Welcome to Waterton/Glacier International Peace Park - a special place which is part of our heritage and here for you and future generations to enjoy. The International Peace Park exemplifies the friendship, peace and co-operation that Canada and the United States are fortunate to share. It is an example to the world of how two countries can work together to protect an increasingly scarce resource - wilderness. As you experience the park, reflect on the importance of protecting these resources and how this example of international co-operation can help the world address serious global environmental problems.

This year at Waterton, with a look to the future, we are starting a review of the park management plan. A national park faces many demands and we are looking for your ideas on how we should address these concerns and ensure that future generations can enjoy Waterton as we do today. Ask our staff. We would be glad to tell you how you can be involved!

Whether you are here for the day or a longer holiday, there is lots to do. Our townsite has all the services you need in a beautiful setting. Wildlife such as deer and bighorn sheep can be seen as you drive along our parkways or walk along our trails. Whether you are playing golf, tennis, hiking in the backcountry or just relaxing in the sun, park staff are working hard to make your stay an enjoyable one.

Have a wonderful holiday and do not hesitate to let us know if we can help in making your stay here the best possible.
Days of Peace and Friendship
July 1 - 4

Tired of hearing about world strife, wars, environmental problems...? Does it seem like nothing positive ever happens in world relations? Well look again!! This is your chance to celebrate some long-standing good news in international relations and environmental conservation.

Peace Park. Several months of lobbying and cooperation informally for years in areas of wildlife management, fire suppression, landscape protection and transportation links. This fact didn't escape Alberta and Montana Rotarians so, in 1932, they resolved that the two parks would be even better joined as the world's first International Peace Park.

Fifty-three years later, invitations were sent out from both parks' superintendents requesting a diverse group of interested citizens to join them on the First Annual Days of Peace and Friendship teepee set up in Waterton Park (townsite). A guest Blackfoot interpreter from Head-Smashed-In Buffalo Jump will be on hand from 1 to 2:30 p.m. to answer questions and give a special talk every half hour on native customs and techniques for "Living Off the Land".

The fourth in a series of ever popular commemorative posters featuring park wildlife and wildflowers will also be on sale this year. You can spend a relaxing day sightseeing, picnicking, camping, bicycling or doing any number of other activities in some of the best scenery in the world!!

Our Peace Park is not a mere symbol but stands as a real example of conservation and cooperation in this world of shared responsibilities. We enjoy working together to solve our common problems and better manage this great natural area. If that feeling is as infectious as the flu, the world would be a different place. Help us take the next step and spread the word around. On July 2 or 3, bring a friend and come help us celebrate.

Visitor Centers

Glacier Park Headquarters—Open weekdays 8 a.m. to 4:30 p.m. Phone 406-888-5441.

Apgar Visitor Center—Open 8 a.m. to 4:30 p.m. from May 26 through June 15. Extended hours after June 16. Open 8 a.m. to 8 p.m. July 1 through Labor Day. Open 8 a.m. to 4:30 p.m. September 4 through November 17. Located in Apgar Village, 2 miles from West Glacier. Phone 406-888-5441, extension 313.

St. Mary Visitor Center—Open 9 a.m. to 5 p.m. May 26 through June 16. Open 8 a.m. to 9 p.m. June 16 through Labor Day. Open 9 a.m. to 5 p.m. September 3 through September 30. Located at the east entrance of the park near St. Mary, MT. Phone 406-732-4424.

Logan Pass Visitor Center—In conjunction with the opening of the Going-to-the-Sun Road, Open 9 a.m. to 6 p.m. through Labor Day. Open 9 a.m. to 5 p.m. September 3 through September 30. Located at the summit of the Going-to-the-Sun Road. No phone service available.

Many Glacier Ranger Station—406-732-4493, Open 8:30 a.m. to 5 p.m. Waterton Information Centre—Open 8 a.m. to 9 p.m. Located in Waterton townsite. 403-859-2445.

Note: Waterton and Glacier must charge separate entrance fees.

Permits

Permits are issued on a "first-come, first-served" basis. In Glacier National Park they must be obtained in person no more than 24 hours in advance of your trip. In Waterton, they must be obtained on the day of your trip or, if starting before the Information Centre opens, after 6 p.m. the day before your trip.

*Never hike or climb alone. Solo hiking leaves no margin for error.*

*"Climbing the peaks in the parks is dangerous. Loose, crumbly, sedimentary rocks provide unstable handholds and poor footing. Climbers are requested to register at a ranger station or visitor center prior to starting their climb.*

*Read bear and weather information before hiking.*

Swimming

The day might be warm, but no matter how refreshing the water feels, it is always colder than you think. Sudden plunging into the water and staying there for long periods of time might lower the body temperature and cause hypothermia. Never swim alone, watch each other for skin tones that look blue and listen for slurring of words when people talk. Children, even though they don't fully submerge their bodies, can become chilled just by playing in the water.
Access for All

A full listing of facilities and programs accessible to disabled visitors in Glacier National Park is available at the Apgar Visitor Center, St. Mary Visitor Center and entrance stations.

FOR THE HEARING IMPAIRED:
1. Some texts and written descriptions of talks and walks in Glacier are available. Check the availability of some tactile exhibits for visually-impaired at the Visitor Centers and some interpretive programs. Ask the naturalist before the program begins.

2. Limited sign language interpretation is available by request. Check at Apgar visitor center for availability.

3. Park information is available by TDD at (406) 888-5790.

FOR THE VISUALLY IMPAIRED:
1. A tape recording of the park brochure is available on request at Apgar and St. Mary Visitor Centers.

2. Small scale relief map at Apgar and St. Mary Visitor Centers.

3. Tactile nature items at St. Mary and Apgar Visitor Centers.

FOR THE MOBILITY IMPAIRED:
1. The Apgar Visitor Center and St. Mary Visitor Center are accessible by wheelchair.

2. The Trail of the Cedars is accessible by wheelchair; ask at the visitor center for more details.

3. A wheelchair for temporary loan is available at the Apgar Visitor Center.

4. The International Peace Park Pavilion, and Heritage Centre are open to mobility-impaired visitors in Waterton Lakes National Park. The Linnet Lake Trail near the townsite has been paved and made wheelchair accessible.

5. Apgar "bike path" (asphalt)

6. Evening slide and campfire programs in campgrounds.

Hypothermia

By definition, hypothermia is the "rapid, progressive mental and physical collapse accompanying the chilling of the inner core of the human body." This happens when the body's core temperature drops to 94°F. or below — at 89°F., death can occur.

Prevention
- stay dry
- stay out of wind (robs heat)
- understand cold — water held against skin lowers temperature
- use water resistant gear before you come wet

Warning Signs
- uncontrolled shivering
- slow, slurred speech

Is It Safe to Drink?

The parks' wildlife carry many organisms that may cause disease in humans. One of these, Giardia lamblia, is transmitted by water in lakes and streams. This protozoan causes the disease giardiasis, which irritates and initiates the digestive system. Severe diarrhea and nausea can result and persist for several weeks. If you have these symptoms, contact your physi-

Knapweed Target of Control

The battle to eliminate knapweed resembles guerilla warfare. Knapweed is a highly competitive plant. A single plant can produce up to 25,000 seeds which can remain dormant in the soil for seven years. Knapweed also releases a growth inhibiting toxin which inhibits development of other plants nearby. Uncontrolled, knapweed will crowd out native plants and develop large stands. Since it is an exotic plant, it has no natural controls here (i.e. nothing eats it). This means it replaces native plants used by a variety of wildlife species.

After being accidentally introduced in 1900, it has spread rampantly throughout western Canada and the northwestern United States dominating dry, disturbed sites along roadsides and adjacent grasslands. Despite a variety of control measures begun in 1979, knapweed continues to be a problem for resource managers. As long as wind, water, animals, and people are present to spread the seed, knapweed threatens to become established. With some progress being made to control this aggressive, competitive plant, it is hoped that eventually knapweed will be eradicated so that the natural balance will be restored in Waterton/Glacier International Peace Park.

Translations

Translations in German, Dutch, French, Spanish and Japanese of the park map/brochure are available at visitor centers in Glacier.

