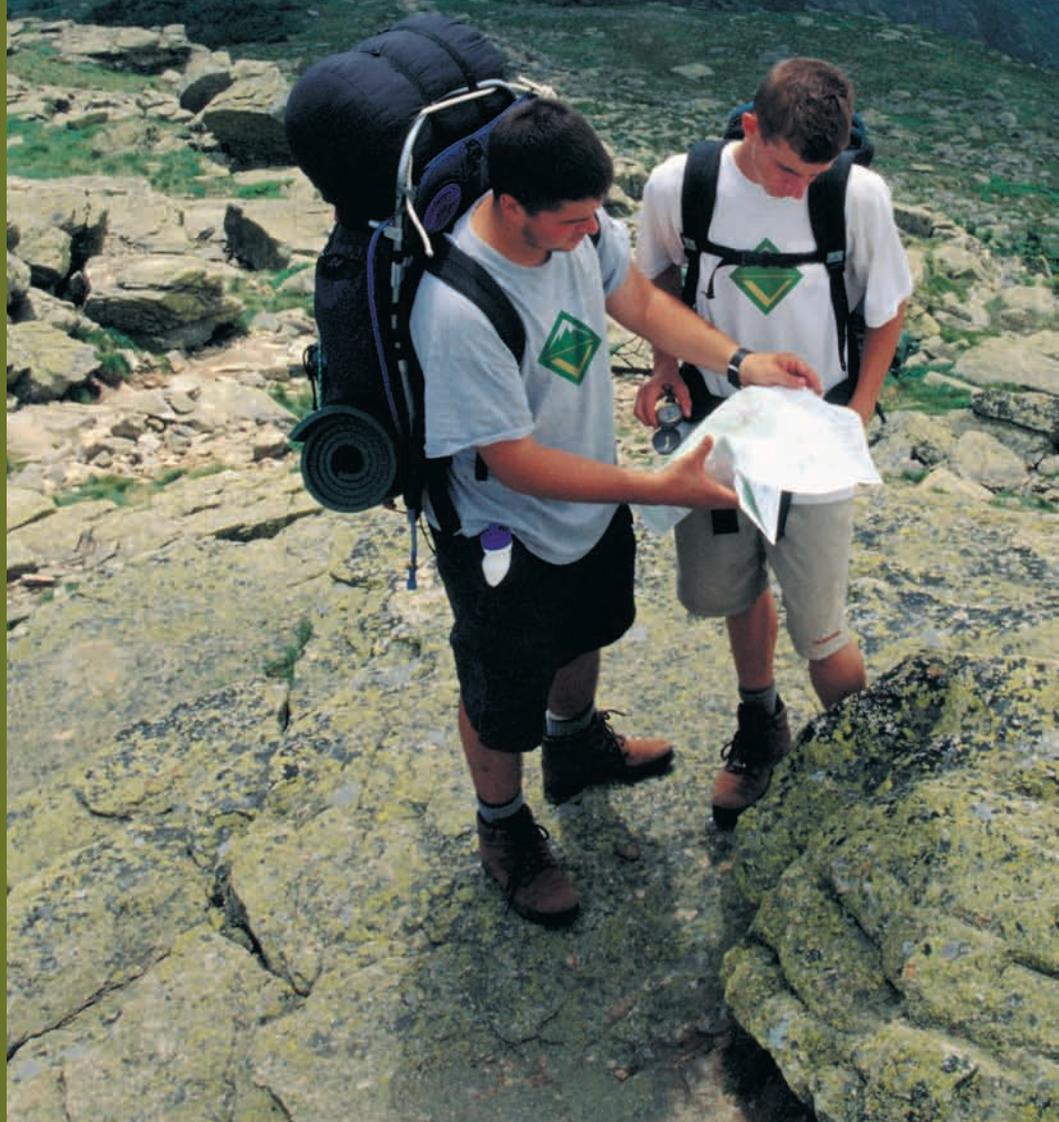


CHAPTER

# 10



## Traveling and Camping in Special Environments

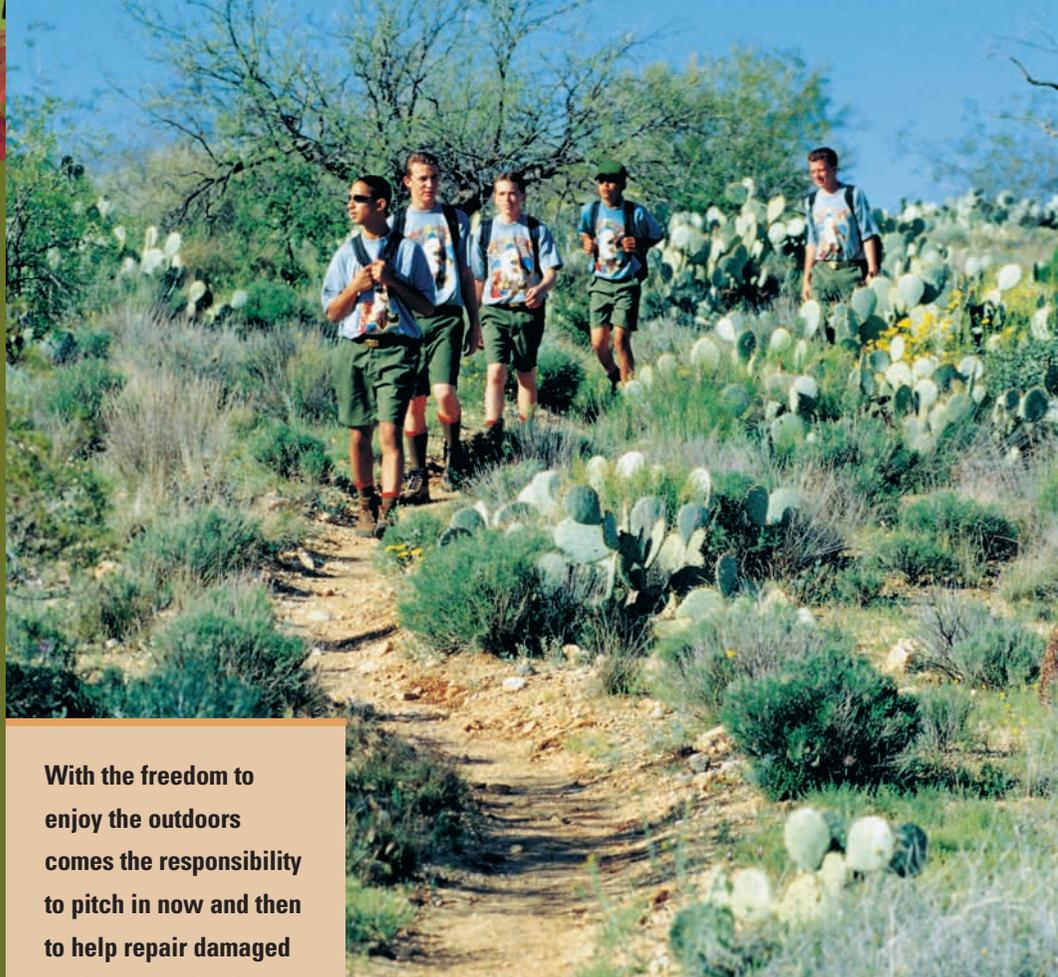
*“Our camp in the cool mountain air banished the fatigues of weary miles; night, under the mountain stars, gave us refreshing sleep; and, from the morning we crossed Pitt Ferry, we dated a new life.”*

—Clarence King (American explorer, scientist, and, from 1879 to 1881, the first director of the U.S. Geological Survey), *Mountaineering in the Sierra Nevada*, 1872



An evening in the desert, a tent above tree line, a night under the stars. Camping in special environments can be just what the word suggests—special. Taking you far from home, removing you from the usual routines and distractions of modern life, journeys into special environments can be filled with discovery and adventure.

