

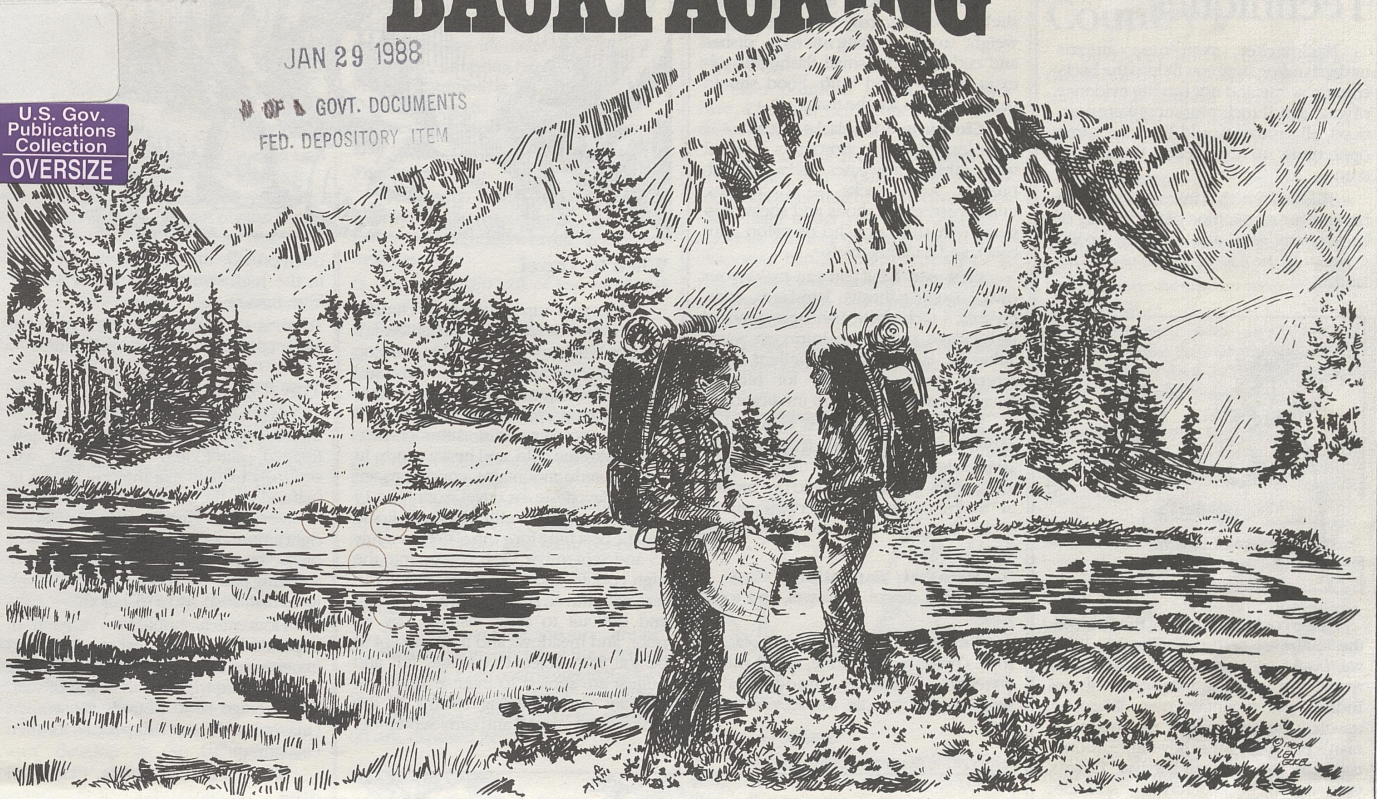
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# BACKPACKING

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## Backpacking is Freedom

Backpacking offers freedom to the forest traveler. You have no worries, other than your own. You become part of a scenic landscape and survive in a primitive environment with few modern conveniences. Self-sufficient, yes, but with this freedom goes an individual responsibility to care for the environment and respect the rights of those you meet along the way and those who follow you.

Backpacking is not limited to supermen and superwomen. However, it does require physical stamina and a genuine liking for the isolation in the remote country. Overnight backpacking trips should be undertaken only by those who have hiked easier mountain or forest trails and are familiar with backpacking techniques.

## Treading Lightly

For thousands of years our wildlands have existed in a complex ecological interrelationship. This interrelationship can be easily upset or even destroyed. Once damaged, some plants and soils may not recover in our lifetime. Today, nature is struggling in many backcountry

areas to cope with results of unacceptable backpacking, overnight camping techniques, and heavy use.

Unappreciative or uninformed backpackers who have no enthusiasm for preserving the land are now in the minority. Even so, many backcountry areas are "camped out". Firewood is scarce or nonexistent. Unnatural fire-blackened rocks and fire scars dot the landscape, and small green trees and ground cover are gone. In many areas, even the streams are no longer safe for drinking. Several groups of people camping around the same lake lower the quality of the "backcountry experience" through noise and visual pollution.