Crimestoppers

Glacier National Park is a member of the Crimestoppers Program. Should you have any information relating to a crime that occurred in the park, please contact a park ranger at 406-888-5441 or if you wish to remain anonymous call 406-257-8477 collect. Please help us control crime within the park; in Waterton, call 403-859-2244.

Keep all valuables out of sight, especially at night. During interpretive programs and while you are away from camp, keep them locked in a secure place.

Report lost and found items to a ranger immediately.

If you are hiking for the day, carry water obtained from one of the parks' treated water systems. If you plan to camp in the backcountry, please follow the recommendations you receive with your camping permit. The easiest method of effective water treatment is to boil the water for one minute or use an approved filter.

Waterton/Glacier Guide

Published jointly by the Glacier and Waterton National History Associations and the parks' interpretation services for the U.S. National Park Service and Canadian Parks Service.

Edited by
1990 No. 1
June/July/August
G.B. Dunagan
J. Smith

Upper McDonald Creek.

M

an is not himself only . . .

He is all that he sees;

all that flows to him from a

thousand sources. . . .

He is the land, the lift of its

mountain lines, the

reach of its valleys."

—MARY AUSTIN
by: Wayne G. Brewster

Scientists at Glacier National Park have a lot of questions about the wildlife and the habitat of this region. In order to protect the park and its wild inhabitants, they look for answers that may help us to understand the land and the animals better. For instance, how does an elk, a white-tailed deer, or a moose in the North Fork spend the winter? What types of habitats do they prefer? Where do they give birth to their young? How long do they live? What effect do fires like the 1988 Red Bench fire have on them? What effects might timber harvest practices on the adjacent national forest have on their ability to survive and prosper? What influence will the recovering wolf population have on the populations of deer, elk, and moose?

University of Montana research scientists began research projects in the North Fork this winter to try to develop answers to these and other questions. The investigations will involve white-tailed deer, elk, and moose. The project is jointly funded by the U.S. Forest Service, U.S. Fish and Wildlife Service, National Park Service, and University of Montana in cooperation with the Montana Department of Fish, Wildlife, and Parks and British Columbia Ministry of Environment – Wildlife Branch. Field personnel began trapping deer and elk in Glacier National Park during the middle of December. The animals are captured in a device called a modified Clover trap: a small pen that closes when the animal enters and presses a trip wire. The traps are checked daily. When an animal is captured, it is carefully removed from the trap, a radio collar is attached, and the animal is released. The trap design eliminates the need for chemical immobilization, so the risk of injury to the animals and field personnel is reduced. Moose, because of their large size, are captured using techniques that involve darting from the ground or from a helicopter.

Movement of the radio-collared animals will be monitored from the ground and from aircraft with radio telemetry equipment to determine important seasonal habitat areas and distribution. The radio collars are subbed in color and are designed to separate and drop off at about the time that the radio battery life is ending.

The wildlife community in the North Fork is very unusual, with most of its historic big game animals and large predators present. It offers an opportunity to better understand the relationships between different species and to cooperate in the management of a wildlife community that is shared by many jurisdictions and by the governments of two countries.

The information that results from these investigations will have many applications. It will develop long-term monitoring techniques. It will identify key habitats and important use areas as well as changes in habitats due to fire and mountain pine beetle infestation and it will document the responses of the animals to these changes. It will be useful to both Montana and British Columbia in management of their big game populations and understanding the effects of the pioneering wolf population on the ungulate complex. Land management agencies will be better able to evaluate and improve habitat management.

The coordinated investigation offers a rare opportunity to increase understanding of the interactions in a complex system of large predators and large prey animals and may have application to other areas of North America.

**Researching Wildlife**

**DROWNING**

Sudden immersion in cold water (below 80°F) sometimes triggers the "mammalian reflex" which restricts blood circulation to the heart, lungs and brain only. The colder the water, the younger the victim, and the quicker the rescue — better the chance for survival. Victims of cold water drownings have survived after being submerged for over 30 minutes — with no brain damage.

**Precautions**
- don't ford or wade swift-flowing streams
- don't walk/play on slippery rocks or logs
- don't lean over an edge for a drink

**Revival Procedure**
- retrieve victim from water, without danger to yourself
- begin CPR/mouth to mouth immediately (regardless of time victim was in water)
- prevent further body heat loss, but do not re-warm
- drowning victims may look dead — don't let this stop you from attempting to revive them!

- Get professional emergency help. Your safety cannot be guaranteed, so please be informed and use good judgment.

**Causes of Fatalities at Waterton/Glacier (1979-1989)**

<table>
<thead>
<tr>
<th>Cause</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart Attacks</td>
<td>14</td>
</tr>
<tr>
<td>Falls</td>
<td>10</td>
</tr>
<tr>
<td>Drownings</td>
<td>8</td>
</tr>
<tr>
<td>Vehicle Accidents</td>
<td>5</td>
</tr>
<tr>
<td>Bear Attacks</td>
<td>3</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>3</td>
</tr>
</tbody>
</table>

**Medical Services**

There are many doctors that are closer to the park boundaries than the hospitals. Please check at the visitor centers or ranger stations for directory assistance. Many hospitals do not have a doctor on call for them. Please call and inquire if at all possible.

**East Glacier Park Clinic:** Open Monday, Tuesday, Wednesday and Friday, 9:30 a.m. to 12 noon. Please call 406-226-4421 before coming. Located on Main Street.

**Kalispell Regional Hospital:** 310 Sunny View Lane, Kalispell, MT (406-752-5111).

**North Valley Hospital:** Highway 93 South, Whitefish, MT (406-862-2501).

**Cardston Hospital:** Cardston, Alberta, Canada (403-653-4411) or 403-653-3331 (Clinic).

**Pincher Creek Hospital:** Pincher Creek, Alberta, Canada (403-627-3321) or 403-627-3333 (Clinic).

**Glacier County Medical Center:** 892-2nd St. E., Cut Bank, MT (406-973-2251).

**Teton Medical Center:** 915 4 NW, Choteau, MT (406-466-5763).

**BEAUTY HIDES HAZARDS**

Among the beauty of Waterton/Glacier are the swift and cold glacial torrents and deep, icy lakes. Moss-covered rocks and slippery logs line the banks of these unspoiled waterways. Children playing happily among the rocks, avid photographers in search of that "special" shot, and careless boaters, rafters, swimmers and fishermen have fallen victim to these swift-running frigid streams and deep glacial lakes. Please use extreme care as you explore our waters.

**Waterfall at Grinnell Glacier.**

**National Park Service**

**Bicycles**

Wheeled vehicles are restricted to established roadways. They are not allowed on backcountry or nature trails. Mountain bikes are only allowed on specific trails in Waterton. Check at the information bureau.

**Precautions**
- Observe all traffic regulations.
- Keep well to the side of the road.
- Don't ride in single file only.
- Ride only on established roads, bike routes or parking areas.
- Pull off road if four or more vehicles stack up behind you.
- In low visibility (log/darkness) you must have a white light in front and a red reflector on the rear of your bicycle.

Bicycles are prohibited from travel on Going-to-the-Sun Road at certain times of the day because of heavy traffic. The two restricted areas are from Agar Campground to Sprague Creek Campground, and from Logan Creek to Logan Pass during: June 15 through Labor Day from 11:00 a.m. to 4:30 p.m. daily.

Get an early start if you plan to cross Logan Pass — it takes an estimated three hours to ride from Logan Creek to Logan Pass.

**Recommendations**
- Night travel is not recommended.
- Watch for falling rocks and ice on road.
- Drainage grates are treacherous for narrow tires.
- Attach a bright flag on a pole to your bike.
- Wear light-colored clothing to make you visible.

