The Crown of the Continent Ecosystem

In a remote corner of northwestern Montana, lies an area of unparalleled scenic beauty, the Crown of the Continent. George Bird Grinnell, an early conservationist and advocate for the formation of Glacier National Park, first referred to this section of the Rocky Mountains as the Crown of the Continent in 1901.

The Crown of the Continent is an area of such magnificence that two national parks, one belonging to the United States and the other to Canada, were established to protect it. Even though Glacier and Waterton Lakes National Parks belong to different countries, they are both part of park systems with remarkably similar missions. While these wild lands are meant to be enjoyed by all, they are primarily to be conserved and protected so as to leave them "unimpaired for the enjoyment of future generations". These words are found in both the U.S. National Park Service Organic Act and the Canadian National Parks Act.

In 1932, in response to the many similarities in our countries' values and as a symbol of our friendship, the Waterton/Glacier International Peace Park was created. This resulted in a shared ecosystem comprised of stunning cultural and natural resources. In fact, to the wildlife, this has always been one ecosystem. The creation of the Peace Park was an idea ahead of its time in recognizing the importance of cooperative management in natural areas which span political boundaries.

The Crown of the Continent ecosystem is more than its core area. It also includes surrounding Wilderness areas, National Forests, Indian Reservations and small tracts of privately owned land.

Located astride the Continental Divide, the Crown of the Continent contains rugged mountains, active glaciers, outstanding examples of evolutionary and geologic processes, diverse wildlife, a rich variety of flora and interesting hydrology. Moisture on Triple Divide Peak in Glacier National Park forms three streams. Each stream feeds a separate watershed. Water drains south into Atlantic Creek ending at the Gulf of Mexico, north into Hudson Bay Creek eventually reaching Hudson Bay and west into Pacific Creek which ultimately finds the Pacific Ocean. Only one other mountain in North America splits waters to three different seas.

If you are interested in additional information on the Crown of the Continent Ecosystem, inquire at any visitor information center in either park.

New Logo for Waterton/Glacier International Peace Park

The Waterton/Glacier International Peace Park Logo will be seen in many places throughout the two parks this summer. The new logo symbolizes international peace and goodwill between friends that share a common border, history, heritage and future. Park staffs from Glacier and Waterton Lakes National Parks cooperate to manage the natural and cultural resources of both parks and promote international peace.

An international contest to select a design was held in the summer of 1990 with over 60 entries received.

The winning logo, designed by Brent Laycock of Calgary, shows the mountains we share. The white marker symbolizes our open boundary; the red, white and blue of the stars, stripes and Maple Leaf represent the freedom and friendship that the two countries and parks share.

While you are visiting Waterton/Glacier International Peace Park, pause to reflect on our common goal, peace.
Protecting the Past, Managing the Present, and Investing in the Future

Who created the National Park Service? Seventy-five years ago, President Woodrow Wilson signed the legislation, but many people—bureaucrats and millionaires—worked together to bring about the establishment of the National Park Service. With this act a handful of individual parks were brought together, creating a system which now numbers over 350 areas.

Glacier National Park will commemorate the seventy-fifth birthday of the National Park Service with several special events, programs, and publications. Visitors who would like to learn more about the history of the National Park Service should inquire at park visitor centers. Three free brochures are available which add meaningful detail to this story. The Apgar Visitor Center will display a special anniversary exhibit about early park rangers. This summer park rangers will add a commemorative pin to their uniforms to observe the anniversary.

Visitors can purchase this same emblem at park visitor center bookstores. An excellent publication, The First 75 Years, is also available for $5.95.

The staff of Glacier National Park invites our visitors to join us in celebrating this event and in rededicating ourselves to the Diamond Jubilee motto: "Protecting the Past, Managing the Present, and Investing in the Future."

Find the Answers at the Visitor Centers

Apgar Visitor Center
May 4 to June 23 — 8 a.m. to 5 p.m.
June 24 to Sept. 7 — 8 a.m. to 8 p.m.
Sept. 8 to Sept. 30 — 8 a.m. to 5 p.m.
Oct. 1 to Oct. 30 — 8 a.m. to 4:30 p.m.
Weekends only starting Oct. 31

St. Mary Visitor Center
May 25 to June 23 — 8 a.m. to 5 p.m.
June 24 to Sept. 7 — 8 a.m. to 9 p.m.
Sept. 8 to Sept. 30 — 8 a.m. to 5 p.m.

Logan Pass Visitor Center
Opening dependent on the opening of the Going-to-the-Sun Road.
through Sept. 7 — 9 a.m. to 6 p.m.
Sept. 8 to Sept. 30 — 9 a.m. to 5 p.m.

Many Glacier Ranger Station
June 15 to Sept. 23 — 8:30 a.m. to 5 p.m.

Glacier National Park Headquarters
Mon. through Fri. — 8 a.m. to 5 p.m.
Phone (406) 888-5441

Exploring Glacier's Backcountry

The best way to see the scenic wonders of Glacier National Park is by hiking or riding into the wilderness. Although not formally designated by Congress, over 95% of Glacier National Park is proposed Wilderness, and is managed as such. Trails are restricted to foot or horseback use only and no wheeled vehicles of any kind are allowed.

Prior to any trip, make sure you have read the safety information contained in this paper. Overnight backpackers or horsepackers are required to stop at a visitor center or ranger station and obtain a free backcountry permit. 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. Permits to camp in the backcountry of Waterton Lakes National Park may only be obtained in person in Waterton on the day of your trip.

Driving the Going-To-The-Sun Road

The Going-to-the-Sun Road was completed in the 1930's as part of a new program to make the nation's parklands accessible to the public by automobile. It was placed on the National Register of Historic Places in 1983 to recognize its significance as an outstanding engineering achievement and its importance in the development of 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 most unique and valuable features. The National Park Service is committed to preserving the road so that it can be enjoyed now and in the future.

