, and all lights must be kept lighted after sunset when automobile is on the roads. Headlights must be dimmed when meeting other automobiles or horse-drawn vehicles.

11. *Muffler cut-outs*.—Muffler cut-outs must be closed while approaching or passing riding horses, horse-drawn vehicles, hotels, camps, or checking stations.

12. *Teams*.—When teams, saddle horses, or pack trains approach, automobiles will take the outer edge of the roadway, regardless of the direction in which they may be going, taking care that sufficient room is left on the inside for the passage of vehicles and animals. Teams have the right of way, and automobiles will be backed or otherwise handled as may be necessary so as to enable teams to pass with safety. In no case must automobiles pass animals on the road at a speed greater than 8 miles an hour.

13. *Accidents; stop-overs.*—Automobiles stopping over at points inside the park, or delayed by breakdowns or accidents of any other nature, must be immediately parked off the road, or, where this is impossible, on the outer edge of the road.

14. *Fines and penalties.*—Violation of any of the foregoing regulations will be punishable by revocation of automobile permit, or by immediate ejection from the park, or by a fine not to exceed \$500, or six months' imprisonment, or by any combination of these penalties, and be cause for refusal to issue a new automobile permit to the offender without prior sanction in writing from the Director of the National Park Service.

15. *Reduced engine power, gasoline, etc.*—Due to the high altitude of the park roads, ranging between 3,000 and 5,000 feet, the power of all automobiles is much reduced, so that a leaner mixture and about 40 per cent more gasoline will be required than for the same distance at lower altitudes. Likewise, one gear lower will generally have to be used on grades than would have to be used in other places. A further effect that must be watched is the heating of the engine on long grades, which may become serious unless care is used. Gasoline can be purchased at regular supply stations as per posted notices.

PANORAMIC VIEW.

A panoramic view of Glacier National Park, 18½ by 21 inches, scale 3 miles to the inch, may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D. C. Price, 25 cents.¹

This view is based on accurate surveys and gives an excellent idea of the configuration of the surface as it would appear to a person flying over it. The meadows and valleys are shown in light green, the streams and lakes in light blue, the cliffs and ridges in combinations of colors, and the roads in light brown. The lettering is printed in light brown, which is easily read on close inspection, but which merges into the basic colors when the sheet is held at some distance.

MAP.

A topographic map of Glacier National Park (size 32 by 28½ inches) on the scale of 2 miles to the inch may be purchased from the Director of the Geological Survey, Washington, D. C., for 25 cents.¹

LITERATURE.

GOVERNMENT PUBLICATIONS.

Government publications on Glacier National Park may be obtained as indicated below. Separate communications should be addressed to the officers mentioned.

DISTRIBUTED FREE BY THE NATIONAL PARK SERVICE.

The following publications may be obtained free on written application to the Director of the National Park Service, Washington,

¹ May be purchased by personal application at the registration offices of the park at Glacier Park Hotel (eastern entrance) and at the office of the superintendent of the park at the western entrance, Belton, Mont.

D. C., or by personal application at the registration offices of the park at Glacier Park Hotel (eastern entrance) and at the superintendent's office at Belton (western entrance):

Glimpses of our National Parks, 48 pages. Glacier National Park on pp. 34-37.

Contains descriptions of the most important features of the principal national parks.

Automobile road map of Glacier National Park.

Shows the park road system, trail system, hotels, chalets, garages, superintendent's office, routes to the park, etc. Also contains suggestions for motorists. Printed in three colors.

Map of National Parks and National Monuments.

Shows location of all the national parks and monuments, and all railroad routes to these reservations.

SOLD BY THE SUPERINTENDENT OF DOCUMENTS.

The following publications may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., at the prices given. Remittances should be made by money order or in cash:

National Parks Portfolio, by Robert Sterling Yard, chief, educational division, National Park Service. 1917. 260 pages, including 270 illustrations. Pamphlet edition, loose in flexible cover, 35 cents; book edition, containing same material securely bound in cloth, 55 cents.

