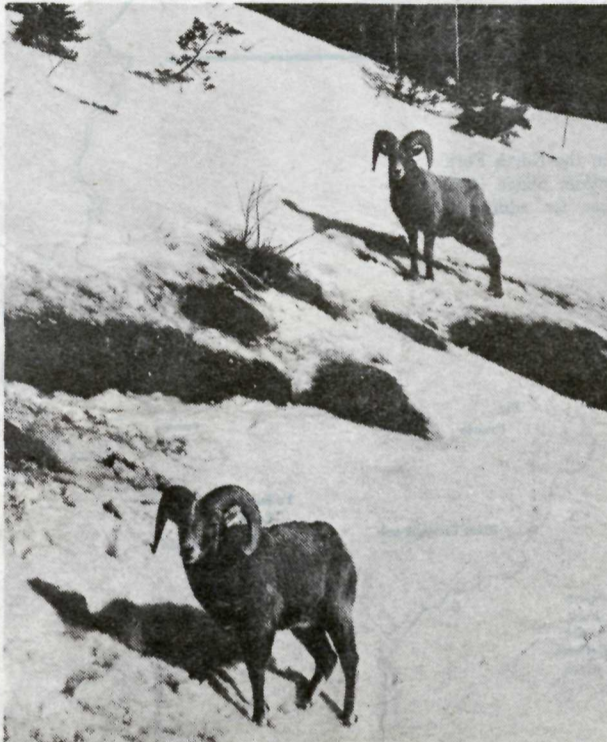


GLACIER TIMES

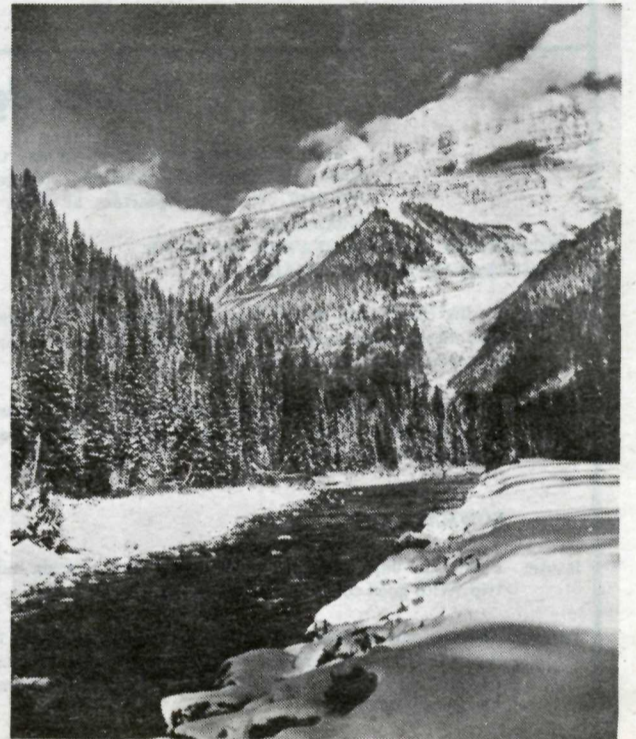
Glacier National Park Newspaper
WINTER ISSUE
 Cross-country Skiing Trails Inside



Mel Ruder photo



Mel Ruder photo



Mel Ruder photo



Pete Martinelli photo

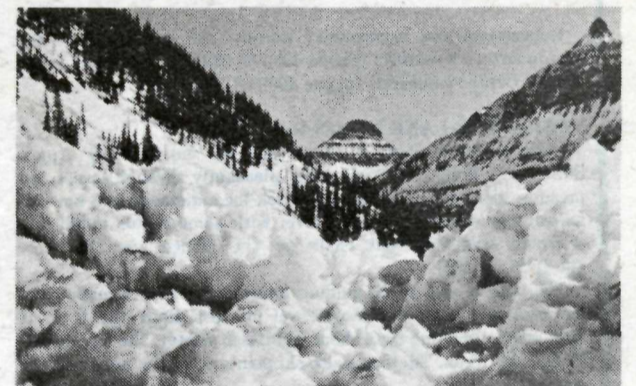
Ski if you will but remember that courage and strength are naught without prudence, and that a momentary negligence may destroy the happiness of a lifetime. Do nothing in haste. Look well to each step and from the beginning think what may be the end. Edward Wymber

Winter Spirit

A blanket of winter white seals Glacier from all but those willing to meet nature on nature's terms...not to conquer but to co-exist in harmony and to learn...

"The earth does not belong to us, but we to the earth." Rolf Edberg

I take my mountains as music. The mountains wake a singing undercurrent, then overtones, then sing with you.



Mel Ruder photo

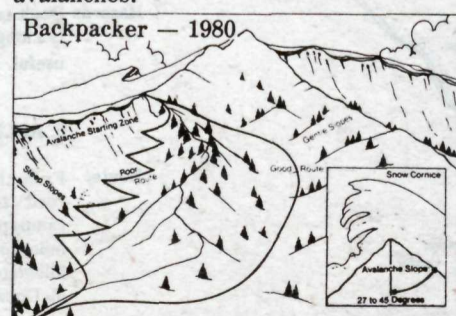
AVALANCHE - BEWARE

As snow began to fall on the steep, open slope, Diane and Greg were traversing back and forth trying to stay out of the wind. It was midwinter and Greg was thinking about how cold it was getting. He noticed some cracks in the snow above them, but they did not mean anything until the snow under him began to slide. Looking up he saw a huge area of snow above him sliding down. Panicking, he called for Diane, but all he could see was snow. What did these cross-country skiers do wrong?