Due to the mountainous terrain, the narrowness of the road and the scenic splendor, plan to take 1 1/2 to 3 hours or more to travel the 50-mile distance.

If you prefer not to drive the road yourself, transportation arrangements can be made by contacting the hotels or calling (406) 226-5551 in summer.

Many bicyclists prefer to see the road using their own power. Due to the narrowness of the road, bicycle use is restricted to specific hours on certain sections. More bicycle information is found on page 3.

Road Reconstruction Continues This Summer

Road repair work will continue this year on the Lake McDonald segment of the historic Going-to-the-Sun Road. The work began last fall to correct drainage problems and provide a new surface to this 10-mile section of road. This year's work will consist of installing drains under and alongside the road and replacing some sections where the original fill material was of poor quality.

The road work has been scheduled to avoid as many traffic problems as possible, but will likely result in some delays and other inconveniences. Delays will be limited to 15 minutes or less each. Please bear with us as we work at improving the road.

The road opening and closing dates are dependent on weather.

Road normally closes in mid-October and opens in early June.

Going-to-the-Sun Road Restrictions

Because of hazards associated with this narrow, winding road, vehicle length restrictions are mandatory. From July 1 until August 31, the total length limit for a vehicle and towed unit is 30 feet. Other times, the total length limit is 35 feet. This restriction applies between Avalanche Campground and Sun Point. Please fold or remove extended mirrors when you are not towing. Vehicles should not exceed 8 feet in width.

<table>
<thead>
<tr>
<th>Length Limit</th>
<th>Permits Allowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 35 feet</td>
<td>35 feet permitted</td>
</tr>
<tr>
<td>35 feet</td>
<td>Over 35 feet not permitted</td>
</tr>
<tr>
<td>50 feet</td>
<td>Under 50 feet permitted</td>
</tr>
</tbody>
</table>

May, June, September and October

July and August

Glacier National Park

National Park Service 1916 - 1991

Waterton-Glacier International Peace Park

Exhibit Places in 1983 to recognize its significance as a Place in the National Register of Historic Places. The Going-to-the-Sun Road is also placed on the National Register.
Car Camping

Campgrounds are operated on a first-come, first-served basis. They begin to fill by late morning in July and August. Plan to arrive early to secure a campsite. No advance reservations are accepted. Camping is permitted only at designated locations and no overflow or roadside camping is available or permitted.

All campgrounds have drinking water and most provide restrooms with flush toilets and cold running water. Utility hookups are not provided, but trailer disposal stations are available at the larger campgrounds.

Group camping is available at Apgar, Many Glacier, St. Mary and Two Medicine campgrounds. The fee is $2.00 per person per night.

No shower facilities are provided in campgrounds, but are available for a fee at Rising Sun and Swiftcurrent Motor Inns or at private campgrounds adjacent to the Park.

Glacier Institute

The Glacier Institute provides field classes within Glacier National Park. Courses examine cultural and natural resources, management policies and research efforts. The Institute also contributes to an appreciation of Glacier's aesthetic qualities through the creative arts.

For more information ask for a brochure at the nearest park visitor center, call the Institute office at (406) 888-5215 or write to: Glacier Institute, P.O. Box 1457, Kalispell, MT 59903.

Camping at Two Medicine, 1982

Glacier National Park Pets are allowed on established roads, bike routes or parking areas and are not allowed on backcountry or nature trails. Mountain bikes are only allowed on specific trails in Waterton. Check at the information centre.

Pedaling Your Way Through the Park

Wheeled vehicles are restricted to established roads, bike routes or parking areas and are not allowed on backcountry or nature trails. Mountain bikes are only allowed on specific trails in Waterton. Check at the information centre.

Regulations:

Bicyclists must observe all traffic regulations, keep well to the side of the road and ride in single file only. Pull off road if four or more vehicles stack up behind you.

Due to heavy traffic, from June 15 through Labor Day, two segments of the Going-to-the-Sun Road are closed to bicycle use between the hours of 11 a.m. and 4 p.m. daily. Traffic on the Going-to-the-Sun Road is restricted to two lanes. Bicyclists must observe all traffic regulations, keep well to the side of the road and ride in single file only. Pull off road if four or more vehicles stack up behind you. In low visibility (fog/darkness) a white light in front and a red reflector on the rear of your bicycle are required.

Ranger-led Programs

Rangers lead a variety of programs that are both informative and enjoyable. Join us for an easy stroll, a vigorous all day hike, a restful boat ride or an illuminated evening talk. A complete list of activities is listed in the Nature with a Naturalist publication, available at visitor centers and entrance stations.

Pets and Parks

To protect both your pet and park resources, the following regulations have been established. Pets must be on a leash no longer than 6 feet, under physical restraint or caged while in the park. Pets are not allowed in eating establishments, stores or visitor centers. Pets are not permitted on any trails in Glacier National Park. Pets are allowed on trails in Waterton.

Glacier Weather

Daytime temperatures can be quite warm and summer evenings are usually cool. Be prepared for sudden rain or snow showers at any time of the year. Always carry warm clothing and rain gear when hiking. The table below reflects record maximums and minimums at Park Headquarters.

<table>
<thead>
<tr>
<th>Month</th>
<th>Temperature °F avg</th>
<th>max</th>
<th>min</th>
</tr>
</thead>
<tbody>
<tr>
<td>May</td>
<td>50</td>
<td>92</td>
<td>13</td>
</tr>
<tr>
<td>June</td>
<td>74</td>
<td>98</td>
<td>17</td>
</tr>
<tr>
<td>July</td>
<td>84</td>
<td>101</td>
<td>31</td>
</tr>
<tr>
<td>August</td>
<td>62</td>
<td>99</td>
<td>30</td>
</tr>
<tr>
<td>September</td>
<td>53</td>
<td>94</td>
<td>7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Month</th>
<th>Rain/inches avg</th>
<th>rain minim</th>
<th>Snow/inches avg</th>
<th>snow minim</th>
</tr>
</thead>
<tbody>
<tr>
<td>May</td>
<td>0.3</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>June</td>
<td>0.3</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>July</td>
<td>1.44</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>August</td>
<td>1.62</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>September</td>
<td>2.13</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Touring Glacier National Park Circa 1910

German, Dutch, French, Spanish and Japanese translations of the park map/brochure are available at visitor centers in Glacier.
Rehab Blues – Help us change Waterton’s rehab blues to green!