**Bike Campsites**

There are two campgrounds in the Sprague Creek Campground (10 miles northeast of the west entrance) designated for bicyclists' use held for this purpose until 7:00 p.m. Each site can be used by 6 people, with a total capacity of 12 in two sites. Cost is $2.00 per person per night.
International Junior Naturalist Section

Want to be a Junior Naturalist?
If you're between the ages of 6 to 12, why not become a Junior Naturalist? All you need to do is pick up a Junior Naturalist blue card at Waterton through the Mountain and Prairie Newsletter and in Glacier through the "Nature with a Naturalist" paper, available at visitor/information centers.Kids programs are only available in Glacier at the Apgar Visitor Center. Ask the park interpreter who led each program you have attended to sign your blue card. Once you have completed your card, return it to one of the previously mentioned places in either park and exchange it for your official Junior Naturalist certificate!

If you attend programs in BOTH Glacier and Waterton, you will receive a special sticker identifying you as an International Junior Naturalist.

Find and Circle — Word Puzzle Fun!
Circle the names of the following animals in the puzzle. Names may by vertical horizontal or diagonal and, forward or backward. HINT: Look for combinations of letters, eg. "PT" in PTARMIGAN, then cross the animal off the list after you have found it. The uncircled letters that are left over will spell, in order, the place to see all the animals!

**WORDS TO FIND:**
1. BAT
2. BADGER
3. BEAVER
4. BIGHORN
5. COUGAR
6. COYOTE
7. DEER
8. EAGLE
9. ELK
10. FOX
11. GOAT
12. GRIZZLY
13. GROUSE
14. HARE
15. HAWK
16. LYNX
17. MAGPIE
18. MARMOT
19. MOOSE
20. PIKA
21. PORCUPINES
22. PTARMIGAN
23. SKUNK
24. WOLF

**SOLUTION**

**Match the animals!**

Can you match the following list of animals to their clues?

**ANIMAL**

1. PIKA
2. CHIPMUNK
3. BUSHY TAILED woodrat
4. RED SQUIRREL
5. POCKET Gopher
6. SHREW
7. SKUNK
8. BADGER
9. GARTER SNAKE
10. COLUMBIAN GROUND-SQUIRREL

**CLUES:**

A. I live in trees and I eat the seeds from cones.
B. I live in a hole that I dig in the ground and I eat small animals.
C. I live in a hole that I dig and I eat grasses and flowers.
D. I love to spend the morning sunbathing before I go to a small pond to eat frogs and tasty bugs.
E. I live high up in the mountains among the rocks and boulders above treeline.
F. I live underground almost all of the time and am very rarely seen.
G. I am among the smallest of mammals, but I am very fierce and eat more creatures in one day than a lion eats in a month.
H. I have a big, bushy tail and I make a huge nest in rock crevices.
I. I am sometimes seen scurrying about at the edge of trails, I have a stripe on my head that crosses over my eye.
J. I eat bugs, delicious worms and the eggs of birds. If you get too close to me, watch out!

**CORRECT SOLUTION (UPSIDE DOWN):**

- PIKA: 6 9 1 3
- CHIPMUNK: 0 9 8
- BUSHY TAILED woodrat: 8 3
- RED SQUIRREL: 0 3 5 1
- POCKET Gopher: 1 2 6
- SHREW: 7 1
- SKUNK: 8
- BADGER: 0 4 5
- GARTER SNAKE: 3 1 0
- COLUMBIAN GROUND-SQUIRREL: 9 6 7
Special Memories, Special Day

Deeply cut coulees washed by the wind and hiding hundreds of mule deer. Falls days when one could find 15 bald eagles in the same tree or thousands of geese on the river - these are my images of Saskatchewan Landing Provincial Park.

And I have equally vivid memories of many other parks; forest fires in Yoho National Park, winter in the alpine meadows in Banff or hiking the Pine Point Rapids Trail in Manitoba's Whiteshell Provincial Park. I can play back these and many other full colour memories any time I want. But let's not dwell on mine. I suspect that you have your own treasured memories in Banff or hiking the Pine Point days when one could find 15 bald eagles in Special Memories, Special Day. And what I discovered was that while the actual experiences were fabulous, it is the memories and there's a third element, the anticipation of future events that are even more special.

(PLACE YOUR MEMORIES HERE.)

What started as a very straightforward article about Parks Day got me thinking about why parks are important in my life. And what I discovered was that while the actual experiences were fabulous, it is the memories that are even more special. (Isn't it marvelous how the human mind can selectively edit out bugs, aches and pains, and other negative aspects.) So it's the experience, the memories and there's a third element, the anticipation of future visits.

All this really helped me understand why, even if I can't be in a park every day, it's important for me to know that they are still out there. So, on June 9, 1990, the last Saturday of Environment Week, I, along with many others, will be celebrating Canada's first ever Parks Day.

The idea was adapted by the Federal Provincial Parks Council and accordingly, involves federal, provincial and territorial parks. The theme for 1990 is 'Canada's Parks - A Public Trust - Society's Treasure'. This will be a coast to coast celebration - special events across the land.

Road Improvements

Road work in progress.

Although carefully planned fire benefits the natural environment, unplanned wildfires are still dangerous and may cause serious damage. Unplanned fires will continue to be totally suppressed in the park.

The first fire, carried out last year, burned about 3 hectares of a meadow on the Lower Vimy Trail. A second fire, near the main park road south of Lower Waterton Lake, was much larger and viewed by many park residents and visitors. People expecting to see a blackened, barren landscape when visiting a former prairie burn site will be surprised at the lush, green growth they will find instead. You can increase your awareness of the importance of fire by visiting and exploring some of these sites. Ask a park interpreter or warden for their locations and watch for more news of this fire management program.

Beargrass Festival

August 23th through August 26th

Hey! Why not join us for a week of events at the 4th Annual Waterton Beargrass Festival - August 23-26! That's four days brimming with competitions, demonstrations and multi-cultural events! Whet your appetite. We're sure you've already noticed our main road is under construction. What you may not have noticed are the important measures being taken to ensure road improvements enhance your park visit and do not damage the park environment.

We're sure you've already noticed our main road is under construction. What you may not have noticed are the important measures being taken to ensure road improvements enhance your park visit and do not damage the park environment.

For example, all topsoil dug up has been collected and stored for replacement after construction. Once returned, the soil will be established to withstand erosion from Waterton's famous winds (and rain!). It will also be reseeded with native grasses. To be sure we do this just right, 4 test sites have been set up to check out which seeds work best and which rehabilitation methods are most effective for planting and keeping both the seeds and soil there.

Special consideration has been given to the animals living near the road. Special care will be taken when working near the banks along the Cardston entrance road not to disturb the cliff swallows nesting there. Osprey fans will enjoy the new pull-out which will be built with a birder's-eye view of the nest. Several other new pull-outs at scenic views along the road have also been created which will allow motorists to enjoy the view, take a picture or do some wildlife watching safely and without holding up traffic. The most popular change along the road is sure to be our new gate kiosks. Those frustrating traffic jams we've endured are similar in architecture to the old building but much smaller. And YAY! - those frustrating traffic jams we've endured should be cleared up with a new design featuring 3 in-lanes (one of which is a drive-through lane for those with permits). The new gate will also be located a little farther down the road to avoid traffic lines blocking the loop road. The nostalgic folks among us will be happy to see the old gate building - which has been named a Federal Heritage Building - will remain on site.
A Wild Week!

Go wild! Join in on our Fourth Annual Waterton Wildlife Week! This year's celebration will take place August 5th to 11th. All of this year will have programs relating to wildlife. Say hello to Mr. Bojangles (the Great Horned Owl), find out how park wardens trap bears, see an award winning wildlife film! These are just a few of the events you can participate in!

During the same week, national parks in Alberta and British Columbia will hold another wildlife event - the 1990 Wildlife Memorial (August 2nd to 9th). This memorial commemorates all wildlife which have been killed on national park roads in the last decade. It is an attempt to build public awareness by presenting a dramatic image of the cumulative impact of these roadkills. Park staff will place a red flag beside the road at each spot where an animal's death was recorded by park wardens in the last 10 years. This will illustrate the severity of the problem, as well as indicating the most critical locations for wildlife-vehicle collisions.