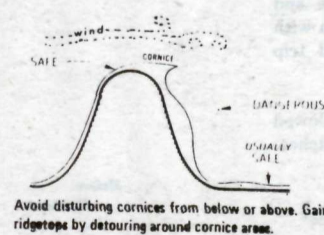
First they should have noticed the changing weather conditions, which increase avalanche danger. Other indications of increased danger are a rate of snowfall greater than one inch an hour, more than a foot of new snow on the ground, or sustained winds of 15 miles per hour or more.

Most avalanches occur during or after

storms with north-facing slopes being more dangerous in midwinter and south-facing ones more prone to slides on spring or sunny days. Rainstorms or spring weather with snow cover result in free percolating water causing wet snow avalanches.



Diane and Greg should have been skiing on a ridgetop, slightly on the windward side where the snow was more compacted and less deep. Open slopes should have been avoided, but when they had to be



traversed, the skiers should have crossed quickly utilizing islands of safety afforded by areas of dense timber, ridges or rocky outcrops. If they couldn't travel on a ridge, the next safest route would have been in a valley, far from the bottom of any slopes.

The cracks in the snow that Greg saw were avalanche fracture lines indicating a loose slab of snow. Similar cracks may be seen on cornices, overhanging ledges of snow, and on ridgetops. Descending or ascending dangerous slopes is best done by traveling straight up or down the

slopes and not traversing back and forth across it.

Realizing the hazardous conditions of the slope, one person should have skied across at a time. Also they should have removed their ski pole straps, loosened all equipment, put on mittens, cap, fastened their clothing and attached an avalanche cord to their waists.

Once caught in the avalanche, Greg should have remained calm and discarded his equipment instead of panicking. He also could have made swimming motions as he tried to work his way to the side of the avalanche and tried to stay on top of the snow. As he started to come to a stop he could have held his hands in front of his face to make an air space in the snow.

Greg was lucky because he slid only a few feet and stopped on the surface. Diane

[continued on back page]

Common hazards and problems for winter touring in Glacier

- 1. Ice on flowing streams is never reliable. Avoid it. Ice on lakes is frequently unstable due to fluctuating water levels, undercutting by rivers and streams entering the lake, and strong wind winds.
- 2. Wind - any exposed area, particularly on the east side which is apt to have sustained high winds and whiteouts.
- 3. Test snowbridges and cross one at a time.

Safety tips

- 1. Never ski or snowshoe alone.
- 2. Tell a friend or a ranger where you are going, by what route and when you will be back.
- 3. Be familiar with your equipment, have necessary replacements and be sure everything is in top condition.
- 4. Know your capabilities.

Polebridge

Most distances are too great for day trips in the North Fork Valley. Inquire at the Polebridge Ranger Station, phone (406) 888-5416 or at Headquarters at West Glacier for additional information.

POLEBRIDGE RANGER STATION TO RIVER CAMPGROUND AND BIG PRAIRIE:

Route: To Big Prairie and return is six miles along the unplowed road. Start on the park road at Polebridge Ranger Station, go north and return the same way.

Terrain: Level with a general elevation of about 3,600 feet, an easy day trip. Snow in the North Fork is generally drier than around Lake McDonald.

BOWMAN LAKE

Route: Follow the unplowed road to Bowman Lake - a six mile trip. With good conditions, this is about an hour trip.

Terrain: There is only a 400 foot elevation gain from Polebridge to Bowman Lake but there are plenty of ups and downs. Some downhill runs can be treacherous when icy and when tracked by many skiers.

Hazards: Stay off lake ice unless sure of safe thickness. Stay away from outlet area.

West Glacier

Information and backcountry permits are available at Park Headquarters weekdays (phone 406-888-5441) or at Apgar Information Center weekends (phone 406-888-5512).

1. SKI LOWER LAKE McDONALD CREEK

Looking for a short cross-country ski outing? Try Apgar Ski-Nature Trail. This trail winds pleasantly through forest and meadow along lower McDonald Creek for a distance of 4 km (2.5 miles). The terrain is mostly level with some minor uphill and downhill stretches that challenge the novice and the more the trail anytime.

The trail is also a self-guiding nature trail with a leaflet and markers that point out features of interest along the trail. It discusses interesting facts about animals in winter, the forest, and McDonald Creek. There are also ski pointers for the novice in the leaflet.

Pick up a copy of the leaflet at Apgar Information Center where the trail begins. The center is open on weekends, but you can go on the trail anytime

2. SACRED DANCING CASCADES

Route: Leave from the end of the unplowed road one mile beyond Lake McDonald Lodge. Follow the unplowed road to the footbridge over McDonald Creek, cross the bridge and follow McDonald Creek Trail downstream to junction with unplowed road at head of Lake McDonald. Round trip distance - two miles.