In 1989/90, Waterton’s main road was reconstructed. Many measures were taken to ensure road improvements did not damage the environment. For example, all topsoil was collected and stored for replacement after construction. Once returned, the soil was stabilized to withstand erosion from Waterton’s famous winds (and rain!). It was also seeded with native grasses. Test sites were set up to check out which seeds and rehabilitation methods worked best. However, all these efforts may be wasted without the cooperation of park visitors. Please avoid driving or pulling over onto roadside areas which are being rehabilitated. This not only crushes any plants trying to regrow there, but also disturbs the soil. The destabilized soils can then be easily blown or washed away. Simple common sense on everyone’s part can help us give those roadside scars a clusive to green up.

Wardens Set Fires

When spring arrives in Waterton, the thoughts of park wardens begin to turn to...fire! Yes! Our ongoing vegetation management program includes the reintroduction of carefully controlled fires to the park. Fires are only carried out if they meet carefully planned "prescription" - closely defined conditions (e.g. relating to wind, moisture) based on extensive fire research. If those conditions aren't met, the burn is not done, since proper containment and efficient burning are essential for success. Evaluation and monitoring during and following the fires provides valuable experience and information about fire behaviour and its effects on the landscape. This is used by park wardens for future planning.

Many plant and animal species benefit from periodic fires. For example, important habitats providing food and shelter for elk are rejuvenated. 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.

Heritage Education Program – Summer 1991

The Waterton Natural History Association offers these one and two-day field, trips, led by expert instructors.

- Prairie Wildflowers .......................... June 8
  - Dr. Keith Shaw.......................... $35
- Bird Shoreline to Treeline .............. June 15
  - Bill McKay.............................. $35
- Geology of Waterton Region June 29,30
  - Jim Hamilton........................... $70
- Beginners’ Nature Photography July 14
  - Howard Snyder.......................... $35
- Sacred Places, Sacred Spaces ............. July 20
  - Dr. Brian Reeves........................ $35
- Alpine Wildflowers ........................ July 27
  - Dr. John Bain........................... $35

Enroll Early, courses are limited to 15 participants.

Bears of Waterton .......................... Aug. 3-4
- Dr. Charles Jenkel.......................... $70
- Vision Quest ................................ Aug. 10
- Dr. John Dornmair........................ $35
- Wildlife: Reading the Signs ............. Aug. 11
  - John Russell............................ $35
- Waterton Photographic Workshop ........ Aug. 17,18
  - Dr. Van Christou......................... $100

For Information:
Waterton Natural History Association,
Box 145, Waterton, AB, T0K 2M0.
Phone (403) 859-2624

Visit Us

The Waterton Natural History Association (WNHA) is a non-profit society cooperating with the Canadian Parks Service. The Association is dedicated to furthering the understanding, appreciation and appropriate use of the park. Proceeds raised through sales or activities of the WNHA are used to support research, educational and interpretation activities and heritage preservation.

The WNHA operates the Heritage Centre where visitors can discover a wealth of information about the park, its people and wildlife. The Centre, in the townsite, interprets the park’s heritage with displays, artifacts and photos. Don’t miss seeing a mural by well-known artist Don Frache of Lethbridge. The mural features “Koosmust” Brown with his wife and two guides; overlooking the park from the Prince of Wales Hotel hill. Check out our photo albums depicting the history of the park to the present day.

Rotating shows fill the Centre’s art gallery with works ranging from photography to wood carving. Youngsters can get a hands-on introduction to the wonders of the park in the Family Corner. Also available are our popular “Discovery Packs” which can be rented for $20.00/day.

The WNHA publishes and supplies a selection of over 150 books on natural and cultural history. Two new publications are a history of the Prince of Wales Hotel and the award winning Waterton and Northern Glacier Trails for Hikers and Riders (revised edition). These new books will be available in our Heritage Centre Bookstore, the Park Information Centre or by mail order.

Throughout the summer, the WNHA hosts several special events. The Annual Spring Barbecue on June 8 will be held at the Bayshore Inn. Longtime Watertonian Florence Dilatush will be honoured. It will be a time for memories and guests can enjoy a tasty dinner. On August 4, tale-spinners gather to give their best for the ”Old Time Story Telling Contest”. A popular event to close off the summer season is the Heritage Ball on September 7 at the Prince of Wales Hotel.

Those interested in supporting the goals and work of the WNHA are invited to become members. Individual Annual ($18.00), Individual Lifetime ($20.00), Family Lifetime ($25), Corporate Lifetime ($100) or Patron Lifetime ($500).

For further information, call JoAnn McIner at (403) 859-2624 or write: Waterton Natural History Association, Box 145, Waterton, AB, T0K 2M0.

Phone (403) 859-2624
Read This Page Carefully

Mountainous Terrain
Many accidents occur when people fall off trails, roadsides, or venturing onto very steep slopes. Stay on designated trails and do not go beyond protective fencing or guard rails. Supervise children closely in such areas. At upper elevations, trails should be followed carefully, noting directions given by trail signs and markers. Stay off snowfields. Sliding on snow can result in serious injuries.

Dangers in the Lakes and Streams
Swift cold glacial streams and rivers, moss-covered rocks and slippery logs all present dangers. Children, avid photographers, boaters, rafters, swimmers and fishermen have fallen victim to these rapid, frigid streams and deep, glacial lakes. Use extreme caution near water.