The main idea of the Wildlife Memorial is to educate drivers as to how to reduce the risk of colliding with a wild animal. Informed and responsible drivers are the ultimate solution to this problem. Research has indicated that the number of collisions with animals in Waterton is not as significant a problem as in other parks such as Kootenay and Jasper. In the last decade, Waterton has had about 71 recorded roadkills of large animals (or about 7/year). For this reason, we will not be flagging park roads. Nevertheless, this is a problem we should all try to reduce, both for the animals' sake and our safety (wildlife-vehicle accidents don't just hurt animals!).

What can you do to help? Don't speed. Pay attention to posted wildlife warning signs. Actively watch for animals near the road. If you see some, slowly slow and pass cautiously. Put on your flashing hazard lights to warn other motorists. Report any dead animals along the road to your nearest park warden or RCMP detachment.

As part of the Waterton Wildlife Week, we will be providing more information on the problem and how YOU can help! Let's make our roads safer for animals and people too!

<table>
<thead>
<tr>
<th>COURSE DATE</th>
<th>INSTRUCTOR</th>
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</thead>
<tbody>
<tr>
<td>WILDFLOWERS OF THE PRAIRIES June 9</td>
<td>Dr. Keith Shaw</td>
</tr>
<tr>
<td>WILDLIFE: THEIR HABITAT AND TRACKS June 10</td>
<td>John Russell</td>
</tr>
<tr>
<td>FLYFISHING IN THE ROCKIES June 16, 17</td>
<td>Vic Bergman</td>
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<tr>
<td>BIRDS OF A FEATHER June 22, 23</td>
<td>John Russell</td>
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<tr>
<td>ARTISTIC LANDSCAPES OF WATERTON July 7, 8</td>
<td>Robert Croskey</td>
</tr>
<tr>
<td>SACRED PLACES AND SACRED SPACES July 14</td>
<td>Dr. Brian Reeves</td>
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<tr>
<td>ALPINE WILDFLOWERS July 20, 21</td>
<td>Elisabeth Beaubien</td>
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<tr>
<td>THE &quot;CROWN&quot; BEARS OF WATERTON July 28</td>
<td>Howard Snyder</td>
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<td>GEELOGY OF WATERTON/GLACIER August 3, 4</td>
<td>Dr. Charles Jonkel</td>
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<tr>
<td>WATERTON/GLACIER PHOTOGRAPHIC WORKSHOP August 11, 12</td>
<td>Dr. Lex Blood</td>
</tr>
<tr>
<td>WATERTON PHOTOGRAPHIC WORKSHOP August 18, 19</td>
<td>Dr. Van Christou</td>
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</tbody>
</table>

*Evening Presentation*

**HERITAGE EDUCATION PROGRAM SUMMER 1990 WATERTON LAKES NATIONAL PARK**

The Waterton Natural History Association offers these one and two-day field trips, led by expert instructors.
WATERTON GLACIER GUIDE, JUNE/JULY/AUG./SEPT. 1990

• Windy Weather Kites - Tamarack Mall - phone 859-2277
• Waterton Trading Co. - Open 10 a.m. daily; Main Street at Bayshore Inn - phone 859-2211
• Village Gifts - Open 9 a.m. to 11 p.m.; Bayshore Inn
• Touch the Earth Boutique and Gifts - Open 9 a.m. to 9 p.m. daily
• R. & W. Wool Co. "Home of the Discerning Taste"
• Dill's General Store - Open 9 a.m. to 10 p.m.
• Caribou Clothes - Open 9 a.m. to 10 p.m.; Waterton Ave. - phone 859-2346
• Akamina Gifts - Open 9 a.m. to 11 p.m.; Main Street
• Kilmorey Lodge - phone (403) 859-2334 or Toll Free 1-800-661-8069
• Emerald Bay Marina: Located at north end of the townsite; boat stalls available for rent on a daily basis; apply at the Park Administration Office weekdays, or at the International Shoreline Cruise office. Mooring is $5 per night.

BIKE AND BOAT RENTALS
• Parks Texaco and Cycle Rental - 8 a.m. to 11 p.m. daily; Corner of Mount View Road and Windflower Ave.
• Cameron Lake Boat and Fishing Gear Rental

OTHER FACILITIES AND SERVICES
• Alpine Stables - Open daily 9 a.m. to 6 p.m. - phone 859-2462
• Banff Information - U.S. information provided - phone (403) 236-3400 or (406) 226-5551 for central reservations
• Prince of Wales Hotel - Buffet Breakfast 6:30 a.m. to 9:30 a.m.; Dining Room: Lunch 12 noon to 2 p.m.; Dinner 5:30 p.m. to 9:30 p.m; Tea Room 2 p.m. to 5 p.m. - phone 859-2348; reservations required.
• New Frank's Restaurant - 7 a.m. to 11 p.m.; Buffet Served 5:15 p.m. to 8:15 p.m. - phone 859-2231
• Pizza of Waterton - 103 Fountain Ave. (close to Post Office)- phone 859-2660
• Kootenai Fried Chicken - phone 859-2667
• Koffee Shoppe - 12 noon to 9 p.m.; at Bayshore Inn
• Waterton Bakery and Grocery - Open daily 8 a.m. to 10 p.m.
• Emerald Bay Motel - 102 Waterton Ave. - phone (403) 859-2620

TRANSPORTATION
• Mountain Sunset Tours - hiker shuttle service - Tamarack Mall
• Waterton Int-Nation Shoreline Cruises - Service to Crypt Landing and other destinations - phone (403) 859-2362

SERVICE STATIONS
• Pat's Texaco and Cycle Rental - 8 a.m. to 11 p.m. daily
• Tamarack Gas and Foodmart - Tamarack Mall

GROCERY STORES
• Pat's Texaco and Cycle Rental - 8 a.m. to 11 p.m. daily
• Tamarack Gas and Foodmart - Tamarack Mall

SPORTING SUPPLIES AND HARDWARE
• Pat's Texaco and Cycle Rental - 8 a.m. to 11 p.m. daily

PRIVATE CAMPGROUNDS
• Outside the park, near both entrances including Homestead, Waterton Riverside and Crooked Creek Campgrounds.

SCENIC LAUNCH TIPS
• Waterton Inter-Nation Shoreline Cruises - phone (403) 859-2362; June 16 to September 9 (weather permitting); Narrated tours of Waterton Lake from the townsite to Goat Haunt U.S.A., 2 hours with 1/2 hour stop at Montana Visitor Center - visit office at Marina for details - Departs Waterton 9:00, 10:00 a.m. and 1:00, 4:00, 7:00 p.m. - hikers need reservations - no backpackers on 7:00 p.m. trip.

PRIVATE CAMPGROUNDS
• Outside the park, near both entrances including Homestead, Waterton Riverside and Crooked Creek Campgrounds.
Glacier National Park
Services and Facilities

APGAR (2 miles north of West Entrance at West Glacier)

** Closure date is dependent on weather condition; please check locations for exact date

** Lodging

Village Inn Motel
May 15 - September 23

(Reservations call Glacier Park, Inc. - USA (406) 226-5551; Canada (403) 236-3400;
In Montana toll-free 1-800-332-9351)

Appar Village Lodge
(Call for reservations, (406) 888-5444)

Food and Beverage

Eddies Restaurant
7:00 AM - 9:00 P.M.
May 25 - Mid-September

Eddies' Tree Deli
8:00 AM - 9:00 AM
June 9 - September

Gift Shops

Eddies’ Campstore
8:00 AM - 9:00 AM
May 25 - Mid-September

The Cedder Tree
7:00 AM - 10:00 PM
May 19 - September

The Schoolhouse
9:00 AM - 9:00 AM
May 1 - October 31

Montana House
9:00 AM - 9:00 AM
May 1 - October 31

Before June 15 - 9:00 AM - 5:00 PM

Camper Services

Groceries, fishing & camping supplies, firewood

(Weather and conditions permitting)

(Weather and conditions permitting)

(Weather and conditions permitting)

Bicycle Rental

Village Inn Motel
7:00 AM - 9:00 AM
May 18 - September

Boat rentals

(weather permitting)

Lake McDonald Boat Co.
9:00 AM - 6:00 PM
(exended hours 6/16-8/15)

Rowboats, canoes, and boats with 6 hp motors; Also fishing equipment rentals

Horseback Rides

Appar Corral
One-hour ride
9:00 AM - 11:00 AM
1:00 PM - 4:00 PM

Two-hour ride
10:00 AM - 1:00 PM
3:00 PM

Six-hour ride
9:00 AM

(Weather and conditions permitting)

Lake McDonald Corral
One-hour ride
9:00 AM - 11:00 AM
3:00 PM - 4:00 PM

Two-hour ride
11:00 AM - 2:00 PM
3:00 PM

Six-hour ride
9:00 AM

(Weather and conditions permitting)

Two medicine Corral
One-hour ride
9:00 AM - 11:00 AM
1:00 PM - 4:00 PM

Three-hour ride
9:00 AM - 1:00 PM

All-day ride
9:00 AM

(Weather and conditions permitting)

Appar Village Lodge
One-hour ride
9:00 AM - 11:00 AM
1:00 PM - 4:00 PM

Two-hour ride
10:00 AM - 2:00 PM
3:00 PM

Six-hour ride
9:00 AM

(Weather and conditions permitting)

HORSEBACK RIDES

Lodge, Cabins and Motel - Reservations call Glacier Park, Inc. - USA (406) 226-5551;
Canada (403) 236-3400; In Montana toll-free 1-800-332-9351.