Laws and regulations are being enforced to correct and eliminate these situations, but cooperation, proper attitudes, and voluntary actions of visitors are better ways to preserve the land.

The concept of taking only pictures and leaving only footprints evolves from backpacker awareness.

## Special Regulations

### Permits

Permits are required in many areas of the backcountry. Permits are available at no cost and can be obtained from the local offices of the land managing agency. The permit must be obtained in advance and must be in your possession during your visit.

### Group Size

In many backcountry areas the maximum number of people in a group is restricted. Large groups are destructive. Check to determine allowable group size.

### Trail Courtesy

When hiking it's quite possible you may encounter trail riders along with pack stock. Since stock are easily

spooked from unseen sources, it is best to make your presence known. When stock approaches, step off on the lower side of the trail while the stock passes. Be courteous in sharing the trail with others.

### Fishing and Hunting

Write in advance of your backpacking trip for fishing and hunting rules and permits.

Fishing and hunting are authorized under State regulations. Check with the local Ranger before entering areas to fish or hunt because regulations vary.

In every jurisdiction, the "plinking" gun used to destroy chipmunks, song birds, and other wildlife is held in contempt, and it is usually illegal.

### Pets

Regulations differ on taking pets into the backcountry so check with the local Ranger regarding restrictions. Remember: dogs and cats are predators by nature and will instinctively chase forest birds and animals; horses and dogs don't mix, so physical restraint of the dog is necessary; and bears and dogs don't mix.

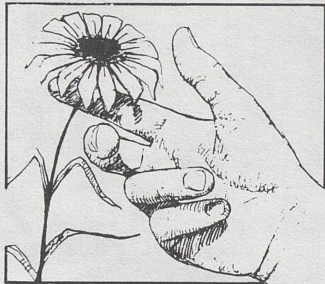
You know your pet but other persons do not. Many areas have leash restrictions, especially on or within specified distances (usually 300 feet) of well-traveled trails or in heavily used areas. Show respect for other persons and wildlife by keeping your pet under physical restraint or better yet, you might consider leaving your pet at home.



## Awareness and Techniques

Backpacker awareness means understanding how you fit into the backcountry scene and not leaving evidence of your visit. If such awareness were practiced, all visitors would have the same opportunity to experience the natural scene.

This awareness is intended to create backpacker recognition of the fragility of backcountry areas and a personal commitment to the care and wise use of this land.



If we could look back at the Rockies, the Southwest, or the Lake States in 1830, we would see a land devoid of cities, roads, and vehicles, inhabited only by Indians and mountain men. When he traveled the backcountry the mountain man's priorities were: adventure, monetary gain, and personal survival. Today's visitors to the backcountry seek solitude, primitive recreation, and natural scenery.

Yesterday's mountain man left no sign of his presence in hostile Indian country. Today, backpackers should leave no signs of their presence so that the next person can enjoy a natural scene and the solitude it portrays. You must tread lightly so nature can endure and replenish.

### Trip Planning

The first step of awareness and backpacking technique is planning your trip. As one of numerous visitors in the backcountry, plan your trip carefully to protect yourself as well as the environment.

For a carefully planned trip, consider:

- maps to plan access, takeoff and return points, route of travel, approximate camping areas, and points of attraction to visit;
- proper lightweight equipment to safely cope with the elements and your recreational pursuits;
- food for the entire trip, packed in lightweight containers such as plastic bags;
- number of persons in the party and their abilities; and
- regulations and restrictions that may be applicable.

Experience will help you refine planning skills, equipment, and techniques. However, evenings at home with how-to-do-it books, practice in putting up tents or shelters from groundcloths, and trying out dehydrated foods or home recipes will spark the imagination and eliminate some mistakes.

### What Do You Need For:

**Camping:** Pack a tent or tarp for a shelter, sleeping bag, foam pad, lightweight stove, cooking utensils, dishes and cutlery, and a small flashlight with extra batteries and bulb. Food should include snacks for the trail.

**Clothing:** Bring slacks or jeans — 2 pairs, long-sleeved cotton shirts, at least 2 wool shirts or a sweater, parka or windbreaker, wool socks — 2 changes, underwear, camp shoes and socks, rain gear (rain shirt, poncho or nylon raincoat), and handkerchiefs.

**First Aid Kit** (you can make your own): Bring adhesive bandages, compresses, 4-inch elastic bandages, triangular bandage, antiseptic, aspirin, eye wash, adhesive tape, insect repellent, sunscreen lotion, mole-skin for blisters, tweezers, and chapped-lip medication.

**Hiking:** Wear footwear with eyelets and lacing. Most backpackers prefer 6- to 10-inch laced boots with rubber or synthetic soles. Footwear should be "broken in" and fit comfortably over two pairs of socks, one light and one heavy. Take extra laces.

**Personal Sanitation:** Carry a lightweight shovel or trowel, and toilet paper.

**Extra Comfort:** Bring dark glasses, rope (nylon cord), knife, small pliers, waterproof matches, biodegradable soap, a towel, needle, thread, and safety pins.