Precautions:
- Don’t cross swift-flowing streams.
- Don’t walk/play on slippery rocks or logs.
- Don’t stand up in a boat or lean over the edge.

Hypothermia
Hypothermia, the “progressive physical collapse and reduced mental capacity resulting from the chilling of the inner core of the human body,” can occur even at temperatures above freezing. Temperatures here can vary quickly and dramatically. Sudden mountain storms can change a warm and pleasant hike into a drenching, bitterly cold and life-threatening experience. People in poor physical shape or who are exhausted are particularly at risk.

Warning signs include:
- uncontrolled shivering
- slow, slurred speech
- memory lapses and incoherence
- lack of coordination (immobile or fumbling hands, stumbling, stumbling gait)
- drowsiness, exhaustion

Immediate treatment:
- seek shelter from weather and remove all wet clothes
- give warm drinks
- build a fire
- get the victim into dry clothes or a sleeping bag with another person.

If victim is semi-conscious or worse, get professional help immediately. Keep victim awake, strip victim and yourself, and get into sleeping bag making skin to skin contact.

Prevention
Prevent hypothermia by using water resistant clothing before you become wet. Minimize wind exposure and if your clothes become wet, replace them. Avoid sweating in cold climates by dressing in layers, rather than in a single bulky garment.

Ticks
Ticks are most active in spring and early summer. Most bites don’t result in illness, but several serious diseases can be transmitted. Completely remove attached ticks and disinfect the site. If rashes or lesions form around the bite, or if unexplained symptoms occur, consult a physician.

Muskegs
Muskegs can be breeding areas for black flies and mosquitoes, and provide a habitat for ticks. Be aware of the risk and use insect repellent (DEET), long sleeves and pants, and closed footwear.

Medical Services
If an injury is sustained, or sudden illness occurs, contact a Ward or Ranger for information and assistance regarding emergency medical care. When traveling to a hospital, call before setting out, to insure adequate staffing on your arrival.

Area Hospitals
- Kalispell Regional Hospital: 330 Sunny View Lane, Kalispell, MT (406) 752-5111.
- North Valley Hospital: Highway 93 North, Whitefish, MT (406) 862-2503.
- Glacier County Medical Center: 822-2nd St, E., Cut Bank, MT (406) 873-2251.
- Teton Medical Center: 915 4 NW, Choteau, MT (406) 466-5763.
- Cardston Hospital: Cardston, Alberta, Canada (403) 653-4411.
- Pincher Creek Hospital: Pincher Creek, Alberta, Canada (403) 627-3533.

Hygiene
Some common sense can solve many hygiene problems you may encounter in the park. Use approved wastewater systems. Use pit toilets or the nearest designated toilet facilities. If you plan to camp in the backcountry, follow recommendations received with your permit. The easiest effective water treatments are to either boil or use an approved filter.

Water and Glacier form a wilderness filled with natural wonders and very real hazards. Reduce your risk of injury or death by taking a few minutes to learn about these hazards. In an emergency contact park staff at the numbers listed below.

Emergency #'s
- Waterton-Lakes National Park (403) 599-2477
- If no answer dial 911

Visitor Alert!
Your visit may be marred if you violate park rules. Law enforcement officers strictly enforce regulations to protect you and the park. These regulations were established to preserve the quality of your park experience and prevent possible tragedy from ending your vacation. Please help keep our contacts pleasant by paying special attention to park regulations. Be considerate of others, use common sense and obey park regulations. The most frequent offenses are listed below.

- Speeding
- Improper Food Storage
- Camping Outside of Designated Sites
- Unleashed Pets or Pets in Closed Areas
- Feeding or Disturbing Wildlife
- Removing Natural and Cultural Features (flowers, artifacts, cones, etc.)
- Improper Passing
- Possessing an Open Container of Alcohol in a Motor Vehicle
- Improper Disposal of Refuse
- Driving While Intoxicated

Ticks
- Don’t stand up in a boat or lean over the edge.
- Don’t ford or wade swift-flowing streams.
- Don’t walk/play on slippery rocks or logs.
- Don’t stand up in a boat or lean over the edge.

Hypothermia
- Warning signs include:
  - uncontrolled shivering
  - slow, slurred speech
  - memory lapses and incoherence
  - lack of coordination (immobile or fumbling hands, stumbling, stumbling gait)
  - drowsiness, exhaustion

- Immediate treatment:
  - seek shelter from weather and remove all wet clothes
  - give warm drinks
  - build a fire
  - get the victim into dry clothes or a sleeping bag with another person.

- Prevention
  - Prevent hypothermia by using water resistant clothing before you become wet.
  - Minimize wind exposure and if your clothes become wet, replace them.
  - Avoid sweating in cold climates by dressing in layers, rather than in a single bulky garment.

Medical Services
- If an injury is sustained, or sudden illness occurs, contact a Ward or Ranger for information and assistance regarding emergency medical care.
The Camas Pack - Wolves Return to Montana

A group of wolves called the Camas Pack lives in an area of about 400 square miles in the North Fork of the Flathead River. Approximately 80 percent of their home range is within Glacier National Park. The Camas Pack is the successor of the group called the Magic Pack which made national news by being the first wolves in the region for over 50 years.

The Magic Pack produced its first litter in southeast British Columbia in 1982. There have been litters of pups born every year since 1985, sometimes in the park and sometimes to the north. The Camas Pack is to Glacier in 1989, but the pups did not survive. In 1990 two litters were born and the wolves were successful in raising 12 pups. Success of this small group is critical to the recovery of wolves in this area.

Gray wolves can actually be gray, but they also range in color from white 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 weigh about 80-110 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 have much longer legs 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 much larger than their canid (dog family) relatives. While a coyote track is usually 2 to 2 1/2 inches long, a wolf track is typically 3 3/4 to 4 1/2 inches wide and 4 1/2 to 5 1/2 inches long—about the size of an adult human hand print. The trademark of the wolf is its howl. It is a long, low-pitched, resonant cry. You may have heard the coyote's higher pitched yapping and singing. This sound is definitely different.