Terrain: Generally level on road. The trail is wide and easily followed and has a few short uphill and downhill stretches. Recommended for the beginner and families.

Hazards: Be careful when leaving the road and crossing the bridge - steep pitches and cornices sometimes build here.

3. AVALANCHE CAMPGROUND AND AVALANCHE LAKE

Route: From the end of the plowed road along Lake McDonald, it is five miles along the unplowed road to the campground. From the campground to Avalanche Lake, it is two miles via trail (trailhead at east edge of campground).

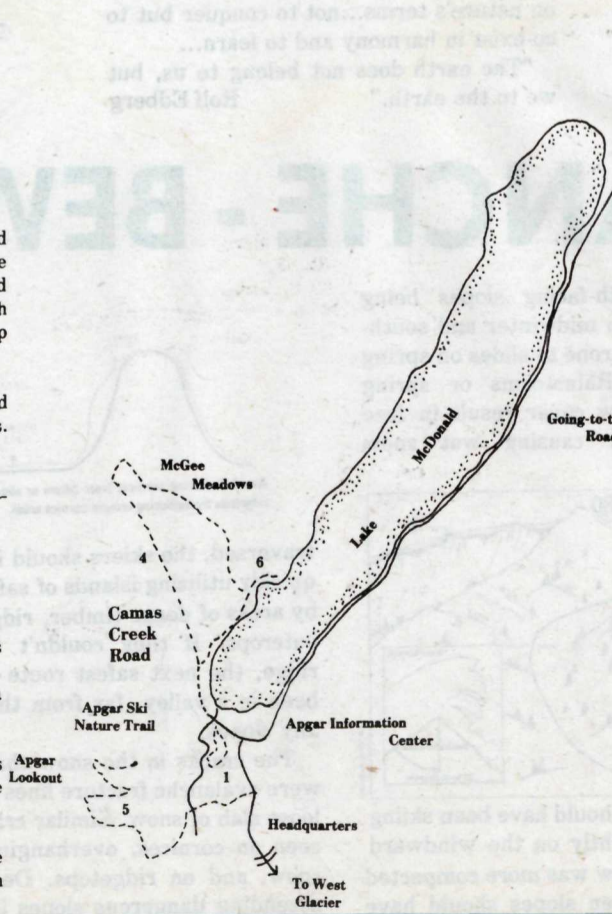
Terrain: Little elevation gain from Lake McDonald to campgrounds (180 feet) but 500 feet gain from campground at Avalanche Lake.

Hazards: Stream gorges are sometimes filled with snow and are potentially hazardous. There are some avalanche paths in the area but crossings are low.