Of course, every environment is special in its own way, and each deserves your best effort to treat it well. The principles discussed in the chapter titled “Implementing Leave No Trace” outline the basic means you can use to enjoy any outdoor setting responsibly. The unique qualities of certain environmental areas demand that visitors make additional preparations and apply specific methods in order to use Leave No Trace most effectively. The following guidelines can help you minimize your impact when traveling or camping in the deserts, in alpine tundra regions, along shorelines, and in bear habitat.



**With the freedom to enjoy the outdoors comes the responsibility to pitch in now and then to help repair damaged landscapes. The chapter titled “Being Good Stewards of Our Resources” explores many opportunities for volunteers to help the environment.**

## Deserts

Treks into arid regions of the continent can be among the most rewarding and challenging of journeys. The rewards come from finding yourself in the midst of magnificent scenery, difficult terrain, and complex ecosystems. The challenge is twofold. First, you must keep yourself safe in an environment not always suited to human comfort. Second, you must see to it that you do no harm to an environment that is sensitive to human impact.

Most desert landscapes consist of scattered islands of life and fertility surrounded by rock and inorganic mineral soil. Because of the general scarcity of water and organic soils, arid lands lack the capability to recover from damage caused by careless visitors. For example, slow-growing desert plants, once they have been injured, will take longer to repair themselves than those in a lush environment.

## Traveling and Camping

Plants and *cryptobiotic soil crusts* that have been trampled beneath boot soles, bicycle wheels, or tents can take years to recover. Avoid disturbing desert vegetation and crusts by using existing trails and campsites whenever you can.

Where there are no trails, travel in dry washes, along bedrock, and across other areas where not much grows. Choose similar sites for camping, but avoid dry watercourses; these can flood with little warning even when storms are some distance away.

An obvious feature of deserts is the lack of water. Where it does exist, protect its purity and access, and take only what you need. Camp well away from pools and streams to reduce chances of polluting them and to allow wildlife to approach them.

Protect desert cultural heritage by viewing but not altering ancient dwellings, rock art, or other artifacts. Leave everything where you find it and camp well away from these areas.

## Sanitation

Dispose of human waste in catholes 4 to 6 inches deep that are located at least 200 feet from permanent and temporary water sources, trails, or campsites. The sun's heat will desiccate waste and kill harmful microorganisms. Where land managers expect it, use pack-it-out kits.

For more on sanitation, see the chapter titled "Hygiene and Waste Disposal."

## Campfires

Desert vegetation grows very slowly, and the debris from dead, decaying wood can provide critical nutrients to ensure soil fertility. Plan ahead so that you can do your cooking over backpacking stoves rather than relying on open fires.



***Cryptobiotic soil crusts* are a unique feature of some arid ecosystems in the American West. The crusts are self-sustaining biological communities formed by living organisms, such as lichens, and their by-products. Many have the appearance of tiny, black, irregular pedestals. They reduce erosion, fix nutrients in the soil, and increase water absorption, thus creating a hospitable environment for plants.**

### ***Protecting Riparian Zones***

**Some arid regions are broken by lush vegetation growing along the sides of streams. These *riparian zones* can be essential to the survival of wildlife and vegetation. They also can be a magnet to outdoor travelers seeking water and shade. Protect riparian zones by concentrating your impact on rock, sand, and other durable surfaces.**



### **Alpine Tundra**

The gorgeous tundra of high mountains is windy, treeless, and covered much of the year by snow. Scattered with rocks and covered in places by a thin mantle of soil, tundra can support communities of vegetation that have adapted specifically to endure the harsh conditions of cold, wind, intense sunlight, and brief growing seasons. While able to thrive on its own, tundra vegetation is especially vulnerable to damage from trampling or from poorly located tent sites.

### **Traveling and Camping**

Stay on existing trails and use established campsites. Where no pathways exist, travel and camp on rock or snow. Spread out as you hike, going abreast rather than in single file.

### **Sanitation**

Decomposition of human waste in alpine areas can be extremely slow. When using a cathole, find a private site where you can make the hole in organic soil. If local regulations require that you carry out your waste, use pack-it-out kits.