If you have seen or heard an animal that you believe was a wolf and would like assistance in interpreting what you have seen, park staff will 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 sightings of wolves, wolf tracks or wolf howls. Please note the location and measurements of any sign as exactly as possible and report them to any park information station.

Mysteries Revealed

Where do elk spend their summers? What do deer eat? Where do moose give birth to their young? Are elk competing for range with cattle? These are typical of the important questions researchers are trying to answer about Waterton/Glacier ungulates. Much of the research can only be done through joining forces with other agencies.

Some of the research in Glacier National Park is done with the Cooperative Park Studies Unit. Joint projects with the University of Montana serve management and educational goals. You may notice that some elk, moose and deer have been radio collared to provide some of the answers we need to better understand and manage them.

Waterton Lakes National Park is participating in a 3-year study to provide information on elk numbers, movements and behaviour in the foothills region of Alberta, south of the Crowfoot Pass. Data will be related to factors such as season, weather, human activity, industrial development and range condition. A better understanding of elk is needed at a time when provincial officials and local residents are concerned about the impact of elk on crops and the increases in industrial development and human activity.

Past studies show that Waterton provides key winter elk range but little is known of their habits the rest of the year. It is expected up to 30 elk will be trapped and fitted with radio or colour coded collars so as to track their movements in and north of the park. Analysis of droppings will also shed light on food preferences.

Agencies involved in the study include the University of Alberta, Alberta Fish and Wildlife, the Energy Resources Conservation Board, Shell Canada and various hunting associations. If wide-ranging wildlife such as ungulates are to survive, there is an increasing need for cooperative studies to support integrated management between national parks, surrounding landowners and state and provincial agencies.

Keep wildlife wild. Your food kills animals. They may lose their desire for natural foods and become beggars - easy prey for car wheels and predators. Feeding park animals is illegal.
Mountain Goats

Visitors to Glacier are more likely to see goats than bighorn sheep, especially in the Logan Pass area. Power shoulders muscles give the goat a humped appearance, but allow it to climb near vertical slopes. In early summer, the Goat Lick on Highway 2 provides a great spot to view these shaggy beasts. In Waterton, goats are occasionally seen in the Goat and Roder Lakes area.

Look for large, very white animals, often with a ragged appearance from shedding their coat. They feed on grasses, sedges, mosses, lichen and even fir and pine needles. Both billies and nannies have rapier-sharp, black horns.

Males and females come together mainly during the November-December rutting season, travelling in separate bands the rest of the year. A six month gestation period results in one or occasionally two kids.

To avoid the approach of humans, animals may be forced to expend precious energy, leaving them in a weakened state or forced out of sheltered areas.

Whatever the season, be observant. Watch the animal for signs of increased alertness or fear. Remember, if you cause a change in the animal’s behavior, you are too close!

On a global scale, as wildlife numbers diminish, their value on the black market increases. Poaching (illegal hunting, trapping or collecting) in and around national parks worldwide is at an all time high. Whatever the season, be observant. Watch the animal for signs of increased alertness or fear. Remember, if you cause a change in the animal’s behavior, you are too close!

Wolves may attempt to prey on goats, but they have a tan coat and beigehorns. Bighorn sheep have horns which are never shed, meaning their age can be told by their horn size. Only rams have the huge, curving horns that give the species its name.

Bighorns prefer grasses, but may eat shrubs and wildflowers. They are often found on moderately sloped grassy meadows near cliffs. Their excellent climbing skills help them to evade predators.

Bighorn Sheep

Dramatic head-crashing clashes between rams highlight the mating season in November and early December. Visitors to Waterton are more likely to see sheep than mountain goats. Good places to look are the townsite or the Red Rock Parkway and Canyon. In Glacier, scan the slopes in the Many Glacier area to find them. Females and lambs group together so are usually easier to spot.

Bighorns are often confused with mountain goats, but they have a tan coat and beigehorns. Bighorn sheep have horns which are never shed, meaning their age can be told by their horn size. Only rams have the huge, curving horns that give the species its name.

Bighorns prefer grasses, but may eat shrubs and wildflowers. They are often found on moderately sloped grassy meadows near cliffs. Their excellent climbing skills help them to evade predators.

Mountain Lions

Mountain lions are big, beautiful, wild cats. They are known by many names, including cougar, puma and panther. They have long tails, and have a distinguishing coloration. They are usually tan with black or white markings. They are a vital part of a dynamic and diverse ecosystem.

This is mountain lion country. To protect yourself and your children, use many of the same precautions as you would to ensure your safety with bears, with a few notable exceptions. Make noise when hiking to avoid surprising a lion. Do not hike alone and keep your children close to you. If you do encounter a lion, do not run. Talk calmly, aver your gaze, stand tall, and back away.

Do not crouch and do not turn away. If attack seems imminent, act aggressively. Unlike bears, lions may be scared away by being struck with rocks or big sticks, or by being kicked or hit. Lions are primarily nocturnal, but have attacked in broad daylight. Mountain lions rarely prey on humans, but such behavior occasionally does occur; children and small adults are particularly vulnerable.

Mountain lions prefer to eat deer, but like most predators, they will eat what is available. They have been known to prey on elk, small mammals and domestic animals.
Traveling the Trails in Bear Country

Most hikers never see a bear, but all of Waterton/Glacier is Bear Country. Whether you plan to hike for days or just a few hours, take the time to learn about the special conditions presented by bears.

Do not approach bears! Bears are exceptionally fast and can run 180 feet in 3 seconds. A minimum safe distance from bears is 500-1000 feet, although there is no guarantee.

Don't surprise a bear, let them know you are coming. Bears will usually move out of the way if they hear people approaching, so make noise. Bells are not as effective as many people believe; talking loudly, clapping hands and calling out are all better. Sometimes trail conditions make it hard for bears to see, hear or smell approaching hikers. Be especially careful hiking by a stream, against the wind or in dense vegetation; a blind corner or a rise in the trail also require special attention by hikers.