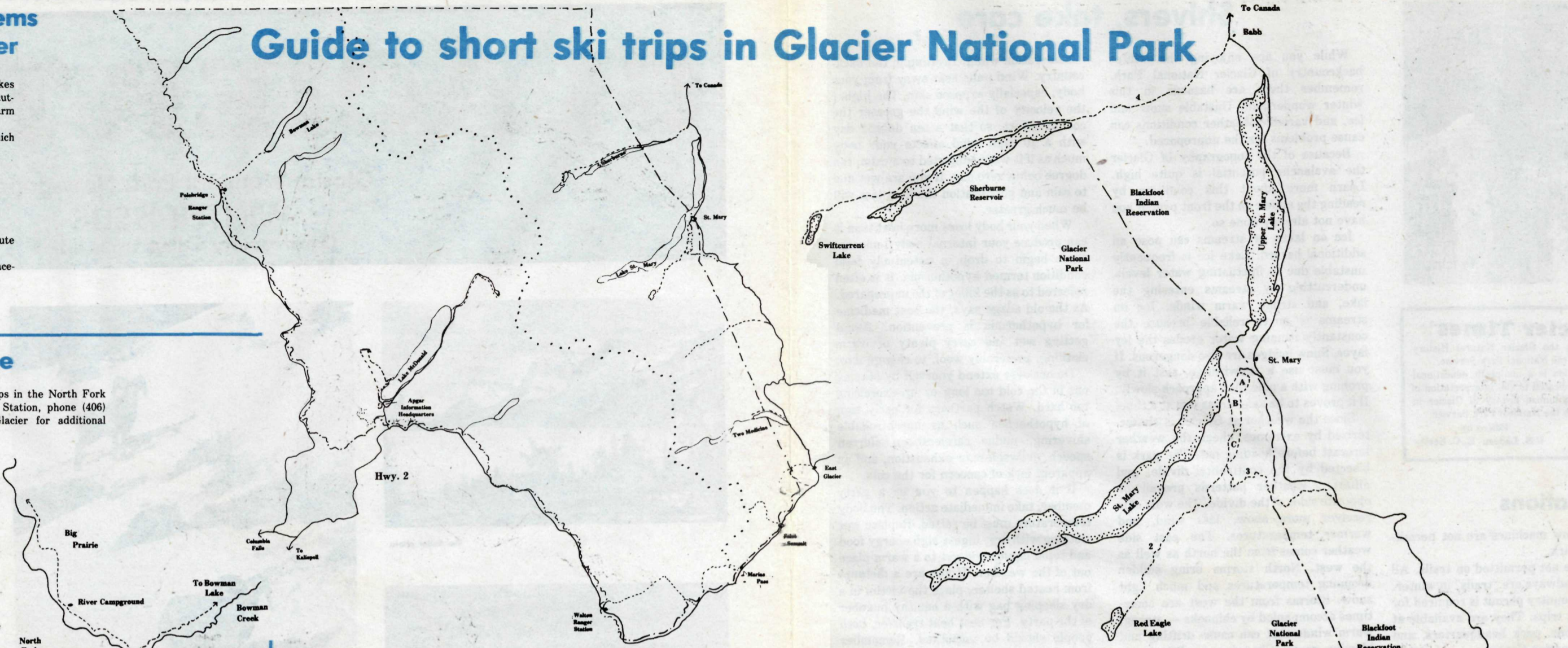
4. FISH CREEK - MCGEE MEADOWS LOOP

Route: From the end of plowed Camas Creek Road, take unplowed road to McGee Meadows, cross to inside road via first easy route on southern edge of meadow, follow inside road to Fish Creek Ranger Station, to unplowed Camas road. Length 11.5 miles round trip.

Terrain: Elevation gain - 767 feet. Rated for strong beginner due to length. Be prepared for changing snow conditions on this route.



Guide to short ski trips in Glacier National Park



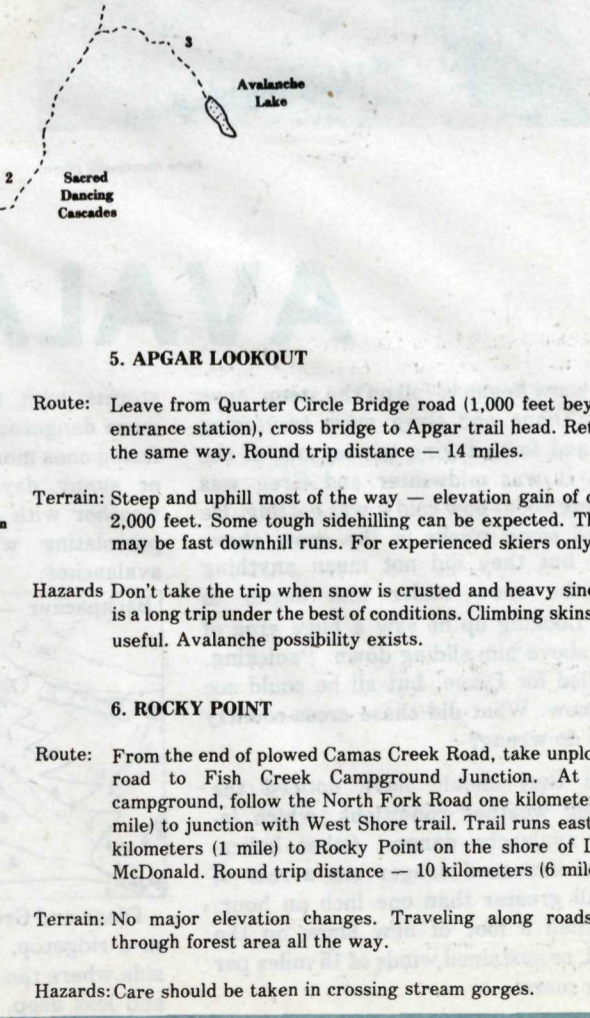
A special note to the overnight mountaineer

Our experienced rangers feel the potential rewards of an extended winter expedition into the high country do not merit the risks involved. Should a serious accident occur, the park's rescue capabilities are limited. Poor weather usually precludes the use of helicopters for rescue and seriously hampers or bars ground search efforts. The ultimate decision, however, rests with you.

Your entire route must be cleared by a ranger. Check out with a reliable friend and a ranger.

If you set up a base camp, always leave a message describing in detail your planned route for the day.

Complete your trip on or before your scheduled time of return. Check out!



5. APGAR LOOKOUT

Route: Leave from Quarter Circle Bridge road (1,000 feet beyond entrance station), cross bridge to Apgar trail head. Return the same way. Round trip distance - 14 miles.

Terrain: Steep and uphill most of the way - elevation gain of over 2,000 feet. Some tough sidehilling can be expected. There may be fast downhill runs. For experienced skiers only.

Hazards: Don't take the trip when snow is crusted and heavy since it is a long trip under the best of conditions. Climbing skins are useful. Avalanche possibility exists.

6. ROCKY POINT

Route: From the end of plowed Camas Creek Road, take unplowed road to Fish Creek Campground Junction. At the campground, follow the North Fork Road one kilometer (1.6 mile) to junction with West Shore trail. Trail runs east 1.5 kilometers (1 mile) to Rocky Point on the shore of Lake McDonald. Round trip distance - 10 kilometers (6 miles).

Terrain: No major elevation changes. Traveling along roads or through forest area all the way.