### **Campfires**

Wood is extremely scarce in tundra regions and of much greater importance as a component of soil nutrition than as campfire fuel. Carry a backpacking stove on trips into the high country and save campfires for more appropriate locations.



## Shorelines

Kayaking, canoeing, rafting, sailing, and other adventures on water often bring outdoor travelers to shorelines for campsites, rest areas, and portages. The recreational use of certain watercourses means that many popular stopping points and layover sites can receive a heavy amount of use. That use often is concentrated in areas important to wildlife and vegetation.

### Traveling and Camping

Unnecessary impact in river corridors can be avoided by carefully preparing for your trip. For example, if river runners fail to bring proper clothing to stay warm and dry, they might be forced to build large fires that can have a negative impact on the land. Proper preparation includes knowing what to expect, repackaging food supplies, having the proper equipment, and having knowledge of the river you plan to visit.

Limit your camping to established sites. When that is not possible, seek out durable surfaces such as gravel bars and sand beaches with little or no vegetation. Otherwise, a good rule of thumb is to camp at least 100 feet from the shoreline, and 200 feet from side streams and springs.

Along ocean coastlines, camp between the highest daily tide mark and the seasonal high-tide/storm-wash line. Check with local land managers to learn where this is.

### Sanitation

Travel by watercraft generally makes it easy to carry the necessary facilities to pack out human waste. Otherwise, use catholes located at least 200 feet from open water, trails, and campsites, and well above high-water lines.

### Campfires

The capacities of most watercraft allow you to carry the stoves, fuel, and provisions you need to make cooking a high point of each evening's entertainment. Consider building a fire only when driftwood is plentiful or when you have packed in a supply of charcoal, and then use fire pans or mound fire lays.



## Bear Habitat

One principle of Leave No Trace is to respect wildlife. That applies to animals in any setting, though it can take on added significance in special environments. These often are critical wildlife habitats—nesting areas, feeding grounds, travel corridors, haul-out sites for marine mammals. Wherever your adventures take you, enjoy wildlife from a distance and do nothing that might cause animals to alter their natural behavior. When it comes to bears, that can require added preparation, knowledge, and diligence.

Bears have come to symbolize the wildness of the outdoors. Their size, power, range, and intelligence have allowed them to thrive for eons in many regions of North America. The pressures of land development and urban expansion have reduced bear habitat.

Left to themselves, bears eat a wide range of food, including berries, grubs, fish, and small mammals. Wild bears typically are shy and try to avoid people. However, bears that get easy meals from campsites can lose their fear of humans, and that can lead to the animals' destruction.

Ensuring your own security and that of all others in your group is very important. Protecting the safety of bears is a high priority, too. Follow the principles of Leave No Trace and you will be well on your way to traveling and camping responsibly in bear country.

The following recommendations are intended to minimize bear-human encounters, but no one can guarantee that an individual will not be injured by a bear even if these recommendations are followed. Bears are wild animals. It is ultimately your responsibility to be cautious and respectful when traveling and camping in bear habitat.

## Traveling and Camping

Do the following before going into bear country:

- Check with local land management personnel for current information on bear activity and the best ways to keep yourself and the bears safe.
- Find out what gear you will need to “bear-proof” your camp—nylon cord and food bags for *bear bags*, for example, or food storage canisters (discussed later in this chapter). Learn how to use those items, and include them on your list of bear country essentials.
- Plan menus with ingredients that won’t create unnecessary odors. Avoid strong cheeses, cans of tuna fish and sardines, grease, and other smelly food items.

Do the following while you are on the trail:

- *Stay alert.* Study the terrain ahead. Be on the lookout for bears or signs of bears. Almost the only occasions for problems with bears on the trail occur when people startle a bear or come too close to a bear’s cubs or sources of food.
- Make noise so that bears can hear you coming and get out of your way. Sing, whistle, clap your hands, and talk loudly. Some hikers hang small bells on their packs.
- Never leave packs or food items unattended, even for short periods of time.