Never run from a bear. If you run from a bear you may look like food.

Inform yourself about where you are hiking. Park staff can tell you of recent bear activity in the area where you plan to hike. They can also help you identify signs of bear activity like paw prints, torn-up logs, trampled vegetation, droppings and turned patches. Cow parsnip or glacier lily fields.

Although most hikers do not encounter bears, people have been seriously injured, mauled and killed by bears. Remember all bears are dangerous and should be respected equally. Females with cubs, bears with a fresh kill or a bear habituated to human food are the most dangerous.

When hiking in bear country always leave an itinerary with friends or in your car which includes beginning and ending times. Never hike alone or at night, and never feed any animals or leave food or garbage unattended.

What do you do if you see a bear? There is no one right answer, it will depend on the bear. Just as people react differently to each situation, so will bears. Bears may appear tolerant of people and then attack without warning. A bear's body language can help determine its mood. In general bears show agitation by swaying their heads, huffing, and clacking their teeth. Lowered head and laid-back ears also indicate aggression, as does raised hair on the hump. Bears stand on their hind legs to get a better view.

If you encounter a bear the following suggestions may help:
- Talk quietly or not at all. Back away slowly, but stop if it seems to agitate the bear.
- Bend at the knees to appear smaller, use peripheral vision. Bears interpret direct eye contact as threatening.
- A charge may only be a bluff and the bear may stop. If the bear does not stop, fall to the ground in a fetal position to reduce the trauma of an attack.

Animals who are fed become demanding and aggressive, can cause personal injury and must be destroyed!

Camping and Bears
- Odors attract bears. Regulations require that all edibles (including pet food), containers (empty or not) and coolware be stored in a hard-sided vehicle, food locker, or hung from a food pole or cable when not in use day or night.
- Improperly stored and unattended food will be confiscated and the owner cited.
- All trash must be placed in bearproof containers.
- Inspect campsite for bear sign and for careless campers nearby.
- Parks, especially dogs, must be kept under physical restraint.
- Use a flashlight at night when walking in the campground.
- If a bear visits your campsite, inform park staff immediately.

Comparing the Grizzlies With Black Bears - Learn To Tell the Difference

**Grizzly Bear**
- Currently listed as a threatened species in the United States.
- Life Expectancy: 15 to 20 years.
- Height: 6 feet or more when standing on hind legs; 3 to 4 feet when standing on all fours.
- Weight: Up to 1,400 pounds, usually 300-600 pounds.
- Color: Blond to nearly black. Sometimes silver-tipped, giving a “grizzled” appearance.
- Other Features: Dished face. Hump of heavy muscle over the shoulders. Claws often 4 inches long. Mediocre vision, but excellent sense of smell. Fast runner, able to cover 180 feet in just 3 seconds! Enters den in November to hibernate until spring.
- Food: Omnivorous, with only 10-20% of its diet coming from meat, mainly caribou and rodents. Also eats huckleberries, cow parsnip, glacier lily bulbs and wet meadow plants and grasses, foraging primarily around dawn and dusk.
- Offspring: Mates in early summer. One to four cubs, each weighing about one pound, are born mid-winter.

**Black Bear**
- Life Expectancy: 15 to 20 years.
- Height: 2 1/2 to 3 feet when standing on all fours.
- Weight: Full-grown males average 220 pounds. Adult females average 140 pounds.
- Color: Black, brown, cinnamon or blond. Color never reliably distinguishes a black bear from a grizzly. Muzzle sometimes a lighter color, often a white "V" is visible on the chest.
- Other Features: Generally appears less massive than the grizzly bear. Profile more “Roman-nosed,” and claws much shorter (about 1 1/2 inches long) than the grizzly’s. Also a fast runner with a keen nose but mediocre eyesight. Hibernate throughout winter, generally from about October or November to some time in April or May.
- Food: Omnivorous, eating almost any available food item. Berries, new growth, bulbs, insects, caribou and tree cambium are all favorite foods for this dawn, dusk and night feeder.
- Offspring: Mates in late spring to early summer. Gestation is 220 days with average litter size of 2 cubs, born in January to early February.

Photography and Wildlife

Whether bear (black or grizzly), mountain lion, deer, squirrels, marmots, or any other species, all animals can present a very real and painful threat. Enjoy them from the safety of your car or from a safe distance with a telephoto lens (200mm or longer). Remember that feeding, harassing, or molesting any wildlife is strictly prohibited and subject to fines.

All photographers should be cautioned that wildlife can be very unpredictable, especially females protecting their young. A photographer was killed in Glacier in 1987 while approaching grizzly bears. Maintain a safe distance. You are too close if the animal detects your presence and moves, or appears disturbed.

Commercial photographers need to follow park regulations that govern photography and filming.
- In Glacier National Park advertising a product or service, using models, sets or props, or creating a potential disruption to visitors and/or damage to park resources are situations that require a non-fee permit. Obtain permits from park headquarters, West Glacier, Montana. For further information on commercial photography permits in Glacier National Park, call (406) 888-5441.
- In Waterton Lakes National Park commercial photographers need to check with the Superintendent’s office for further information.

Visit support of park regulations regarding food availability and storage have reduced bear problems in the past. Your help is vital to continue this success.
International Adventurer

Born in England, his explorations took him to battlegrounds in the Crimea, remote mountain passes in Canada, thick woods in the U.S.A., a wild river in China and bird-watching in Japan. He lived his final years in New Mexico. Who was he? Most Canadians and Americans couldn’t tell you, but many Japanese would immediately identify him as Lt. Thomas Blakiston.

Why mention him here? Well, those explorations in Canada and the United States included the Waterton/Glacier area. In fact, Blakiston is responsible for naming the Waterton Lakes (after an eccentric 19th century British naturalist). In turn, Waterton’s highest mountain, a waterfall and a creek now bear Blakiston’s name.