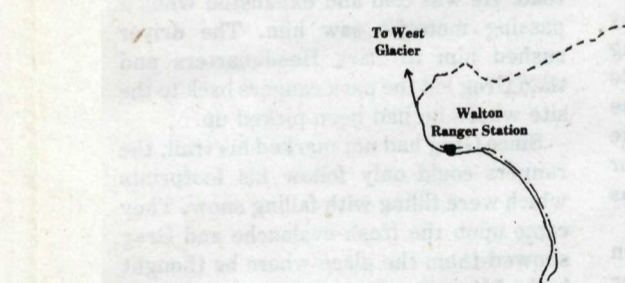
Hazards: Care should be taken in crossing stream gorges.

Walton - Marias Pass

Between West Glacier and Walton the park is not easily accessible in the winter because of the problem of crossing the Middle Fork of the Flathead River. Inquire at the Walton Ranger Station (phone 406-888-5628), 26 miles east of West Glacier on Highway 2 for further information.

1. AUTUMN CREEK LOOP

Route: Going east on Highway 2, park one car at milepost 193.8. Drive on to Marias Pass (Summit). Start at Summit and end on Highway 2, four miles west of Summit. Distance of Autumn Creek Trail is 6 miles. Trail is generally well-marked.



Terrain: Level and downhill (from 5,200 to 4,600 feet). Be prepared for skiing into the wind across the open country. Includes some moderate to fast downhill runs. From railroad tracks to highway is usually very fast and sometimes crusted.

Hazards: The wind along the Divide between Bear Creek and Autumn Creek is invariably chilling. Dress for it. Several avalanche paths must be crossed but crossings are low and hazard can be avoided.

Highlights: The snow is usually good here when poor elsewhere.

2. FIELDING TRAIL

Route: From chain-up area (mile post 192) turnout just east of Snow Slip Inn on Highway 2. Follow the unplowed road to railroad tracks, then follow trail to Ole Creek. Return is along the same route. Round trip distance - 9 miles.

Terrain: Good variety of terrain with moderate uphill to Divide between Bear Creek and Ole Creek, then downhill to Ole Creek.

Hazards: Snowmachines usually run on road to railroad tracks. Trail is marked but it can be lost along open stretches on Elk Mountain. Snow is sometimes wind-crusted along these slopes. Be alert when crossing tracks, since snow deadens the sound of approaching trains. Be careful when parking that you do not block the driveways of private landowners.

St. Mary & Many Glacier

St. Mary is the focal point and information center for all winter travel on the east side north of Two Medicine. Weather and travel conditions in the northeast part of the park are generally unpredictable. Check at St. Mary Ranger Station, Phone 732-5571 to find where the good snow may be and to check out for trips into the St. Mary Valley, into Many Glacier and to other areas of the park to the north.

1. CUT BANK VALLEY

Route: Turnoff is 17 miles north of Browning on Highway 89 where Cut Bank Creek crosses the highway (County road 455 also joins Highway 89 at this point). Follow the 5.8 mile unplowed dirt road westward to Cut Bank Campground.

Terrain: Little elevation gain but many open meadows where winds and drifting snow are common.

Hazards: Strong winds are common. Carry enough clothing. A camping permit is required for Cut Bank Campground.

2. RED EAGLE VALLEY

Route: Turn left off Highway 89 at the St. Mary winter entrance sign and follow the entrance road 300 yards to the bulletin board in front of the ranger residences. Four trails start from the bulletin board and are marked by orange marks on trees with A, B, or C marked in black.

- Lion, Loop A - one mile round trip.
- Eagle, Loop B - two and a half mile loop.
- Elk, Loop C - three and a half mile loop.

Red Eagle Lake: Fourteen miles round trip. Follow Red Eagle road to end, then follow orange markers on trees.

Terrain: A, B, and C little change in elevation, a combination of open meadows and woods. Red Eagle Trail drops moderately at the end of Red Eagle road with a number of switchbacks.

Hazards: Because of strong winds and sub-zero cold, a chill factor well below zeros is often encountered. Allow at least an hour per mile traveled on all trails.

3. DIVIDE CREEK TRAIL

Route: Trail starts near orange state snow marker on the west side of Highway 89 on the north side of Hudson Bay Divide. Total distance is 8 miles. Two cars are needed.

Terrain: Relatively gentle down grade to Divide Creek following the historic first road into the St. Mary Valley. Trail crosses the creek, then climbs a gentle grade to the top of a moraine before descending gently at intersection with Red Eagle Road. Follow ski trail north to St. Mary Ranger Station.

Problems: Trail breaking is sometimes strenuous in new snow making this a good trip for a large group sharing the trail breaking.

4. MANY GLACIER VALLEY

Route: A 12 mile unplowed road leads west from Babb to Many Glacier. This distance makes a day trip impractical.

Terrain: Gradual uphill the entire distance, so climb is not severe. Area is usually windswept and travel is difficult.

Hazards: The strong west winds cause a mixture of high drifts and bare pavement. Visibility is bad. Yellow goggles should be carried. Because of the extreme weather conditions and the distances involved, this is a trip for the hardy one. Anyone interested in traveling in this area should check with rangers at St. Mary before proceeding.