Do the following while camping:

- Be especially cautious where there are signs of recent bear activity. Moist bear droppings, newly overturned rocks, and fresh claw marks on tree trunks all are indications that the bears, rather than you, have already reserved the spot.
- Accept the fact that bears will investigate your camp. Your goal is to make camp completely uninteresting to them. Bears that find nothing to eat will sniff around and then move on.

*“Your best weapon to minimize the risk of a bear attack is your brain. Use it as soon as you contemplate a trip to bear country, and continue to use it throughout your stay.”*

—Dr. Stephen Herrero (professor of biology and environmental science, University of Calgary, and a leading authority on ecology and bear behavior), *Bear Attacks: Their Causes and Avoidance*, 2002

- Set up your sleeping tents 200 feet or more away from your camp cooking area. Allow nothing in the tents except sleeping bags and pads, flashlights, and perhaps a book or two. Since the clothing you wear during the day can pick up odors from food, sunscreen, and toiletries, change into clean sleeping clothes before going to bed. Store your day clothes along with your other gear under a rain fly near the cooking area. (Clothing that smells of spilled food should be hung in a bear bag.)
- At night and whenever you leave the cooking area unattended, put every bit of food, trash, and smellables in a bear bag at least 300 feet from your campsite, or stow them in bear canisters or in the bear boxes provided at some campgrounds. Canisters and bear boxes might have insufficient capacity to store more than a couple days' food.
- Clean up any spilled food or crumbs and store them with your trash.
- Thoroughly wash and rinse pots, plates, utensils, and other kitchenware after meals. Strain washwater and scatter it over a wide area at least 200 feet from camp. (Place any bits of food in a plastic bag and store it with the trash.)

If a bear approaches your campsite, make loud noises to discourage it from coming closer. If a bear enters your campsite, leave the area and stay away until the bear is gone. Don't risk injury by attempting to save your food or gear; it would be much easier to replace provisions and equipment than it would be to replace you.

Follow any other advice provided by the land management agencies of the bear habitat you are visiting.

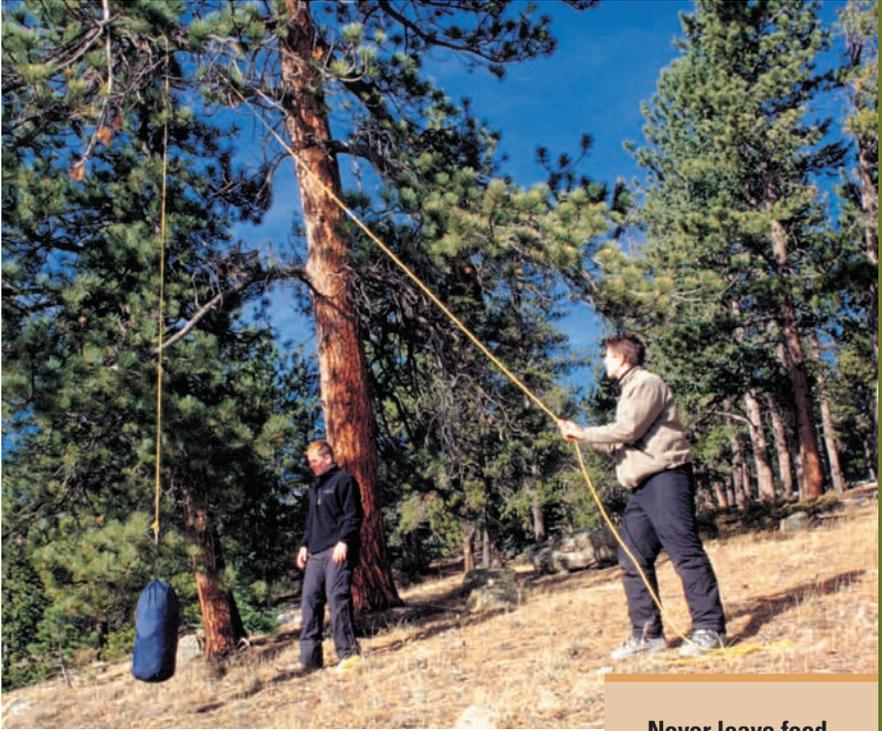
### How to Protect Your Food and Other Smellables

Wherever you camp, it's a wise practice between meals to stow your food beyond the reach of wildlife. If there are bears around, it is extremely important that you get all the smellables out of your tent and pack whenever you will be away from camp or are bedding down for the night. Even in the absence of bears, ground squirrels, mice, raccoons, and other animals can create havoc with unprotected provisions.