Contains nine sections, each descriptive of a national park and one larger section devoted to other national parks and monuments.

Origin of the scenic features of Glacier National Park, by M. R. Campbell, 42 pages, including 25 illustrations, 15 cents.

This pamphlet contains a general account of the forces that have caused the development of the mountain ranges, the valleys, and lakes of Glacier National Park.

Glaciers of Glacier National Park, by W. C. Alden, 48 pages, including 30 illustrations, 15 cents.

This publication contains descriptions of the principal features of the larger glaciers in the park.

Some lakes of Glacier National Park, by M. J. Elrod, 32 pages, including 19 illustrations, 10 cents.

This pamphlet contains a description of some of the principal lakes, with special reference to the possibility of stocking the lakes with fish.

Glacier National Park—a popular guide to its geology and scenery, by M. R. Campbell (Bulletin 600, U. S. Geological Survey), 54 pages, 13 plates, including map, 30 cents.

Wild Animals of Glacier National Park; The Mammals, by Vernon Bailey; **The Birds**, by Florence Merriam Bailey; 210 pages, 94 text figures, 37 plates, including map, 50 cents.

Describes the birds and animals both popularly and scientifically; tells how the visitor may identify them.

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ALLEN, E. F. A Guide to the National Parks of America, 1918. 338 pages.

BOWMAN, I. Forest Physiography, New York, 1911. Ill. Maps.

BRUCE, JAMES. University and historical addresses. 1913. 433 pp.

National Parks—the need of the future on pp. 389-406.

COLEMAN, A. P. Glacier National Park, in "Glaciers of the Rockies and Selkirks," Ottawa, Gov. Print, 1915. Ill. Maps.

DUMBELL, K. E. M. California and the Far West, 1914. 198 pp.

Glacier on pp. 23-36

- HOLTZ, MATHILDE EDITH, and BEMIS, KATHERINE ISABEL. Glacier National Park, Its Trails and Treasures. 1917. 262 pp., illustrated.
- JAMES, G. W. "Our American Wouderlands," Chicago, 1915. Ill. Glacier National Park Chap. XXII.
- JOHNSON, C. "Highways of Rocky Mountains," Mountains and Valleys in Montana, pp. 194-215. Ill.
- MARSHALL, L. Seeing America, Philadelphia, 1916. Ill. Map. (Chap. XXIII; Among the American Alps, Glacier National Park, pp. 193-200.)
- MCCLINTOCK, W. The Old North Trail, 539 pages, illustrations, maps. Macmillan Co., 1910.
- MILLS, ENOS A. Your National Parks. 532 pp., illustrated. Price \$2.50. Houghton Mifflin Co., 1917. Glacier National Park on pp. 148-160, 475-487.
- RINEHART, MARY ROBERTS. Through Glacier Park. The Log of a Trip with Howard Eaton. 1916. 92 pp., illustrated.
- My Country 'Tish of Thee.
- SANDERS, H. F. Trails through Western Woods. 1910. 310 pp., illustrated.
- History of Montana, vol. 1, 1913. 847 pp. Glacier National Park on pp. 685-689.
- The White Quiver. Illustrated, 344 pages. Duffield & Co., New York, 1913.
- SCHULTZ, JAMES WILLARD. Blackfeet Tales of Glacier National Park. 1916. 242 pp., illustrated.
- STEELE, DAVID M. Going Abroad Overland. 1917. 198 pp., illustrated. Glacier National Park on pp. 92-101.
- STIMSON, HENRY L. The Ascent of Chief Mountain. In "Hunting in Many Lands," edited by Theodore Roosevelt and George B. Grinnell, pp. 220-237. 1895.
- WOOD, R. K. Glacier National Park in "The Tourist's Northwest," New York, 1916. Ill.; map; pp. 367-387.
- YARD, ROBERT STERLING. The Top of the Continent. 1917. 244 pp., illustrated. Glacier National Park on pp. 87-115.
- The Book of the National Parks, elaborately illustrated. Price \$3.00. Scribners, 1919. Chapter on Glacier National Park.