East Glacier & Two Medicine

Most ski tours begin outside the park on Blackfoot tribal lands. Snowmobiles may share the same area outside the park. Depending on the year, State Route-49 North from East Glacier, may be plowed to the turnout to Two Medicine. For trip, weather, and road conditions, check at the East Glacier Ranger Station, 226-4473.

1. TWO MEDICINE VALLEY

Route: Drive 4 miles north of East Glacier on State Route 49 (if plowed), and park at the end of the plowed road, or the Two Medicine junction. Ski up the unplowed roadway toward the park. This is a good beginning tour with views of the park mountains. It is 3 miles to the park boundary, 2 more to Running Eagle Falls, and a total of 8 miles to Two Medicine Lake.

Terrain: Almost flat unplowed roadway.

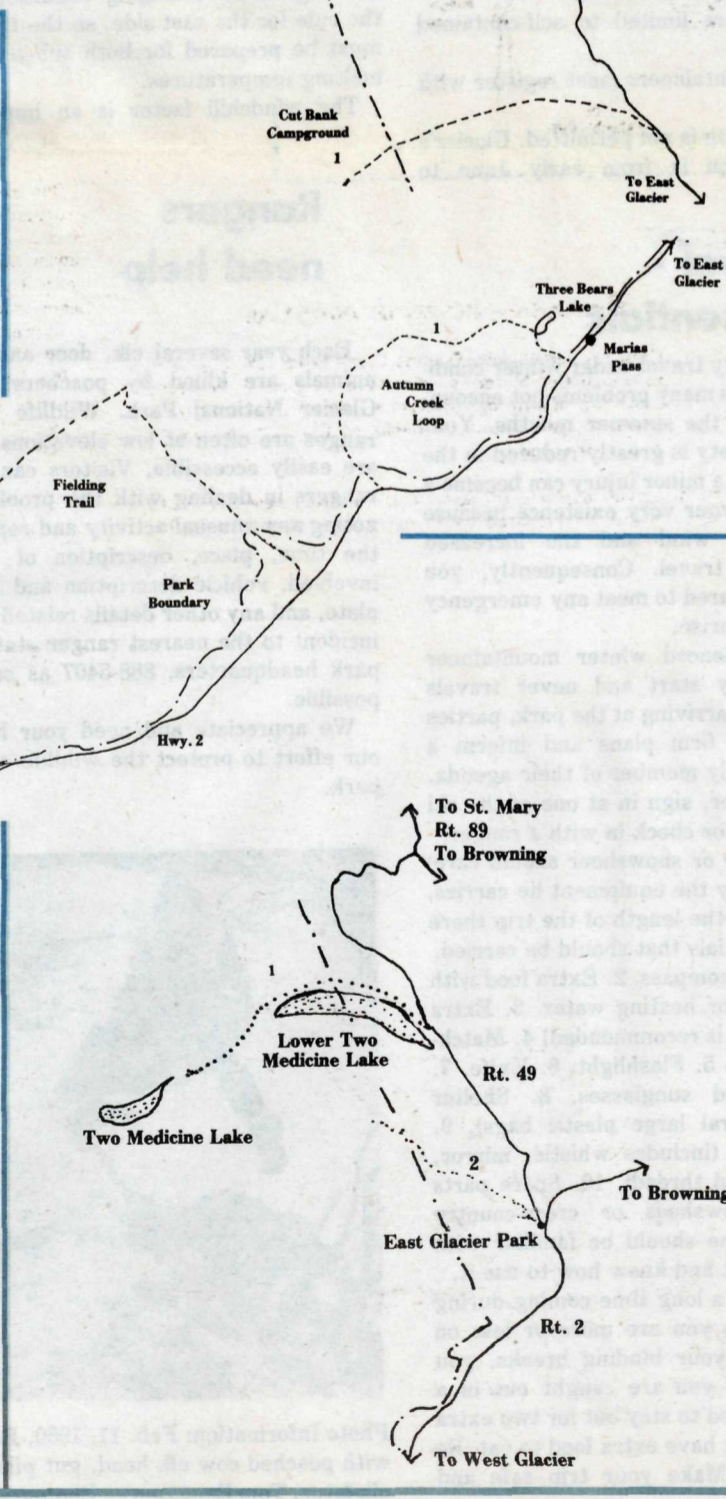
Hazards: Some snowmobile use outside the park.