### When to Travel

Time your trip according to climatic conditions. For example, in California's Hoover Wilderness backpacking season is about 2 months long — July and August. Even then, the hiker and camper should be prepared for all kinds of weather including rain, summer blizzards, extreme cold, and heavy winds. In the Colorado mountains, conditions are usually favorable for travel from June 15 to October 1, but in the Northern Rockies, the best time for a trip is between July 15 and September 15. If you go into the high country too early, snow may interfere with travel, streams tend to be high and difficult to cross, fishing may be poor, and meadows and trails are apt to be soft and subject to damage. July and August are subject to intense afternoon thunder and lightning storms in the alpine areas. August and early September

often provide the best weather for travel in the high country, with little bother from insects.

To obtain solitude, try to plan your trip when use by others is at a minimum.

### Travel Light

Experienced backpackers pride themselves on being able to travel light. Rugged, surefooted backpackers will seriously explain that they cut towels in half and saw the handles off toothbrushes to save ounces. They measure out just the right amount of food needed and put it in plastic bags, which are light. They carry scouring pads with built-in soap, to eliminate dish soap and a dishcloth.

How much should you carry? It all depends on your physical condition and experience, the terrain to be covered, the length of the trip, and the time of year. The average is 30 pounds for women (maximum 35), and 40 pounds for men (maximum 50).

When figuring weight, count all items — the cup on your belt, the camera around your neck, and the keys in your pockets.

### Backcountry Travel

Travel quietly in the backcountry, avoid clanging cups, yells, and screams. Noise pollution lessens the chance of seeing wildlife and is objectionable to others seeking solitude. However, in "grizzly country" noises may keep the bears away. See "Enjoy Bear Country."

Wear "earth colors" to lessen your visual impact, especially if you are traveling in a group. However, during hunting season a blaze orange hat and vest are advisable for your personal safety.

When tracking wildlife for a photograph or a closer look, stay downwind, avoid sudden motions, and never chase or charge any animal. Respect the needs of birds and animals for undisturbed territory. Some birds and small animals may be quite curious, but resist the temptation to feed them. Feeding wildlife can upset the natural balance of their food chain — your leftovers may carry bacteria harmful to them.

Stay on the designated path when hiking existing trails. Shortcutting a switchback or avoiding a muddy trail by walking in the grass causes unnecessary erosion and unsightly multiple paths. In the spring, travel across snow and rocks as much as possible; high mountain plants and soil are especially susceptible to damage during a thaw.

If you choose a route without trails, do not mark the trees, build rock piles, or leave messages in the dirt. A group should spread out rather than walk one





behind the other (especially in tundra or meadow areas). Ten people tramping in a row can crush plant tissue beyond recovery and create channels for erosion.

Hike in groups of 4 to 6 people at most; four is the best number, especially during off-trail travel. In case of sickness or injury one person can stay with the victim while two people go for help. Use your judgment in breaking your group into smaller units to reduce visual impact and to increase individual enjoyment and self-reliance.

Pick up any litter along the route; have one pocket of your pack available for trash.

Avoid removing items of interest (rocks, flowers, wood or antlers). Leave these in their natural state for others to see.

Allow horses plenty of room on trails. Horses may be frightened by back-pack equipment. It is best to move off the trail. Everyone in your group should stand off to the same side of the trail. The downhill side of the trail is best. Avoid sudden movements as horses pass.

Help preserve America's cultural heritage by leaving archeological and historical remains undisturbed, encourage others to do the same, and report your discoveries to the local ranger.

### Locating a Campsite

Check with the local ranger for suitable camping areas; then plan your trip to avoid areas that need to recover from overuse.

If other parties are close to where you want to camp, move on or choose your campsite so that terrain features insure privacy. Trees, shrubs, or small hills will reduce noise substantially. Out of respect for nearby campers keep the noise level low at your campsite.

Use an existing campsite whenever possible, in order to reduce human impact. If selecting a new campsite, choose a site on sandy terrain or the forest floor rather than the lush but delicate plant life of meadows, streambanks, fragile alpine tundra, and other areas that can be easily trampled or scarred by a campfire.

Camp at least 200 feet away from water sources, trails, and "beauty spots" to prevent water and visual pollution.

Take a little extra time to seek out a move secluded area. It will increase your privacy and that of other visitors.

Arrange the tents throughout the campsite to avoid concentrating activities in the cooking area.

Avoid trenching around your tent, cutting live branches or pulling up plants to make a park-like campsite. If you do end up clearing the sleeping area of twigs, or pine cones, scatter these items back over the campsite before you leave.

A backcountry campsite should be reasonably organized. If you have laundry to dry or equipment to air out, try to make sure these items are not in sight of other campers or hikers.

Leave the area as you found it, or in even better condition.

### Campfires and Stoves

The mountaineer's decision to have a campfire was frequently influenced by the friendliness of the Indians. Today, your most important consideration should be the potential damage to the environment. A stove leaves no trace.