What brought him here? In 1856, Lt. Blakiston was assigned to the Palliser Expedition - set up to explore and assess the value of vast expanses of Western Canada. In 1858, his assignment took him to the southern passes of the Rockies. His explorations in this area took him over the Continental Divide and across the international boundary into the United States. After passing through the northeast corner of what is now Glacier National Park, he entered what is now Waterton Lakes National Park through the South Kootenay Pass. Camped by the lakes he named, he found the scenery to be “grand and picturesque”.

In 1860, Blakiston headed to China, where he organised an expedition up the Yangtze River. He charted the river 900 miles further inland than any westerner before him. Later, he moved to Japan. His interest in nature led him to compile a book on the birds of Japan which for years was considered the standard work on the subject. Blakiston is well known to Japanese schoolchildren and a plaque honouring him can be found on a mountain top there.

With his reputation as a truly international explorer and naturalist well established, Blakiston retired to New Mexico to continue his bird studies. He died in San Diego at the age of 58.

Why mention him now? Lt. Blakiston died in 1891. What better time is there than this 100th anniversary of his death to share his explorations and appreciate his achievements? You’re invited to find out more about this remarkable man by attending one of the special interpretive programs being held in his honour in Waterton Lakes National Park. Offered throughout the summer, they include an evening theatre program and a short history walk to Blakiston Falls. Check the Waterton Interpretive Programs Schedule for details.

A special “Heritage Day” hike honouring Blakiston will also take place in Waterton on Monday, August 5th. You’re invited to join Bruce Haig, noted local historian and Director of the Waterton Natural History Association, for a day-long hike retracing Blakiston’s steps from the South Kootenay Pass. Check at the Waterton Information Centre for details.

Access for All

A full listing of facilities and programs accessible to disabled visitors to the parks is available at the Apgar Visitor Center, St. Mary Visitor Center, the Waterton Information Centre, entrance stations and in the Nature with a Naturalist publication.

The Apgar and St. Mary Visitor Centers are fully accessible. The following locations are accessible by wheelchair:
- The Trail of the Cedars
- The International Peace Park Pavilion
- The Linnit Lake Trail, near Waterton Townsite
- The Waterton Townsite Trail
- Cameron Lake Day Use area

Museum of the Plains Indians

Open June 1 to September 1, 7 days a week from 9:00 a.m. to 5:00 p.m. Free admission. July 7 is the museum’s 50th Anniversary. The guest speaker will be Dr. John C. Ewers, the first Curator.

North American Indian Days, a summer celebration of the Blackfeet Nation is July 11-14. All visitors are welcome.
Waterston Lakes Services & Facilities

Eating Facilities
- The Prince of Wales Hotel - Open 9 a.m. to 10 p.m. daily
- Prince of Wales Hotel Gift Shop - Open 9:30 a.m. to 10 p.m. daily
- Waterston Lakes Open House - movies
- Waterston Park Momey Exchange - Tamarack Mall
- Waterston Lakes Open House - movies
- Waterston Park Momey Exchange - Tamarack Mall

Service Stations
- Kootenai Gas - phone 859-2667
- Pat's CAA/AAA Affiliate - phone 859-2286

Transportation
- Mountain Sunset Tours - shuttle service - Tamarack Mall
- Waterston Inter-Nation Shoreline Cruises - phone 859-2362
- Transportation - phone (403) 859-2362; Operate May 4 to Sept 30, weather permitting.
- Tours from the townsite to Great Flat Island U.S.A., 2 hours with 1/2 hour stop at Montana Visitor Center - visit office at Marina for details
- Depart Waterston 9:00, 10:00 a.m. and 1:00, 4:00, 7:00 p.m. - daily
- Buses will also run daily between townsite and Crandell Campground.

Interpretation Programs
- Enjoy a relaxing hour of information and entertainment at an evening indoor theatre program; explore Waterston Lakes from the Park first-hand on a guided event; check out a mobile exhibit; become an International Junior Naturalist or, laugh it up a puppet show! There's lots to see and do and discover. All programs are free.
- In Waterston, to find out more...
  - ask Waterston Lakes National Park Interpretation Centre staff
  - ask Park staff for our program schedule (which will supply you with details on program topics, times and locations)
  - check a Waterston Interpreters Theatre bulletin board (Pall Theatre is just across from Cameron Falls and, Crandell Theatre is just across from "E" section of the Crandell Campground)

In Glacier, to find out more...
- check the Glacier National Park time sheet, natural history and other destinations
- check a Waterton Interpreters Theatre bulletin board (Pall Theatre is just across from Cameron Falls and, Crandell Theatre is just across from "E" section of the Crandell Campground).

Tune in for special information and stories - 1490 on your radio
Apgar

Located 2 miles north of the West Entrance (West Glacier). Apgar is open on weather conditions; please check location for exact dates.

Bicycle Rental
- Village Inn Motel May 17 - Sept. 22 7:00 AM - 9:30 PM

Boat Rentals
- McDonald Boat Co. May 8 - Sept. 22 9:00 AM - 6:00 PM Extended hours 6/5-9/17
- Rowboats, canoes, and boats with 6 hp motors. Fishing equipment rental. Call (406) 888-5227.

Camper Services
- Edleys Campstove May 25 - Mid-Sept. 8:00 AM - 9:30 PM

Food and Beverage
- Village Inn Motel May 17 - Sept. 22 7:00 AM - 9:30 PM
- The Cedar Tree Deli June 8 - Sept. 22 8:00 AM - 9:00 PM

Gift Shops
- Edleys Campstove May 24 - Sept. 22 8:00 AM - 9:30 PM
- *From July 1 to August 31 8:00 AM - 9:30 PM
- *The Cedar Tree Deli 8:00 AM - 9:00 PM

Rising Sun

Located 6 miles inside of East Entrance (St. Mary). Rising Sun Motor Inn open from June 14 - 10:00 AM on September 3

Campground
- Rising Sun Motor Inn June 14 - Sept. 22 8:00 AM - 9:00 AM
- Campers - groceries, fishing and camping supplies, firewood, and gifts.