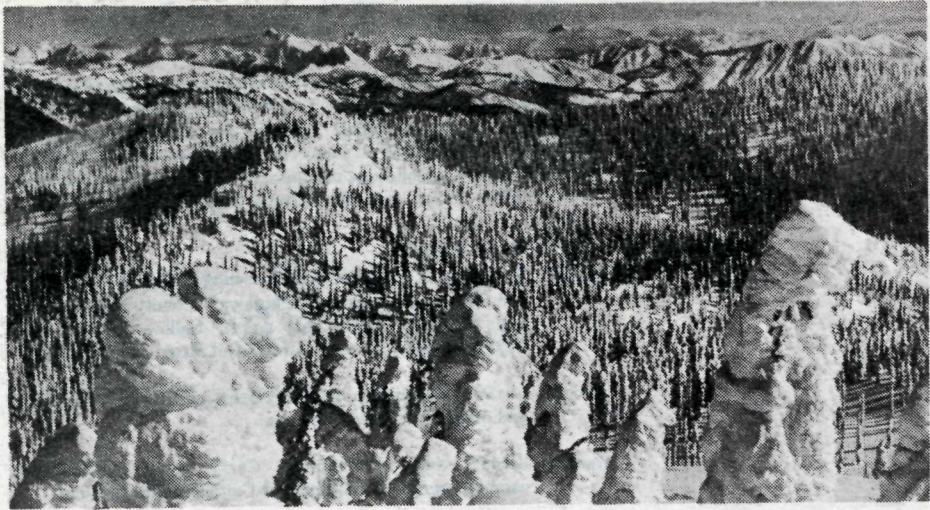
2. EAST GLACIER-BALD HILL

Route: From the East Glacier Ranger Station, go north up the main road and turn left at the Mountain Pine Motel. Park at the end of the street. Ski the unplowed lane toward the park. After about 1/4 mile, turn right onto the Scenic Point Trail (marked with a sign). The trail begins climbing through alternating aspen and fir groves, and open meadows. Bald Hill is a moderately steep meadow slope after about 3 miles. The adventuresome may wish to practice downhill technique here, and all will enjoy the sweeping panorama on a clear day. The park boundary is about 1/2 mile past Bald Hill. On the return trip, there is the option of bearing east on one of many roadways, and intersecting the highway 1/2 mile north of town.

Terrain: This tour climbs 600 feet, and is for those who wish some downhill.

Hazards: Occasionally crusty snow conditions on the steep, narrow trail sections.





Enjoy from a distance

Winter, with all of its obvious beauty represents the most critical time for the survival of wintering wildlife. Food is extremely scarce, competition is keen and the deep snow leaves many animals floundering up to their bellies.

Even when the snow is obviously not too deep, walking, even at a moderate pace, on an open road or meadow requires large expenditures of energy from the animals. Think of how much energy you use to reach your outdoor goals, and how much food before, during and after you consume.

When a wild animal is approached by a human on snowshoes or skis, even though the person is carrying only a camera, the animal becomes excited. Thinking it is being pursued, it tries to run. Running leaves the animal in a weakened state. It can also drive the animals from the sheltered valleys within the park and into the areas around the park where they are hunted.

Do your part to keep your winter viewing of wildlife a rewarding experience to humans and one that is not harmful to the health of wildlife.

How to find a Ranger

Information and camping permits are available at Park Headquarter (phone 888-5441) and St. Mary Ranger Station (phone 732-5501 or 732-5571), open weekdays 8 a.m. to 4:30 p.m.

The following ranger stations are always staffed on a regular basis: Polebridge (888-5416) Walton (888-5628) and East Glacier (226-4473). A phone call to the ranger station nearest to your planned trip can provide details concerning snow conditions, wind velocity and weather forecasts. Pay telephones located in all the campgrounds, at the end of the plowed road along Lake McDonald, in the Apgar area, at Park Headquarters, and in the West Glacier area are in operating condition.

Apgar Information Center is open weekends from 9 a.m. to 4 p.m. as funding and staff limitations allow. It is located in Apgar Village, 3 kilometers (2 miles) north of West Glacier. Phone 888-5512. A recorded message, updated every Friday, can be called for general road and avalanche information throughout the park. Call 888-5551. Groups interested in naturalist led ski tours should contact 888-5441, ext. 50.

Register for all day trips at any of the following places: Head of Lake McDonald, Marias Pass (Summit) for Autumn Creek Trail, Walton Ranger Station, Trail head of Fielding Trail.

For trails on the east side check in at the St. Mary Ranger Station.

All overnight campers and skiers must have a Backcountry Camping Permit, available from a ranger.

Glacier Times

Published by the Glacier Natural History Association for the National Park Service.

The Association is a non-profit educational organization dedicated to the interpretation of the natural and human history of Glacier in cooperation with the National Park Service.

No. 6
Winter

Edited by
C.B. Ladeau E. C. Seeley

Regulations

1. Oversnow machines are not permitted in the Park.
2. Pets are not permitted on trails. All unplowed roadways are "trails" in winter.
3. A backcountry permit is required for all overnight trips. They are available at ranger stations, park headquarters, and Apgar Information Center.
4. Fires are limited to self-contained stoves only.
5. Ski mountaineers must register with area ranger.
6. Ice fishing is not permitted. Glacier's fishing season is from early June to mid-October.

Survival - 10 essentials

Backcountry travel under winter conditions presents many problems not encountered during the summer months. Your margin of safety is greatly reduced in the winter. Even a minor injury can become a struggle for your very existence because of the cold, wind and the increased difficulty of travel. Consequently, you must be prepared to meet any emergency which might arise.

The experienced winter mountaineer gets an early start and never travels alone. Before arriving at the park, parties should make firm plans and inform a friend or family member of their agenda. Once at Glacier, sign in at one of the ski trip registers or check in with a ranger.

Every skier or snowshoer should carefully inventory the equipment he carries. Regardless of the length of the trip there are ten essentials that should be carried.