You should use a campfire infrequently and only when there is abundant dead wood available on the ground. Be very critical about the necessity for campfires. In many areas, wood is being used faster than it grows. In overcamped areas or near timberline, choose an alternate campsite or use a portable stove. In all areas fires should be completely out before you abandon the campsite. In some areas campfires are prohibited by regulations. Check with the public land management agency for local regulations.

#### If you do build a campfire remember:

All fires must be attended. Be aware of overuse. If your firepit is full of wood ash or your cooking area unnecessarily trampled, move your campsite to lessen the camping scar.

Fires should be built away from tents, trees, branches, and underground root systems.

Campfires should never be built on top of the forest floor. If there is a ground cover of needles and decomposed matter be sure to dig through it to the soil.

Be sure the firepit is large enough to prevent the possibility of the fire spreading.

Do not build fires on windy days when sparks might be dangerous, especially when the countryside is dry.

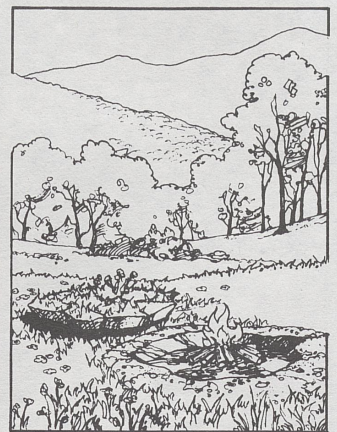
### Types of Fires

If you come upon a fire ring in the backcountry and the surrounding area has not been overcamped, make use of it. However, fires should not be ringed with rocks as this permanently blackens them. When there is no existing fire ring, use one of the following three types of fires to assure little impact.

**Flat Rock Method:** Spread several inches of carefully gathered bare soil on top of a flat rock over an area slightly larger than the fire will occupy, then build your fire as usual. Burn all wood completely. After the fire is out, crush and scatter any coals. After the soil is removed and the rock rinsed, the area will be virtually unscarred.

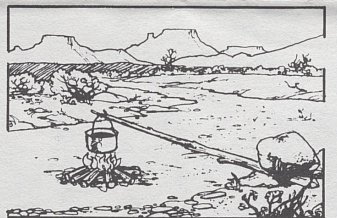


**Pit Method:** Remove sod or topsoil in several large chunks from a rectangular area, about 12"x24" (sufficient for a party of two). When excavating the pit, place the topsoil or sod neatly in a pile nearby, and the pile of bare soil around the firepit



area to avoid drying out surrounding vegetation. If bare soil is not placed on top of sod surrounding the firepit, then the sod should be kept moist. On breaking camp, both the bottom and sides of the firepit should be cold to the touch. Remaining coals should be crushed to powder or paste before carefully replacing the dirt and sod. Make sure there are no soft spots in the fill-in firepit that will sink with age.

Also be sure to mold the edges of well-defined chunks of sod to assure a flat surface and to give the appearance that the earth has not been disturbed. Landscape the entire cooking area by scattering leaves, twigs, or whatever originally covered the ground. It is worth the effort.



**Surface Method:** When there is abundant bare soil available without excavation (gopher holes, old streambeds, etc.) there should be no need to disturb the topsoil by digging a firepit. Simply spread several inches of bare soil on the ground and build a fire as usual. As with the "flat rock method," all wood should be burned completely to ashes. Crush remaining coals and scatter ashes and bare soil once they have cooled. Be careful of scorching the topsoil, and landscape the cooking area before leaving.

### Firewood Selection

Select your firewood from small diameter loose wood lying on the ground in order to insure complete, efficient burning.

Avoid breaking off branches, alive or dead, from standing trees. An area with discolored broken stubs and pruned trees loses much of its natural appearance.

Leave saws and axes at home because they leave unnatural and unne-



cessary scars and add weight to your pack.

The mark of an experienced backpacker is to use a stove when wood is not readily available or when an area could be easily damaged.

Firewood is often scarce near heavily used campsites so it should not be wasted on excessively large fires.

Scatter unused firewood before leaving your campsite to preserve a natural appearance.

#### Extinguishing Fires

When preparing to leave the campsite, use water and bare soil to douse the flames thoroughly. Feel the coals with your bare hands to be sure the fire is out, and scatter or bury the ashes.

#### Human Waste

The proper disposal of human waste is most important. For the benefit of those persons who follow, you must leave no evidence that you were there, and you must not contaminate the waters.

Fortunately, nature has provided a system of very efficient biological "disposers" to decompose fallen leaves, branches, dead animals, and animal droppings in the top 6 to 8 inches of soil. If every hiker cooperates, there will be no backcountry sanitation problems. The individual "cat method," used by most experienced backpackers is recommended.

#### The "cat method" includes the following steps:

Carry a light digging tool, such as an aluminum garden trowel.

Select a screened spot at least 100 feet from the nearest water.

Dig a hole 6 to 8 inches across. Try to remove the sod (if any) in one piece.

Fill the hole with the loose soil, after use, and then tramp in the sod. Nature will do the rest in a few days.