Food Service

Breakfast
6:30 AM - 9:30 AM

Lunch
11:30 AM - 2:00 PM

Dinner
5:00 PM - 9:00 PM

Coffee Shop
7:00 AM - 2:30 PM
4:30 PM - 9:00 PM

Swiss Lounge (Lobby Level)
11:30 AM - 12:00 Midnight

Coffee Shop
7:30 AM - 10:00 AM

CAMP STORE

8:00 AM - 9:00 AM

Camper services - groceries, fishing and camping supplies, firewood and gifts.

Rental Boats

8:30 AM - 8:00 PM

(Weather and conditions permitting)

LAKE Mc Donald

Services & facilities located at the head of lake.

LAKE MCDONALD (10 miles north of West Entrance)

LAKE MCDONALD LODGE

June 7 - September 23

Lodge, Cabins and Motel - Reservations call Glacier Park, Inc. - USA (406) 226-5551;
Canada (403) 236-3400; In Montana toll-free 1-800-332-9351.

Food Service

Breakfast
6:30 AM - 9:30 AM

Lunch
11:30 AM - 2:00 PM

Dinner
5:00 PM - 9:00 PM

Coffee Shop
7:30 AM - 10:00 AM

CAMP STORE

8:00 AM - 9:00 AM

Camper services - groceries, fishing and camping supplies, firewood and gifts.

HORSEBACK RIDES

Lodge, Cabins and Motel - Reservations call Glacier Park, Inc. - USA (406) 226-5551;
Canada (403) 236-3400; In Montana toll-free 1-800-332-9351.

Food Service

Breakfast
6:30 AM - 9:30 AM

Lunch
11:30 AM - 2:00 PM

Dinner
5:00 PM - 9:00 PM

Coffee Shop
7:30 AM - 10:00 AM

CAMP STORE

8:00 AM - 9:00 AM

Camper services - groceries, fishing and camping supplies, firewood and gifts.

Rental Boats

8:30 AM - 8:00 PM

(Weather and conditions permitting)

SWIFTCURRENT (Located 23 miles northwest of East Entrance at St. Mary)

SWIFTCURRENT MOTOR INN

June 22 - 10:00 AM September 24

Motel and Cabins - Reservations call Glacier Park, Inc. - USA (406) 226-5551;
Canada (403) 236-3400; In Montana toll-free 1-800-332-9351.

Food Service

Breakfast
6:30 AM - 9:30 AM

Lunch
11:30 AM - 2:00 PM

Dinner
5:00 PM - 9:00 PM

Coffee Shop
7:30 AM - 10:00 AM

CAMP STORE

8:00 AM - 9:00 AM

Camper services - groceries, fishing and camping supplies, firewood and gifts.

TWO MEDICINE (10 miles from East Glacier)

TWO MEDICINE CAMPSTORE

June 5 - September 3

Food Service

8:00 AM - 8:00 PM

CAMP STORE

8:00 AM - 8:00 PM

Camper services - groceries, fishing and camping supplies, firewood and gifts.

SCENIC LAUNCH TOURS AND BOAT RENTALS

June 9 - September 9

Tours - Glacier Park Boat Co. narrated tours of Swiftcurrent and Josephine Lakes depart from Many Glacier Hotel Dock. Lake side of hotel (allow 10 minutes to walk from parking lot). Departure times with * indicate Park Naturalist on trip one way beginning mid-June. Check locations for details.

1 hour 15 min. cruises depart *9:00 AM *11:00 AM *2:00 PM *7:00 PM (sunset cruise)

July and August only - 3:00 PM

When the Ginnell Glacier trail opens a special Ranger/Naturalist led cruise and hike is offered at 8:30 AM.

Rental Boats

8:30 AM - 8:00 PM

(Weather and conditions permitting)

TRANSPORTATION

Scheduled transportation is available between in-park lodges, hotels and motor inns, as well as East Glacier, Beltown Station (West Glacier), Waterton and St. Mary, based on location and operating dates. Schedules are available at all Glacier Park Inc. operated locations. For advanced reservations, call (406) 226-5551 USA or (403) 236-3400. In Montana call toll-free 1-800-332-9351.

BACK COUNTRY CHALETS

Glacier Wilderness Guides

Guided day hikes and backpacking trips into Glacier’s backcountry for one to seven days.

Private facilities adjacent to the park also provide services.

ST. MARY:

Food, lodging, service station, coin laundry, groceries, sporting goods, gift shops.

EAST GLACIER:

Food, lodging, service stations, groceries, gift shops, art gallery, golf course, horse rentals.

ESSEX:

Food and lodging.

WEST GLACIER:

Food, lodging, service station, coin laundry, groceries, sporting goods, gift shops, photo service, golf course, river rafting.

POLEBRIDGE:

Food and lodging, regular gas only, mercantile.
Over the past few years, there has been an increase in the number of park animals which have become conditioned to owner of the car, who was standing less than 10 feet away, attempted to "shoo" the bear out but was bluff-charged instead.

**TRAIL OF THE CEDARS** — Discover the serene beauty of a mature cedar/hemlock forest. Stately western red cedars, some over 700 years old, line the wheelchair accessible boardwalk through the forest. Over time, rushing water has carved Avalanche Gorge, a highlight of this easy 1/2 mile roundtrip. The trailhead is located near the entrance to Avalanche Campground, just off the Going-to-the-Sun Road on Glacier’s west side.

**CAMS CREEK INTERPRETIVE TOUR.** A 10 mile (16 km) self-guiding auto tour along Camas Creek Road, showing succession from old cedar forests through moderate-aged lodgepole pine to young lodgepole pine and finally, an area recently burned by a forest fire. Roadside exhibits along the way explain what you see. Start this drive west of the Aggar Visitor Center on the Camas Creek Road.

**THE RED BENCH FIRE** — Fire has played a major role in shaping the character of Glacier’s ecosystem or plant communities. During the fall of 1988, a major fire burned along the northwest part of Glacier National Park. Approximately 28,000 acres of park land were within the fire perimeter. The Red Bench Fire has set the stage for the dramatic renewal of a dynamic forest in a continuing natural cycle. To view the fire area drive to the Polebridge area in the North Fork and stop at the ranger station for further information.

**THE GOAT LICK** — Located along U.S. Highway 2, just inside the southern boundary of Glacier National Park, is an exposed river bank cliff containing natural mineral salts. Each spring, Mountain Goats from Glacier and nearby National Forest land visit the lick in order to satisfy their need for sodium. As many as 73 goats have been seen on the lick at one time; however, on most occasions 1-12 goats may be at the site.

**Reduced Ranger Services**

Park Rangers are responsible for providing many services to you, the Park Visitor. Over the years we have provided high levels of emergency medical care, search and rescue, law enforcement and visitor protection, answering keys from locked vehicles, assistance after hours for non-emergencies such as "out of gas", and many other services which we desire to provide, but which are very time consuming.