OTHER NATIONAL PARKS.

The circulars containing information about national parks listed below may be obtained free of charge by writing to the Director of the National Park Service, Washington, D. C.

Yellowstone National Park.
Mount Rainier National Park,
Crater Lake National Park.
Mesa Verde National Park.
Yosemite National Park.

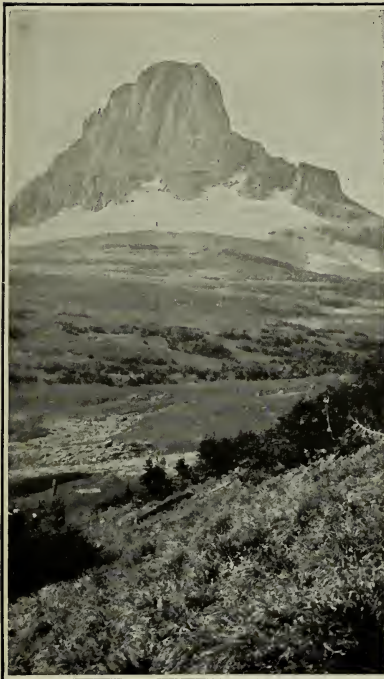
The Hot Springs of Arkansas.
Sequoia and General Grant National
Parks.
Wind Cave National Park.
Rocky Mountain National Park.

NATIONAL MONUMENTS.

The following publications relating to the national monuments may be obtained free of charge by writing to the Director of the National Park Service, Washington, D. C.:

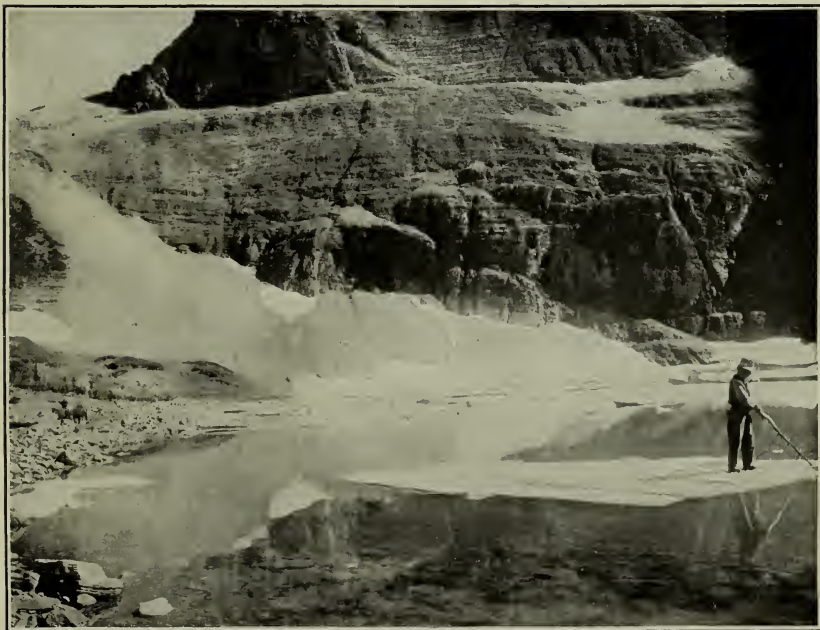
Casa Grande National Monument.
The National Monuments.

Contains brief descriptions of the national monuments, administered by the Department of the Interior, the Department of Agriculture, and the War Department (excepting Casa Grande, Verendrye, and Katmai National Monuments).