When hiking on the trail, burial of human waste should be well away and out of sight of the trail, with proper considerations for drainage. The cat method is unnecessary for urination; however, urinate well away from trails and water sources. Use areas that are well-hidden, but try to avoid vegetation because the acidity of urine can affect plant growth.

If you are traveling as a group, consider a toilet pit to minimize impact.

Burning of toilet paper is preferable to burying it since it does not decompose quickly. This is essential to prevent sanitation problems from heavy visitation. If you are up to the mountain man's style, use snow, leaves, and other natural substitutes in preference to toilet paper.

Tampons must be burned in an extremely hot fire to completely decompose. When not in grizzly bear country, they can be bagged and packed out. Never bury tampons because animals will dig them up.

#### Disposal of Camping Wastes

Tin cans, bottles, aluminum foil, and other "unburnables" should not be taken to the backcountry because they must be packed out.

Avoid the problem of leftover food by carefully planning meals. When you do have leftovers carry them in plastic bags or burn them completely.

Waste water (dishwater or excess cooking water) should be poured in a corner of the firepit to prevent attracting flies. If you cook on a stove, disperse water waste far away from any body of water. Non-soluble food particles (macaroni or noodles) in dishwater should be treated like bulk leftovers. They should be either packed up and carried out or burned.

Nothing should be left behind. Food scraps like egg and peanut shells and orange peels take a long time to decompose, and are eyesores to other hikers.

Fish intestines should be burned completely in a campfire. However, if there are scavenger animals and birds around, and not many remains, and if the area is lightly used, then the intestines can be scattered in discreet places to decompose naturally. Use good judgment.

#### Drinking Water

Better to be safe than sorry. No matter how "pure" it may look, water from streams or lakes should be considered unsafe to drink until properly treated.

The most common disease associated with drinking water is giardiasis which is caused by ingesting the microscopic cyst form of the parasite giardia lamblia. Flue-like symptoms appear 5 to 14 days after exposure and may last 6

weeks or more if untreated. Other disease-causing organisms may also be present in untreated surface waters.

Start each trip with a day's supply from home or other domestic source. To replenish that supply, search out the best and cleanest source, then strain the water through a clean cloth to remove any suspended particles or foreign material. The best treatment then is to bring the water to a rolling boil for 3 to 5 minutes. Cool overnight for the next day's supply.

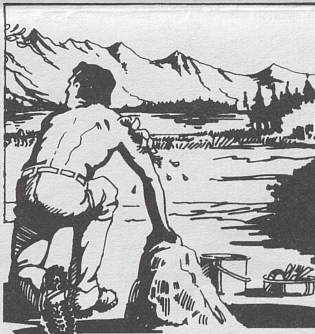
Another solution is to treat with iodine water purification tablets or use an approved EPA-filtered water purifier device.

#### Bathing and Washing

Although the mountain men weren't famous for their cleanliness, today's visitors like to bathe and wash their clothes. Be aware, however, that all soap pollutes lakes and streams. If you completely soap bathe, jump into the water first, then, lather on the shore well away from the water, and rise the soap off with water carried in jugs or pots. This allows the biodegradable soap to break down and filter through soil before reaching any body of water. Clothes can be adequately cleaned by thorough rinsing. Soap is not necessary.

Too much soap in one place makes it difficult for soil to break it down. Therefore, dispose of soapy water in several places.

Do not use soap or dispose of soapy water in tundra areas; the soil layer is too thin to act as an effective filter, and destruction of plant life usually results.



#### In Case of Injury

Injury in remote areas can be the beginning of a real emergency. Stop immediately! Treat the injury if you can and make the victim comfortable. Send or signal for help. If you must go for help, leave one person with the injured. If rescue is delayed, make an emergency shelter. Don't move until help arrives unless there is more danger in remaining where you are; use extreme care in moving the injured.

#### Altitude Sickness

A person should spend 2 or 3 days getting acclimatized to high altitudes before hiking. The lack of oxygen at high elevations gives some travelers altitude sickness.

#### Prevention

The best prevention is slow ascent with gradual acclimatization to altitude. Beginning at an elevation of 9,000 feet, it is recommended that you do not ascend more than 1,000 vertical feet per day.

#### Symptoms

Cough;  
Lack of appetite;  
Nausea or vomiting;  
Staggering gait; and  
Severe headaches.

#### Treatment

A person with symptoms of altitude sickness should breathe deeply, rest, and eat quick-energy foods such as dried fruit or candy. Take aspirin to help the headaches; antacid pills may help other symptoms. If symptoms persist, seek lower elevations immediately. Continued exposure can make the victim too weak to travel, and may lead to serious complications.

#### Dehydration

Adults require 2 quarts of water daily, and up to 4 quarts for strenuous activity at high elevations. There is a 25 percent loss of stamina when an adult loses 1½ quarts of water. To avoid dehydration, simply drink water as often as you feel thirsty. The "don't drink when hiking" saying is nonsense. An excellent way to determine if you are becoming dehydrated is to check your urine; dark yellow urine may indicate you are not drinking enough water.