Over the years our budget has eroded and failed to keep up with increasing costs, and the number of ranger personnel available to assist has dwindled. Therefore, we find ourselves in the position of having to reduce some of these services which are provided for your assistance and feel it only fair that you are made aware of these cut backs.

We will continue to provide a high level of medical care to those in need but will be unable to respond to all such calls with as many people as we have in the past. We will endeavor to insure that a Park Medic responds, even if it is at the patient’s request, but will not be able to make this commitment for incidents of lesser degree.

Our search and rescue functions will continue to receive great emphasis but these incidents can indeed become life threatening very quickly.

**Just One Cookie Can't Hurt. Can It?**

PLEASE — WE NEED YOUR HELP! Over the past few years, there has been a noted increase in the number of park animals which have become conditioned to being fed by humans. This has caused problems both for wildlife and park visitors.

Here are some recent examples:

- A black bear which had been "bumming" food along the Going-to-the-Sun Road entered a parked car through an open window to obtain potato chips. The owner of the car, who was standing less than 10 feet away, attempted to "shoo" the bear out but was bluff-charged instead.
- A mother and her four-year old daughter were turned by a forest fire. Roadside exhibits along the way explain what you see. Start this drive west of the Aggar Visitor Center on the Camas Creek Road.

A black bear which had been "bumming" food along the Going-to-the-Sun Road entered a parked car through an open window to obtain potato chips. The owner of the car, who was standing less than 10 feet away, attempted to "shoo" the bear out but was bluff-charged instead.

Deer which had been fed bread and other foods had to be forcibly moved from the Loop area by park rangers firing explosive charges called "cracker rounds." These deer lost all fear of humans and boldly approached anyone with an outstretched hand.

Deer have caused hundreds of dollars in property damage in some front and backcountry campgrounds by chewing on tents and camping gear, looking for salt and other human food.

Mountain goats in some areas have become accustomed to humans providing food. They approach at close range and their horns and sharp hooves are dangerous.

Many animals have been struck and killed by vehicles after they become accustomed to humans tossing food at them along the roadways.

People can be injured by hooves, teeth or pick up a disease through saliva. Habitu­ation of animals cannot be reversed by using the kill on at one time; however, on most occasions 1-12 goats may be at the site. Visitor Centers have a directional information piece to guide you.

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We are extremely grateful for his generosity and will take great care to spend this gift wisely.
SERVICES OF WORSHIP
Glacier National Park
June 2 through September 2, 1990

**West Side**
- Park Headquarters
  Community Bldg.
  Interdenominational
  Sunday, 10:30 a.m.

- Apgar Amphitheater
  Sunday, 8:30 a.m.

- Fish Creek Amphitheater
  Sunday, 9:00 a.m.

- Lake McDonald Lodge
  Sunday, 10:00 a.m.

- Avalanche Amphitheater
  Sunday, 9:00 a.m.

**East Side**
- Swiftcurrent Amphitheater
  Sunday, 8:30 a.m.

- Mary Glacier Hotel
  Sunday, 10:00 a.m.

- Rising Sun Amphitheater
  Sunday, 8:30 a.m.

- St. Mary Amphitheater
  Sunday, 9:30 a.m.

- Two Medicine Amphitheater
  Sunday, 9:00 a.m.

- Glacier Park Lodge
  Sunday, 9:30 a.m.

**East Glacier**
- Blackfeet (United Methods)
  Saturday, 9:00 a.m.

- Browning (LDS Mormon)
  Saturday, 10:00 a.m.

- Browning (United Methods)
  Sunday, 11:00 a.m.

* Interdenominational services sponsored by a Christian Ministry in the National Parks.

NOTE: The Amphitheaters are in the Campgrounds in the Park.

Reflections on Two Medicine Lake.

Devereax Butcher

Two Worlds -- Two Realities

As you explore the wonderland that is Glacier National Park, please note that this wondrous beauty was once part of the world and reality of the Blackfeet Indian Nation which stretched from Edmonton, Alberta, Canada, to the Yellowstone River in Wyoming and from the eastern boundaries of Montana to the present day Glacier National Park. The Blackfeet are a proud and generous people who have sacrificed much for the people of the United States and Canada. Both Glacier National Park and Waterton International Peace Park in Alberta, Canada, can be seen as the legacy of the tribal elders of the reservation in preserving a piece of the environment for you and your children. As Mother Earth, the land has been good to all of us and should be treated with the respect and love that you accord to your own mother. Treat the animals and plants with respect, as they are all creatures of the Creator and have a right to exist. Many of the mountain peaks and hanging valleys that you see and will explore have the history of many of our tribal elders as Vision Quest Sites where they underwent four days of fasting without food and water for the benefit of the people. Through prayers and personal sacrifices, they sought to preserve the order of the universe and to preserve the many gifts of the Creator. Glacier National Park is a vital part of the original stewardship of this land. As such, the Blackfeet Indian Nation continues to hold this park and all it contains as sacred. The Blackfeet Indian Reservation borders the eastern boundaries of the park and is also rich in history and cultural significance. If you have any questions or are interested in pursuing more information about the reservation and its people, please contact a ranger. Also, you can contact the Blackfeet Community College at (406) 338-5441 and ask for the cultural department.

Museum of Plains Indians

Browning, MT 59417
406-338-2230

Open June 1 through September 22, 7 days a week from 9:00 a.m. to 5:00 p.m. No admission charge. From June 1 through June 14 is an exhibit by Rose Moran and poster June 17 is the Summer Sales. It features the works of Native American Indians including paintings and traditional crafts.

North American Indian Days, a summer celebration of the Blackfeet Nation, is July 12-15th. During that week the museum will have extended evening hours until 7 p.m.

Two American Programs

Speakers from the Blackfeet Tribe will lecture on the tribal history, culture, and legends. Programs start at 8 p.m.

**RISING SUN**
Campfire Circle
Thursdays - 8 p.m.

July 12 Curly Bear Wagner
July 26 Curly Bear Wagner
Aug. 9 Jack Gladstone
Aug. 16 Jack Gladstone
Aug. 23 Jack Gladstone
Aug. 30 Jack Gladstone

**TWO MEDICINE**
Campfire Circle
Wednesdays - 8 p.m.

July 11 Jack Gladstone
July 25 Jack Gladstone
Aug. 8 Jack Gladstone
Aug. 15 Jack Gladstone
Aug. 22 Jack Gladstone

**MANY GLACIER**
Lucerne Room
Tuesdays - 8 p.m.

July 3 Jack Gladstone
July 10 Curly Bear Wagner
July 17 Curly Bear Wagner
July 24 Jack Gladstone
July 31 Curly Bear Wagner
Aug. 7 Curly Bear Wagner
Aug. 14 Curly Bear Wagner
Aug. 21 Jack Gladstone
Aug. 28 Jack Gladstone

Inquire at visitor centers, ranger stations and hotels for other special events featuring Native Americans to be held in and near the park.
Distances From West Glacier

<table>
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<th>Location</th>
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The road in early 1930’s.

One of the main attractions in Glacier National Park is the Going-to-the-Sun Road. Although sections of the road were built in the 1910’s and ‘20’s, it was completed and officially opened in 1933. It has been honored with a listing on the National Register of Historic Places and designated as a Civil Engineering Landmark. It is the only road that crosses the park, winding through the McDonald and St. Mary Valleys, and across the cliffs of the Garden Wall ascending to Logan Pass. Due to the mountainous terrain, the narrowness of the road and scenic splendor, plans to take 1/4 to 3 hours or more to travel the 50 miles from one side to the other. Because of the hazards associated with this narrow, winding, scenic road, vehicle length restrictions are in effect. From July 1 until August 31, the total length limit for a vehicle or vehicle and towed unit is 30 feet. The rest of the season, the total length limit is 35 feet. This restriction applies between Avalanche campground (west) and Sun Point (east). If you have extended mirrors on your vehicle, please fold or remove them when you are not towing. Vehicles should not exceed 8 feet in width.

If you prefer not to drive the road yourself, transportation arrangements can be made by contacting the hotels or calling (406) 226-5551. Many bicyclists prefer to see the road using their own power. Due to the narrowness of the road, bicycles are restricted to certain hours of use for certain sections of the road. Please check on page 4 for specific regulations.