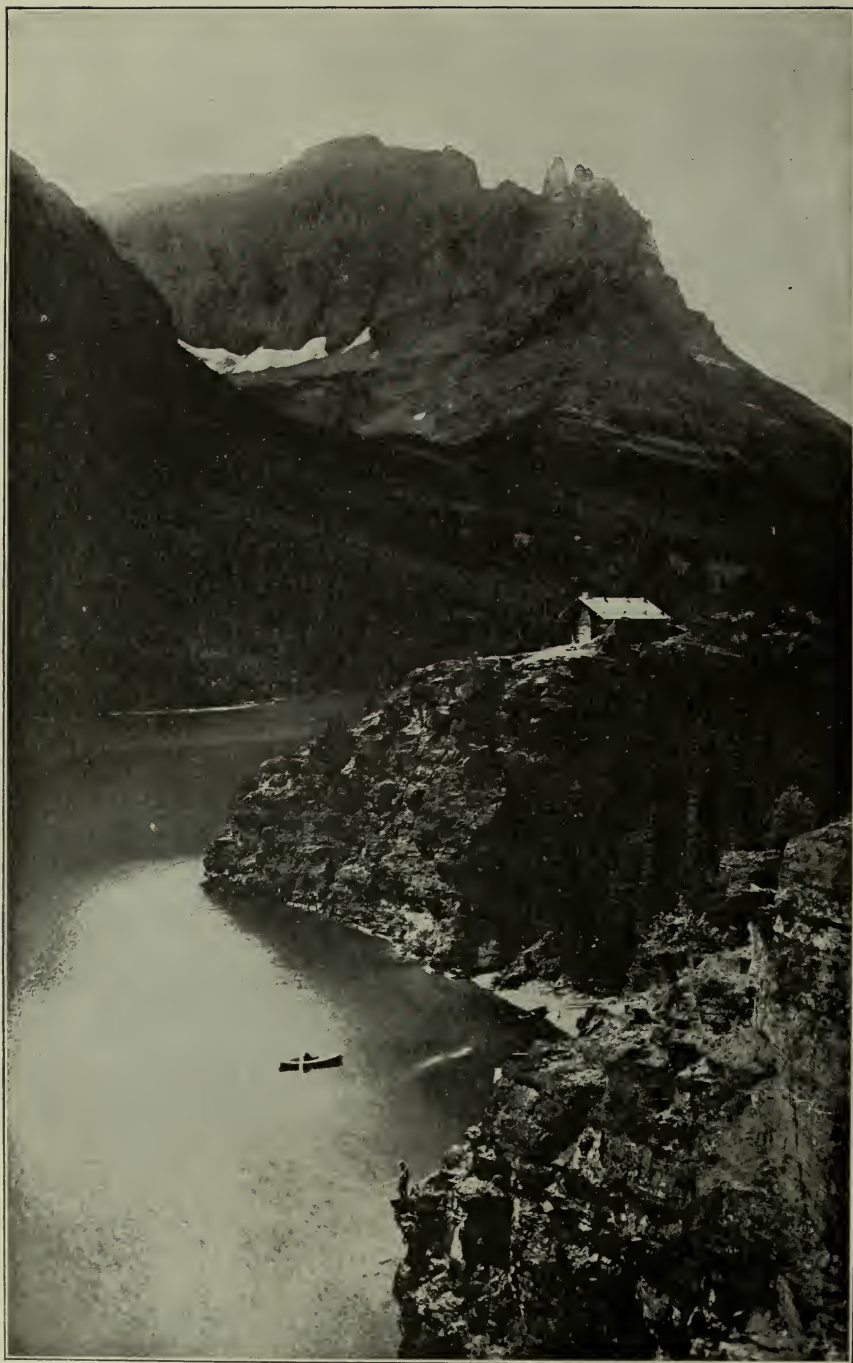


Looking across Logan Pass at Clements Mountain and Clements Glacier. The new Logan Pass Trail crosses the Continental Divide through Logan Pass.

On top of the Garden Wall overlooking Grinnell Glacier, Mount Gould in the distance. Reached by new foot path from the Granite Park Chalets.



Iceberg Lake in August.



ST. MARY LAKE AND LITTLE CHIEF MOUNTAIN.

From Going-to-the-Sun Chalets. Cliffs of argillite. Hanging Valley in the distance.
Photograph by Kiser, furnished by Great Northern Railroad.