#### Hypothermia

Be aware of the danger of hypothermia — subnormal temperature of the body. Lowering of internal temperature may lead to mental and physical collapse.

## Safety and Emergency Precautions

**For safety reasons, travel with a companion** Leave word at home and at your "jumping-off" place if a backcountry visitor register is provided.

When you travel in a party, see to it that no one leaves the group without advising where they are going and for how long.

Watch out for loose or slippery rocks and logs, cliffs, steep grades, and inclined hardpacked snow fields where a misstep can cause an uncontrolled slide or fall.

Use your best judgment and never take chances.

Hypothermia is caused by exposure to cold, and it is aggravated by wetness, wind, and exhaustion. It is the number one killer of outdoor recreationists.

#### Cold Kills in Two Distinct Steps

The first step is exposure and exhaustion. The moment you begin to lose heat faster than your body produces it, you are undergoing exposure. Two things happen: You voluntarily exercise to stay warm, and your body makes involuntary adjustments to preserve normal temperature in the vital organs. Both responses drain your energy reserves. The only way to stop the drain is to reduce the degree of exposure.

The second step is hypothermia. If exposure continues until your energy reserves are exhausted, cold reaches the brain, depriving you of judgment and reasoning power. You will not be aware that this is happening. You will lose control of your hands. This is hypothermia. Your internal temperature is sliding downward. Without treatment, this slide leads to stupor, collapse, and death.

#### Defense Against Hypothermia

Stay dry. When clothes get wet, they lose about 90 percent of their insulating value. Wool loses less heat than cotton, down, and some other synthetics.

Choose rainclothes that cover the head, neck, body, and legs, and provide good protection against wind-driven rain. Polyurethane-coated nylon is best. The coatings won't last forever.

Understand cold. Most hypothermia cases develop in air temperatures between 30° and 50°.

#### Symptoms

If you or a member of your party is exposed to wind, cold, and wet, think

hypothermia. Watch yourself and others for these symptoms:

- Uncontrollable fits of shivering.
- Vague, slow, slurred speech.
- Memory lapses, incoherence.
- Immobilized, fumbling hands.
- Frequent stumbling, lurching gait.
- Drowsiness — to sleep is to die.
- Apparent exhaustion. Inability to get up after a rest.

#### Treatment

The victim may deny any problem. Believe the symptoms, not the victim. Even mild symptoms demand immediate treatment.

- Get the victim out of the wind and rain.
- Strip off all wet clothes.
- If the victim is only mildly impaired, give warm drinks. Get the person into warm clothes and a warm sleeping bag. Well-wrapped, warm (not hot) rocks or canteens will help.
- If victim is badly impaired, attempt to keep him/her awake. Put the victim in a sleeping bag with another person — both stripped. If you have a double bag, put the victim between two warm people.
- Build a fire to warm the camp.

#### Windchill Chart

Wind, temperature, and moisture are factors that can greatly affect the safety of a backpacker. Each contributes to the loss of body heat. The "windchill" chart illustrates the effect of wind and temperatures on dry, exposed flesh.

#### Lightning

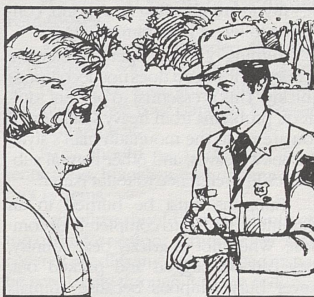
Being struck by lightning is a very real possibility in high country. During a lightning storm avoid the following:

- Standing on a mountain top or ridge.
- Open area.
- Under a lone tree.
- Shallow caves.
- Base or edge of a cliff.
- Rappelling.

Safer positions are: A deep thick cave, a boulder field crouched between rocks, or forested areas.

If you are in a treeless area (as above timberline), you should sit on a small rock with insulating material (poncho or foam pad) under you, with only your buttocks and feet touching the rock — clasp your hands around your knees. If you are struck, the bolt of lightning may not pass through your heart because of the insulation.

**Think ahead and get to safe areas before the storm hits.**



#### If You Get Lost

Someone in your party may become lost. If you or someone else becomes lost, follow these steps.

Stay calm and try to remember how you got to your present location. Look for familiar landmarks, trails, or streams. If you are injured, near exhaustion, or it's dark, stay where you are; someone may be looking for you. If you decide to go on, do it slowly. Try to find a high point with a good view and then plan your route of travel. When you find a trail, stay on it. If you stay lost, follow a drainage downstream. In most cases it will eventually bring you to a trail or to a road. Help won't be far off.

When backpacking with children, be sure they stay with you or near camp. Discuss with them what they are to do if they become separated. They should know the international distress signals and when to use them. Three smokes, three blasts on a whistle, three shouts, three flashes of light, three of anything that will attract attention.