Transportation To and From The Park

There is a regularly scheduled commercial bus line from Glacier National Park International Airport to West Glacier, 752-4022. No bus service into Waterton, but a taxi service is available from Fincher Creek to Waterton.

Going-to-the-Sun Road Construction

Plans are to reconstruct a 9.8 mile segment of the Going-to-the-Sun Road from Appar to the Lake McDonald Ranger Station intersection. The project should begin in September 1990 and continue through August 1991.

Road Rehabilitation

The historic Going-to-the-Sun Road, Glacier National Park’s major visitor use route, will be getting a much needed facelift starting this year. The tags, flags and teams of surveyors that you will likely see along the Lake McDonald section of the road this summer are the beginning of a parkwide road improvement program. It is aimed at restoring the appearance and maintainability of these facilities as well as adding an extra measure of safety for park visitors.

Traffic along the Going-to-the-Sun Road was completed in the 1930’s as part of the National Park Service’s then-new program to make parklands accessible to the public by automobile. The 50 mile road was placed on the National Register of Historic Places in 1983 to recognize its significance as an outstanding engineering achievement of the time and its importance in developing visitor use of the parks by automobile. The combination of its historic qualities, the pristine natural environment in which it is located, and the exciting visitor experience that it affords makes the Going-to-the-Sun Road one of Glacier’s valuable resources. The National Park Service is committed to preserving this resource so that it can be enjoyed now and in the future.

The Lake McDonald section of the Going-to-the-Sun Road was first constructed in 1922 as the primary access to the Lewis Hotel, now Lake McDonald Lodge. The cost was $100,000. The road underwent several reconstruction efforts prior to attaining its present design in 1937. Pavement was added in 1950. Since 1937, problems with the original design have been numerous. Much of the original fill material for the road was of poor quality and did not drain well. Steep, unstable slopes that were cut for the original road continued to erode and slip. Turnouts were developed in response to visitor demand but often without regard to their impact on environment or visitor safety. The current road improvement program is an attempt to remedy these problems while at the same time protecting those qualities that make the road so unique.

The reconstruction work on the Lake McDonald section will retain the historic width and alignment, the stone bridge across Snyder Creek and most of the rock culvert headwalls. Some of the smaller, unsafe turnouts will be eliminated and several of the larger turnouts will be enlarged or delineated so that they can be used more efficiently by visitors.

Reconstruction work will disturb vegetation, especially in the road shoulder and ditch areas where drainage corrections need to be made. Twelve acres of roadside vegetation will be disturbed from Appar to the Lake McDonald Ranger Station junction. To aid the recovery of this vegetation, federal highway funds have been allocated for seed collection, experimental studies, and a native plant nursery. As sections of road are completed, we will be planting native grasses, forbs, shrubs and trees.

Speed Limits

Glacier is 45 m.p.h.
Waterton is 80 km/hr.

Exceptions in both parks where posted.
Protecting Bears and People

Glacier is bear country. Your cooperation in adopting the following good manners and practices in bear country will help provide for your safety, and reduce the number of trail and campsite closures this year.

Your cooperation will also greatly reduce bear habituation to humans which ultimately results in incidents between bears and Park visitors. These situations necessitate handling and/or eliminating bears, including the currently threatened grizzly bear. Remember all bears are potentially dangerous. A Fed Bear Is A Dead Bear!

Feeding bears is a violation of federal law and carries a maximum fine of $500 and six months in jail.

Feeding bears or photographing them at close-range conditions them to potentially dangerous. A Fed Bear Is A Dead Bear!

A clean camp in an auto or backcountry campsite is good insurance against bear problems. Garbage must be placed in bear-proof garbage cans or placed in sealed, plastic bags to be packed out by the backpacker. DO NOT BURY!

When food is not being consumed or prepared, all food, coolers, cooking utensils and food containers must be kept in a closed hard-sided vehicle day or night.

Several campgrounds have food lockers or food poles for those camping without a suitable vehicle. Ask a ranger for their location. Otherwise, food must be suspended at least 10 feet above the ground, and 4 feet from any post, tree trunk or limb. Food and beverage left on tables or stored in tents or in open containers in vehicles is an invitation to bears.

Pet food and garbage must be properly stored at all times. Improperly stored and unattended food is a violation and will be confiscated.

Persons camping in the backcountry should store food as illustrated on the litter bags given out with backcountry camping permits utilizing the poles provided in each campground. Storing food in a tent invites trouble! Wise backpackers use odorless food, such as freeze-dried foods.

Sleeping areas should be near the outer edge of your individual assigned campsite, as far as possible from where you cook. People should not sleep in clothes they have been wearing while cooking. Separate food preparation and sleeping areas are designated in backcountry campgrounds.

Hiking alone is not recommended. Avoid hiking at dusk or dark. Make noise talking, singing, or using loud bear bells (the little tinkling things many people use are worthless) avoids surprising a bear. A surprised bear may respond aggressively. If a bear is made aware of human presence, it will often run away. It may make a short charge at you until it determines you are not a threat. DO NOT RUN! Bears, like dogs, are fond of the chase. Running may excite them and increase the chance of physical contact. Remain where you are or retreat slowly.

Be Alert and think ahead. Watch for bear signs - fresh tracks, diggings and scat (droppings). Be especially wary whenever cubs are present or an animal carcass is near a traveled route. Be alert when traveling into the wind. The bear may not get your scent and thus be unaware of your approach. Bears may not hear you approach near rushing streams or when windy. Please report all bear sightings and incidents to a ranger. This information is valuable in evaluating situations and in initiating proper management action to ensure the safety of people and bears.

About Bears, a 50c pamphlet on some of the characteristics of grizzly and black bears, is available at park visitor centers.

Bear facts

Black Bear

Name: Ursus americanus, cinnamon bear, American black bear.

Life Expectancy: 15 to 20 years maximum.

Height: Adult standing on all fours, 5’ 1 to 3 feet.


Distinguishing Features: "Roman nosed" profile.

No distinct hump over shoulders. Claws approximately 1 1/4 inches on adults. Claws curved and non-retractable. Exceptional sense of smell and hearing. Mediocre vision. The most characteristic feature is the white "V" on chest. Color variations include brown, cinnamon, blond and solid black.

Favorite Foods: Omnivorous habits of the black bear, plus its opportunistic selection of available food items, indicate favorite foods vary on a local basis. Vegetation is the major component of their diet. Huckleberries, tree cambium, skunk cabbage, insects, flower bulbs, fish and carrion are often favorite foods.

Daily Habits: Most active in evening, night and early morning. Usually rests during day, but can be active at any time.

Hibernation: Usually enters den in November, sleeps until spring.

Grizzly bear

Name: Ursus arctos horribilis, brown bear, silvertip.

Life Expectancy: 15 to 25 years.

Height: 5 feet or more when standing on hind legs; 3-4 feet when standing on all fours.

Weight: Up to 1,400 pounds, usually 300 to 600 pounds in the lower 48 states.

Color: Blond to nearly black, Clifton silver-tipped.

Distinguishing Features: Round head with concave or dished face. Hump of heavy muscle over shoulders. Claws often 4 inches long. Strong enough to kill a man with the swipe of a paw. Mediocre vision. One of the best noses in the animal kingdom.

Speed: Covers 50 yards in 3 seconds.

Offspring: Mating is the only purpose, other than feeding, that causes this anti-social creature to mix with its own kind. Mates in early summer. One to four cubs, weighing about a pound each, are born by mid-winter.

Favorite Foods: Huckleberries, wet meadow plants and grasses, ground squirrels, wildflower bulbs, fish and carrion. Only 10 to 20 percent of diet comes from meat.

Daily Habits: Forages near dawn and dusk. Often naps during heat of day. Can be active anytime.

Hibernation: Usually enters den in November, sleeps until spring.

Persons camping in the backcountry should store food as illustrated on the litter bags given out with backcountry camping permits utilizing the poles provided in each campground. Storing food in a tent invites trouble! Wise backpackers use odorless food, such as freeze-dried foods.