1. Map and compass.
2. Extra food with a metal cup for heating water.
3. Extra clothing (wool is recommended)
4. Matches and candle.
5. Flashlight.
6. Knife.
7. Sunscreen and sunglasses.
8. Shelter (tarp or several large plastic bags).
9. First Aid Kit (includes whistle, mirror, and needle and thread).
10. Spare parts for your snowshoes or cross-country skis. Everyone should be familiar with this equipment and know how to use it.

Help can be a long time coming during the winter, so you are more or less on your own. If your binding breaks, you must fix it. If you are caught out in a storm and forced to stay out for two extra days, you must have extra food to eat. So go prepared. Make your trip safe and memorable.

Shivers, take care

While you are enjoying the winter backcountry of Glacier National Park, remember there are hazards in this winter wonderland. Unstable snow and ice, and variable weather conditions can cause problems for the unprepared.

Because of the topography of Glacier the avalanche potential is quite high. Learn more about this condition by reading the article on the front page if you have not already done so.

Ice on lakes or streams can pose an additional hazard. Lake ice is frequently unstable due to fluctuating water levels, undercutting by streams entering the lake, and strong warm winds. Ice on streams is never reliable because the constantly running water erodes the icy layer. Snow bridges are also dangerous. If you must use a snowbridge, test it by probing with a pole then approach slowly. If it proves to be safe, cross one at a time.

Since the weather at Glacier is characterized by extremes, check the weather forecast before heading out. The park is bisected by the continental divide, and different weather patterns prevail on opposite sides of the divide. The west side receives more snow, less wind, and warmer temperatures. The east side weather comes from the north as well as the west. North storms bring sudden dropping temperatures and much light snow. Storms from the west are sometimes accompanied by chinooks — strong, warm winds that can cause drifting and blowing snow. Changing conditions are the rule for the east side, so the traveler must be prepared for both sub-zero and melting temperatures.

The windchill factor is an important

Rangers need help

Each year several elk, deer and other animals are killed by poachers within Glacier National Park. Wildlife winter ranges are often at low elevations which are easily accessible. Visitors can assist rangers in dealing with the problem by noting any unusual activity and reporting the time, place, description of people involved, vehicle description and license plate, and any other details related to the incident to the nearest ranger station or park headquarters, 888-5407 as soon as possible.

We appreciate and need your help in our effort to protect the wildlife of your park.



Photo Information: Feb. 11, 1980, Ranger with poached cow elk head, gut pile, and elk fetus. Tom Bengston — Photographer.

consideration when traveling in the backcountry. Wind pulls heat away from your body, especially exposed skin. The higher the velocity of the wind the greater the cooling effect, so that a ten degree day with a 10 mph wind effects your body much as if it were subjected to a calm, ten degree below zero day. If you are wet due to rain and perspiration the heat loss will be much greater.

When your body loses more heat than it can produce your internal body temperatures begin to drop, a potentially fatal condition termed hypothermia. It is often referred to as the killer of the unprepared. As the old adage says, the best medicine for hypothermia is prevention. Avoid getting wet and carry plenty of warm clothing, preferably wool, to change into.

Do not over extend yourself by staying out in the cold too long or by exercising too hard. Watch partners for early sign of hypothermia such as uncontrollable shivering, undue carelessness, slurred speech, drowsiness or exhaustion, and an apparent lack of concern for the cold.

If it does happen to you or a party member, take immediate action. The body temperature must be raised. Replace wet clothing with dry, ingest high energy food and tepid liquids and get to a warm place out of the weather. If you are a distance from heated shelter, place the victim in a dry sleeping bag with a healthy member of the party. For best heat transfer, both people should be unclothed. Remember hypothermia is a potentially fatal condition, it is not time for modesty.

Despite these hazards, Glacier National Park can be a very rewarding place for a winter visit. Go prepared and enjoy yourself.

Avalanche

[continued from page 1]

was nowhere in sight. Greg, disoriented, wandered around calling for her. He knew he had to get help, so he plodded through knee-deep snow for a mile to the road. He was cold and exhausted when a passing motorist saw him. The driver rushed him to Park Headquarters and then Greg led the park rangers back to the site where he had been picked up.

Since Greg had not marked his trail, the rangers could only follow his footprints which were filling with falling snow. They came upon the fresh avalanche and Greg showed them the place where he thought he had last seen Diane two hours earlier. The rangers probed the area directly downslope from this site. They knew that a person buried in snow over 1/2 hour has only a 50% chance of being found alive. If help is more than a few minutes away, an avalanche victim's best hope for survival is his companions. The first thing to be done for the buried person is to probe the snow downslope from where the victim was last seen with a ski pole or long stick. If there is more than one survivor, one person can probe while another goes for help.

One-half hour after the search began Diane was found unconscious — but alive. She was wrapped in a sleeping bag to treat her for hypothermia before she was sledged out to the road and help.

Hundreds of avalanches occur in the mountains each year. They are a real and serious threat to the winter adventurer.

If you find yourself on a snow-covered slope, remember the story of Diane and Greg and have a safe, enjoyable adventure.