A guaranteed method of attracting attention and getting someone to investigate during the summer months is a fire creating a large volume of smoke. Green boughs on a fire will create smoke. A fire should only be used as a last resort. Be sure your fire does not escape and cause a wildfire. You can be held liable for the entire cost of putting it out!

#### What To Do When Someone is Overdue

Stay calm and notify the County Sheriff or Ranger in the trip area. They will take steps to alert or activate a local search and rescue organization. If the missing person returns later, be sure to advise the Sheriff or Ranger.

## Enjoying Bear Country

Grizzly bears live in Yellowstone and Glacier National Parks and portions of the surrounding National Forests in Montana, Wyoming, and Idaho. Black bears inhabit the forested areas throughout the United States. The Alaskan brown bear is extremely dangerous. It exploits whatever opportunities it has for food sources.

All bears are dangerous animals. They are usually secretive creatures, and stay away from people. But, if you are in bear country, be on the alert and take precautions.

**Remember, there are no hard and fast rules to insure protection from a bear. Bear behavior differs under different conditions.**

#### Bears Don't Like Surprises

Traveling alone in grizzly country is not recommended. When in grizzly bear country, make your presence known. Many experienced hikers wear bells, dangle a can of rattling pebbles, whistle, talk loudly, or sing, although noise is not a foolproof way to deter bears.

A surprise encounter, particularly with a female bear and cubs, is dangerous. A normally placid mother may be quickly provoked if her cubs are disturbed, or if you come between the cubs and her.

If you see a bear, give it plenty of room. Do not make abrupt moves and noises that would startle the bear. Slowly detour, keeping upwind so it will get your scent and know you are there. If you can't detour, wait until the bear moves away from your route.

#### Climb a Tree For Safety

Should a bear charge at you, head for the nearest tree tall enough to get you out of reach. Most adult grizzlies cannot climb trees. Grizzly cubs and black bears can often be discouraged from climbing. Drop some sizable item — a bedroll or pack — to divert the bear and give you time to retreat.

If you are caught by a bear, try playing dead, lying on your stomach or side with your legs drawn up to your chest. Clasp your hands over the back of your neck. Bears have passed by people in this position without harming them. Don't run blindly down the trail or into the brush — it will only excite the animal. Bears can easily outrun humans.

#### Bears and Dogs Don't Mix

It's a good idea to leave your dog at home when you do hiking or camping especially in bear country. A dog can easily disturb a bear and lead it back to you.

#### Odors Attract Bears

Pack out all garbage in sealed containers. Make sure items such as empty food containers are clean and odor free.

When camping, it is best to use freeze-dried food instead of fresh food.

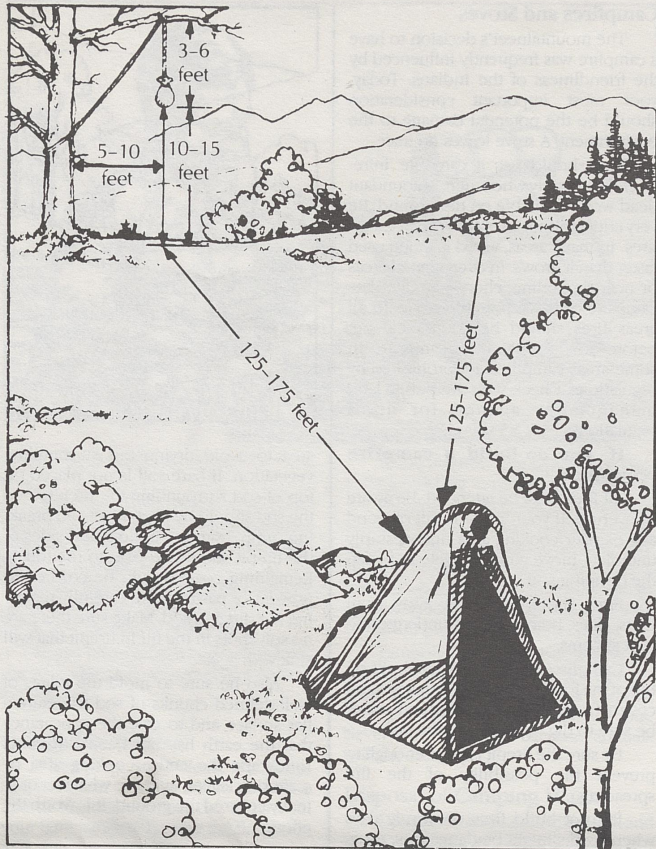
Store food in plastic bags out of reach of bears and well away from sleeping areas.

Sleep some distance from your cooking area.