Sleeping areas should be near the outer edge of your individual assigned campsite, as far as possible from where you cook. People should not sleep in clothes they have been wearing while cooking. Separate food preparation and sleeping areas are designated in backcountry campgrounds.

Hiking alone is not recommended. Avoid hiking at dusk or dark. Make noise talking, singing, or using loud bear bells (the little tinkling things many people use are worthless) avoids surprising a bear. A surprised bear may respond aggressively. If a bear is made aware of human presence, it will often run away. It may make a short charge at you until it determines you are not a threat. DO NOT RUN! Bears, like dogs, are fond of the chase. Running may excite them and increase the chance of physical contact. Remain where you are or retreat slowly.

Be Alert and think ahead. Watch for bear signs - fresh tracks, diggings and scat (droppings). Be especially wary whenever cubs are present or an animal carcass is near a traveled route. Be alert when traveling into the wind. The bear may not get your scent and thus be unaware of your approach. Bears may not hear you approach near rushing streams or when windy. Please report all bear sightings and incidents to a ranger. This information is valuable in evaluating situations and in initiating proper management action to ensure the safety of people and bears.

About Bears, a 50c pamphlet on some of the characteristics of grizzly and black bears, is available at park visitor centers.
The Camas Pack

The foothold for wolf recovery in Northwestern Montana

A group of wolves, called the Camas Pack, is occupying a home range of about 400 square miles in the North Fork of the Flathead River. Approximately 80 percent of this home range is within the west side of Glacier National Park. The Camas Pack is the successor of the Magic Pack which had the first documented litter in 1986 and was the first pack of wolves to exist and raise pups in the western United States in almost 50 years. Since the Magic Pack produced its first litter just north of the border in 1982, there have been litters of pups born every year since 1985 with pups born in Glacier National Park in 1986 and 1987. The Camas Pack denned in Glacier in 1989, but the pups did not survive their first several weeks. It is hoped that they will be successful in raising pups this year. Continued success of this small group is key to recovery of wolves in Glacier National Park and in the Northwestern Montana Recovery Area. This pack’s success will determine if the howl of the wolf will be heard by future generations.

Gray wolves, can be gray, but they can also vary in color from white to black. Wolves in the Camas Pack range from light gray to black. Wolves are similar to coyotes in body shape, but are much larger. While coyotes weigh about 25-30 pounds and stand 1 1/2 to 2 feet tall, adult wolves will weigh 80 to 110 pounds and stand 2 1/2 to 3 feet in height. Wolves also have a larger, more square head with shorter and more rounded ears than coyotes.

Wolves make their living with their legs which are much longer relative to their body size than dogs or coyotes. They also have a deep, narrow chest which makes their body structure more efficient for traveling long distances in search of prey. Wolves can easily travel 20 or more miles per day. Their feet are also much larger in relation to their canid (dog family) relatives. Seeing their tracks is evidence you are in wolf country. While a coyote track is about the size of an adult human hand print, a wolf track is massive in comparison. Adult wolf tracks are typically 3 3/4 to 4 1/2 inches wide and 4 1/2 to 5 1/2 inches long from the back of the heel to the tip of the nail prints. They are about the size of an adult human hand print. Printed in shadow on this page is a life-size wolf track.

The trademark of the wolf is its howl. It is the sound that brings primeval feelings to the surface. You stop and listen - a quick chill passes - you wonder if you really heard it and you strain to hear it again. It is a long, low pitched, resonant howl. You’ve heard the coyote’s higher pitched yapping and singing. This sound is definitely different.

Many animals are members of the Glacier National Park wildlife community. If you would like assistance in interpreting what you have seen, ranger-naturalists are available to help you. Efforts are being made to record all observations of wolves or their sign to aid in documenting wolf recovery. The park staff is anxious to hear about all wolf sightings or wolf tracks you observe or wolf howls that you hear.

Please note the location of the sighting and measurements of any sign as exactly as possible and report them to any park information station.

Wayne Brewster
Glacier National Park

The Role of Natural Fire in Glacier National Park

Fire has played an integral part in shaping the landscape of Glacier National Park. Only recently have we fully realized the essential role that wildland fire plays in the natural order of things. Fire history studies have shown that low intensity underburns were frequent in the forests of the park. Large, intense, stand-replacing fires swept through these forests an average of once every 100 to 180 years. Some of the effects from natural fire include the consumption of dead material so nutrients are put back into the system to be recycled more rapidly than by decay. Assistance to plants that need additional heat for seed germination or more exposure to sunlight for reproduction, and a change in species composition, usually resulting in more diversity, creating a healthier forest.

From its beginnings in 1916 until 1972, the National Park Service practiced a policy of total and immediate suppression, as did most other land management agencies. As a result, fires were not performing their natural function. Since 1972, several National Parks and forests wilderness areas have allowed certain natural fires to burn within predetermined prescriptions and under specific monitoring. After the fires of 1988, these prescriptions were refined and the program is now back in effect in some areas. Since wilderness lands no longer encompass the vast areas they did in the past, the challenge facing us is to maximize the natural role of fire in those remaining areas, while minimizing the adverse impacts in our developed areas.

Native Plant Restoration

Glacier Park may seem like a pristine place to most visitors. But if you look closely, there are many ways people are leaving their mark. Providing visitor services often causes loss of soil and vegetation from road work, underground utilities, or building improvements. In other areas there are simply too many people trampling plants.

The park has a program to restore these disturbed sites. While there are commercial sources for native seed and plants, they may actually be very different genetically from the same species growing in the park. These commercial strains could contaminate our native strains.

To avoid this contamination and to protect the park’s biodiversity, we are collecting native seed and plant material in and around the park. The seed is used to grow plants in commercial nurseries or in the park’s native plant nursery. It may also be planted directly on disturbed sites or "increased" to produce more seed in cultivated fields. Stem and root pieces are taken from plants that are grown easily from cuttings. Because there is very little information on many of the species we’re growing, we’ve set up experiments to determine the best propagating methods.

Please help our efforts by staying on the trails and off areas where vegetation is recovering.
**TEMPERATURE**

The table below will give you an idea of the weather conditions at Glacier. Summer evenings are cool. Warm clothing and rain gear should be carried when hiking. Sudden rain or snow showers may occur at any time of year, so be prepared.

<table>
<thead>
<tr>
<th>Month</th>
<th>Temperature (Fahrenheit)</th>
<th>Precipitation (in inches)</th>
<th>Snowfall (in inches)</th>
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Maximum and minimum figures reflect RECORD highs and lows for period.

**A Natural Classroom for all Ages**

Summer vacation and school. The two don't seem to go together unless you can imagine this: a school that's as big and spectacular as all of Glacier National Park and beyond; a school where students of any age get out on the trails and experience the wildlife, the flowers, the history, or the geology of this park firsthand; a school where class sizes are small and the emphasis is on learning by doing; a school where rafting a river, hiking to a glacier, or tracking wildlife is what students do. The Glacier Institute is just such a school offering outdoor classes lasting from one to seven days for a variety of ages.

Adults from 18 years on to senior citizens can choose from field seminars lasting from 2 to 5 days. Seminars include GLACIER'S GRIZZLIES, PEOPLE OF THE MOUNTAIN WORLD, ABOVE AND BELOW THE TREE LINE, TRACKING EARTH AS A MANUSCRIPT, and more. College credit is available for these courses.

Individuals or families with children 10 years and older can choose from 13 different exploration classes offered on Saturdays and Sundays. ALL OF GLACIER, NORTHWEST MONTANA BIRDS OF PREY, and OUTDOOR SKETCHING are just a few of the classes you'll find waiting for you.

For children only, there are week-long residential programs at the Big Creek Outdoor Education Center from late June through late August.

For more information ask for a brochure at the nearest park visitor center, call the Glacier Institute office at (406) 888 5215, or stop by. Our summer camp is located just inside the West Glacier Entrance to Glacier Park and the Big Creek Outdoor Education Center is along the North Fork of the Flathead River 3 miles south of the Cusma entrance to Glacier Park.

The Glacier Institute
P.O. Box 527
West Glacier, MT 59936
June - August 15