Food and Beverage
- Coffee Shop & Snack Bar June 14 - Sept. 22 7:00 AM - 9:00 PM
- Gas Station Rising Sun Motor Inn June 14 - Sept. 22 8:00 AM - 5:00 PM

Lodging
- Rising Sun Motor Inn June 14 - Sept. 22
- Motel and Cabins - Reservations call Glacier Park, Inc. USA (406) 226-5551 Canada (403) 386-3400
- In Montana toll-free 1-800-332-9351.
- Off season (602) 248-6000

Scenic Launch Tours
- Glacier Park Boat Co. June 15 - Sept. 22
- Naturalist-guided tours available on the 9 AM and 2 PM cruises beginning mid-June. Check location for details.
- All-day rides 8:00 AM - 8:00 PM
- 1 hour rides Available throughout the day
- All-day rides 9:00 AM - 9:00 PM
- 2 hour rides 8:00 AM - 1:00 PM
- 3 hour rides 8:00 AM - 3:00 PM

Two Medicine

10 miles from East Glacier

Campground
- Two Medicine Campground June 8 - Sept. 2 8:00 AM - 8:00 PM
- Campers - groceries, fishing and camping supplies, firewood, and gifts.

Food Service
- Two Medicine Campground June 8 - Sept. 2 8:00 AM - 8:30 PM
- Village Inn Motel May 17 - Sept. 22 8:00 AM - 9:30 PM
- Reservations call Glacier Park, Inc. USA (406) 226-5551; Canada (403) 236-3400
- In Montana toll-free 1-800-332-9351.
- Off season (602) 248-6000

Scenic Launch Tours & Boat Rental
- Glacier Park Boat Co. June 8 - Sept. 2
- Naturalist-guided tours available on the 9 AM and 2 PM cruises beginning mid-June. Check location for details.
- All-day rides 8:00 AM - 8:00 PM
- 1 hour rides Available throughout the day
- All-day rides 9:00 AM - 9:00 PM
- 2 hour rides 8:00 AM - 1:00 PM
- 3 hour rides 8:00 AM - 3:00 PM

Many Glacier Area

21 miles north and west of East Entrance. Many Glacier Hotel from July 7 - 10:00 AM on September 9. Swiftcurrent Motor Inn open June 21 - 10:00 AM on September 3

Campsites
- Swiftcurrent Campsite June 21 - Sept. 3 8:00 AM - 9:00 PM
- Sept. 4 - Sept. 23 or until campground closes.

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

Food and Beverage
- Many Glacier Hotel June 7 to Sept. 8
- Dining Room Breakfast 6:30 AM - 9:30 AM. Lunch 12:00 - 2:00 PM. Dinner 5:00 PM - 9:00 PM.
- Heidi's Snack Bar 8:00 AM - 11:00 PM
- Swiftcurrent Lodge Lodging 8:00 AM - 9:00 PM
- Village Inn Motel May 24 - 10:00 AM
- St. Mary, Lake McDonald 9:00 PM - Midnight
- Swiftcurrent Motor Inn June 14 - Sept. 22 8:00 AM - 7:00 PM
- Coffee Shop 7:00 PM - 9:00 PM

Services Adjacent to the Park

East Glacier: Food, lodging, biker's lodging, service station, groceries, gift shops, art gallery, golf course, and rentals.

West Glacier: Food, lodging, service station, coin laundry, groceries, sporting goods, gift shops, horse rentals.

Toboggan Chalets

Backcountry Chalets
- Granite Park and Sperry Chalets
- Lodging July 15 - Sept. 1 by reservation only. Contact Belton Chalets, Inc. at their office in West Glacier or call (406) 888-5511. Opening will be July 1 if weather and trail conditions allow. Food Service - A la carte food service available. 11:00 AM - 5:00 PM daily.

Backpacking & Hiking

Greenleaf Guides

Guided day hikes and backpacking trips into Glacier's backcountry for one to seven days. Custom trips available. Camping equipment available for rent at their West Glacier office. Write Box 355, West Glacier, MT 59936 or call (406) 888-5553.

Transportation

Scheduled transportation is available in park lodges and motor inn areas, as well as to East Glacier, Belton Station (West Glacier), Waterton, and St. Mary, based on location operating dates. Schedule is available at all Glacier Park, Inc. locations. For advanced reservations, call (406) 226-5551 USA or (403) 236-3400 Canada. In Montana call toll-free 1-800-332-9351.
Waterton/Glacier International Peace Park

**Speed Limits**
- **Glacier**: 45 mi./hr
- **Waterton**: 80 km/hr
Exceptions in both parks where posted.

**Map Legend**
- International Boundary
- Continental Divide
- Paved Road
- Unpaved Road
- Backcountry Chalet
- Boat Cruise / Boat Rental
- Boat Launch Ramp
- Campground
- Customs Station
- Food Service
- Horseback Rides
- Lodging
- Mileage Marker
- Nature Trail
- Picnic Area
- Ranger Station / Warden Office
- Visitor Center
- Wheelchair Accessible Facilities

**Border Crossings**
- **Chief Mountain**
  - May 18 to May 31: 9 a.m. to 6 p.m.
  - June 1 to Sept. 14: 7 a.m. to 10 p.m.
  - Closes Sept. 14
- **Piegan/Carway**
  - May 16 to Oct. 31: 7 a.m. to 11 p.m.
  - Nov. 1 to May 15: 9 a.m. to 6 p.m.
- **Trail Creek**
  - June 1 to Oct. 31: 9 a.m. to 5 p.m.
  - **Roosville** (Hwy 93 north of Whitefish, MT)
    - Open 24 hours