Three effective means of bear-proofing your provisions are *bear bags*, *bear boxes*, and *bear canisters*.

*"Smellables" include food (including candy and trail mix), garbage, soap, shampoo, deodorant, lotions, toothbrushes and toothpaste, sunscreen, lip balm, insect repellent, film, first-aid kits, feminine hygiene products, and anything else that has an odor.*





### ***Bear Bag***

While there is still plenty of daylight, find a tree with a sturdy horizontal branch about 20 feet above the ground. Put a couple of handfuls of soil in a bandanna and secure it to the end of a 50-foot length of nylon parachute cord. Toss the weighted cord over the branch. Stash your provisions in a sturdy plastic trash bag or in a waterproof stuff sack. Twist it closed and secure it to one end of the cord with a clove hitch. Pull the other end of the cord to raise the bag until the bottom of the bag is at least 12 feet off the ground and 8 feet away from tree trunks—well beyond the reach of any bears that might stand beneath it, climb the tree, or venture out onto a branch. Secure the free end of the cord to a tree.

A second bear-bag technique requires two 50-foot cords. Toss the end of one over a high branch. Toss the second cord over a branch of equal height on a second tree at least a dozen feet away from the first. Secure one end of each cord to the bear bag. Pull on the free ends of the cords to hoist the bag, centering it between the trees. Tie off the cords.

Some designated campsites are equipped with a wire cable or pole secured horizontally between two trees at a height of 16 feet or more. Toss a cord over the center of the cable or pole and use it to hoist bear bags out of the reach of animals.

**Never leave food unattended. Hang food and all smellables well out of the reach of bears, or store them in bear-proof containers.**



*Bear boxes are most often found at frequently used campsites.*

### ***Bear Box***

Some popular campgrounds in bear territory, especially those in state or national parks and forests, have metal containers that can be used for storing food and other smellables. Follow the instructions to close and lock the lids.

### ***Bear Canister***

Much of North America's bear habitat includes tundra and other regions with few trees tall enough to make bear bags effective, and so remote that bear boxes are few and far between. An effective solution to the problem of protecting food and other smellables is to carry bear canisters with you. These canisters are made of a very strong, lightweight plastic and have lids that cannot be pried open by animals. Simply place food and smellables in the canisters and leave them on the ground at least 200 feet from the tents where you intend to sleep. Relying upon canisters demands careful planning to ensure that provisions, toiletries, and all other odoriferous items carried on a trip will fit inside.



*Bear canisters are ideal for protecting provisions in treeless terrain.*

## Sanitation

Avoid using scented lotions, soaps, deodorants, and shampoos while in bear habitat. Wash early enough in the day that residual aromas will have time to dissipate before bedtime.

### ***Bear Safety Checklist***

Review this list before setting out on a bear country trip. Go through it again each morning and each evening while you are in bear habitat.



✓	YES	
		<b><i>While hiking, alert bears to your approach by making noise. Never approach or provoke a bear.</i></b>
		<b><i>Set up your sleeping area at least 200 feet away from where you will cook and eat.</i></b>
		<b><i>Ensure there are no smellables in sleeping tents.</i></b>
		<b><i>Clean up any spilled food, food particles, and campsite trash.</i></b>
		<b><i>Use a bear bag, bear box, or bear canister to protect all unattended smellables.</i></b>
		<b><i>Dispose of strained dishwater at least 200 feet from your campsite and sleeping area.</i></b>
		<b><i>Clean fish far from campsites. Toss entrails in flowing water, or pack them out.</i></b>
		<b><i>Wash early in the day. Avoid using scented lotions, soaps, deodorants, or shampoos.</i></b>
		<b><i>Change into clean sleeping clothes before going to bed.</i></b>