### Wind Speed Cooling Power of Wind Expressed as "Equivalent Chill Temperature"

mph	Temperature (F)											
	40	30	20	10	5	0	-10	-20	-30	-40	-50	-60
	<b>Equivalent Chill Temperature</b>											
5	35	25	15	5	0	-5	-15	-25	-35	-45	-55	-70
10	30	15	5	-10	-15	-20	-35	-45	-60	-70	-80	-95
15	25	10	-5	-20	-25	-30	-45	-60	-70	-85	-100	-110
20	20	5	-10	-25	-30	-35	-50	-65	-80	-95	-110	-120
25	15	0	-15	-30	-35	-45	-60	-75	-90	-105	-120	-135
30	10	0	-20	-30	-40	-50	-65	-80	-95	-110	-125	-140
35	10	-5	-20	-35	-40	-50	-65	-80	-100	-115	-130	-145
40	10	-5	-20	-35	-45	-55	-70	-85	-100	-115	-130	-150
<b>Danger</b>			<b>Increasing Danger (Flesh may freeze within 1 min.)</b>				<b>Great Danger (Flesh may freeze within 30 seconds)</b>					

Example: At 10°F, a 25 mph wind speed produces a -30°F chill temperature.



Don't sleep in the same clothes you wore when cooking.

Keep sleeping bags and personal gear clean and free of food odor.

Cook with gasoline or liquid petroleum burners instead of making campfires.

Don't use perfumes, deodorants, or other sweet smelling substances.

Personal cleanliness is good insurance.

Women should stay out of bear country during their menstrual periods.

Human sexual activity attracts bears.

#### Bearproof Your Camp

Pitch your tent at least 125 feet upwind from your cooking area and your food and garbage. Try to place its door near climbable trees. Suspend food and garbage in sealed plastic bags at least 10 feet above the ground, 5 to 10 feet from the tree trunk, and 3 to 6 feet below the limb on which they hang. A clean camp-

site without tempting or strange odors will best insure a night's sleep untroubled by bear visits.

### Credits

This brochure is for backpacking campers who want to make their experience and that of others more safe and enjoyable.

Our thanks are extended to the following groups and organizations for their assistance in developing this guide:

Bureau of Land Management  
 Colorado Horsemen's Council  
 Colorado Open Space Council  
 Colorado Outward Bound School  
 Izaak Walton League of America, Inc.  
 National Outdoor Leadership School  
 Sierra Club  
 Wilderness Society

For Information

## National Forests in the Rocky Mountain Region

### National Forest Headquarters

Contact these headquarters for maps and information about the National Forests you plan to visit.

### Arapaho and Roosevelt National Forests

240 West Prospect  
 Fort Collins, CO 80526 (303) 224-1277

### Bighorn National Forest

1969 S. Sheridan Ave.  
 Sheridan, WY 82801 (307) 672-0751

### Black Hills National Forest

RR 2, Box 200, Highway 385 North  
 Custer, SD 57730 (605) 673-2251

### Grand Mesa, Uncompahgre and Gunnison National Forests

2250 Highway 50  
 Delta, CO 81416 (303) 874-7691

### Medicine Bow National Forest

605 Skyline Drive  
 Laramie, WY 82070 (307) 745-8971

### Nebraska National Forest

270 Pine Street  
 Chadron, NE 69337 (308) 432-3367

### Pike and San Isabel National Forests

1920 Valley Drive  
 Pueblo, CO 81008 (303) 545-8737

### Rio Grande National Forest

1803 W. Highway 160  
 Monte Vista, CO 81144 (303) 852-5941

### Routt National Forest

29587 West Highway 40, Suite 20  
 Steamboat Springs, CO 80487 (303) 879-1722

### San Juan National Forest

701 Camino del Rio, Room 301  
 Durango, CO 81301 (303) 247-4874

### Shoshone National Forest

225 W. Yellowstone Highway  
 P.O. Box 2140  
 Cody, WY 82414 (307) 527-6241

### White River National Forest

9th and Grand,  
 P.O. Box 948  
 Glenwood Springs, CO 81602 (303) 945-2521

### Rocky Mountain Region Headquarters

11177 W. 8th Ave.  
 P.O. Box 25127  
 Denver, CO 80225 (303) 236-9431

### FOR YOUR PROTECTION

As a user of National Forest system lands, you have significant responsibility for your personal safety during any activity you might pursue. The Forest Service does install signs and other information devices at various locations where site conditions warrant. However, the size of the National Forests and the variety of natural and man-made conditions limits placement of signs or other specific warnings and necessitates the use of more general education efforts.

Hazards are not limited to, but include: changing weather conditions; snow; avalanches; landslides; caves; overlooks; falling trees or limbs; high or rushing water; contaminated water; wild animals; becoming lost or over exerted; hypothermia; remnants of mining and other activities involving excavation, tunnels and shafts, decaying structures and a variety of equipment; and changing road and trail conditions. You may also be exposed to unreasonable acts of others.

The Forest Service does not manage or control all of these occurrences. It is your responsibility to know the hazards involved in your activities and to use the proper safety procedures and equipment to minimize the inherent risks and hazards related to your activity.

In order to help visitors enjoy their experience on the National Forests, the Forest Service and other agencies provide information regarding local conditions by various means. This information is available at Forest Service offices, from local residents, outfitters and guides, and other reference materials.



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U.S. DEPARTMENT OF AGRICULTURE

FOREST SERVICE ■ ROCKY MOUNTAIN REGION

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