Lightweight Backpacking

The Importance of Good Form

HOW TO REDUCE YOUR PACK WEIGHT TO UNDER 25 LBS. AND ENJOY BACKPACKING MORE WITHOUT SPENDING A FORTUNE

by Kevin D. Hauser

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ON THE COVER: This pack looks huge until you realize that 12-year old Jonathan (our troop's steam locomotive in trousers) is carrying it. He's also holding the fish on the table of contents.

To Ray Brooks

Acknowledgements

I am grateful for those who gave freely and enthusiastically of their time and expertise in assisting me in compiling this information. Sean Bush, MD, FACEP called from the Emergency Room to talk about snakebite. Sandra Vandenberg of the US Forest Service was very helpful in dealing with staying found. Dawne Malone poured over my freshman English and crafted it into an intelligible document. The Scouts and Leadership of Boy Scouts of America Troop 127 provided unending encouragement and inspiration. Finally, I want to acknowledge my lovely wife, Marty, for her support and devotion.

This was really fun to do.

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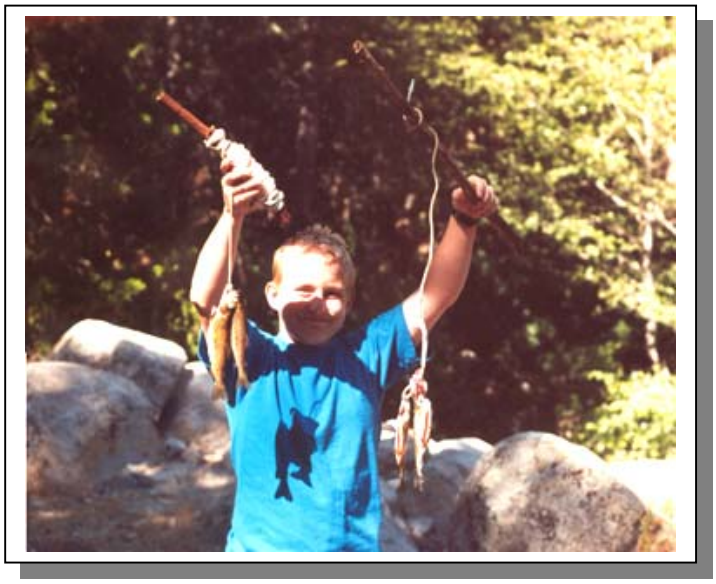


Introduction

A typical Boy Scout outing is an overnight backpacking trip with a hike of around three to five miles. Because the trip wasn't very far or long, we didn't bother too much about saving weight. We would try to bring along the comforts of home, including: chairs, cans of Chef Boy-ar-dee, mammoth tents, slumber party sleeping bags, six-packs of soda, watermelons and six-piece cooksets. Well-intentioned parents were buying their sons every camping gizmo and gadget you could find at Sportmart. Typical pack weight would average between 35-50 lbs. and resembled Jed Clampett's truck on The Beverly Hillbillys. The problems we ran into were:

- The smaller scouts struggled to make it on many of the trips
- Hikes had to be kept short, thus limiting the places we could go
- Scouts were terribly unprepared for the 35-mile and 50-mile hikes
- $$$ Fortunes were being spent on equipment $$$
- Injuries and accidents were a constant danger because of heavy pack weights
- Outdoor skills were traded for technology and convenience (bad form!)
- Scoutmasters were on the verge of coronaries from helping carry other's packs

$ Fortunes were being spent on equipment $

This all changed upon reading ***The Pacific Crest Trail Hiker's Handbook*** by Ray Jardine (1997 Adventure Press). Ray is an accomplished long-distance hiker, who advocates featherweight (8.5 lbs. without food and water) pack weights in order to maximize daily distances (30+ miles a day) and ease the punishment on your body. Many of his recommendations are heresy to veteran backpackers (such as hiking in running shoes instead of heavy boots), but with over 20,000 miles of hiking to his credit, his thought-provoking observations seemed to be the answer to many of the problems on our outings.

The following is an attempt to adapt many of the techniques of ultra-long distance hiking to more common backpacking trips, in order to bring increased safety and enjoyment. There is a big difference in even reducing a 35-lb. pack to 25 lbs., which gives motivation to decreasing packweight even further. I will give an overview of the equipment and prices, as well as how they are used in attaining "Good Form."

It's Supposed to Be Fun

Backpacking need not be an expensive sport. You'll notice that many of the recommended items are common, everyday things you may have around the house. Most of the other things are found at Home Depot, Wal-Mart or the grocery store. I realize that I'm blowing my already slim chances of landing lucrative product endorsement contracts by saying things like this. Backpacking specialty stores and mountain shops are fun to visit just to see the clever engineering that goes into the gizmos they try to sell you. But resist the urge to bring expensive, unnecessary gear along just because it says "backpacking" on the label. Learn to take pride in how much you can do without, how little you carry, and how much money you saved. Retailers may hate you but your back and your wallet will thank you.

Backpacking for the Common Man

Being in good physical shape will greatly improve your enjoyment of the outdoors. However, most Scout leaders aren't exactly a bunch of tri-athletes. Usually it's whoever's dad volunteered to come along. The rest of our group may be comprised of 11-year old 5th graders or 15 year olds who will *never* make the football team. In such cases the techniques presented here are important in opening up the wilderness to many who might not have participated because of the heavy pack weights we used to carry.

Thus, this book is for the common people who love the outdoors and would like to see the unspoiled beauty that is beyond the roads or car campgrounds. You don't need to be a rock climber or bushwhacker (unless you fish the places we do), just someone who can put one foot in front of the other and is willing to take a fresh look at living in the wilderness. Backpacking can be a family sport,

especially since with lighter packs the parents can carry some of the kid's load (or the kids carry some of the parent's load).

Many of the techniques in this book are not new. The Indians of this country were the original lightweight backpackers who were skilled in adapting to their environment instead of adapting the environment to them. Their whole life was a camp-out, and their outdoor skills are what sustained them, not technology. It is in this theme that we explore the equipment and techniques of lightweight (and low cost) backpacking in an attempt to achieve good form.

Going Without

People who are not familiar with good backpacking form ask me "isn't it difficult to sacrifice and do without so many things on a trip?" That depends on your definition of "doing without." Doing without broken ankles, heat exhaustion, ruptured disks, catastrophic equipment failures and $800 Visa bills isn't such a sacrifice to me. Our tummies are full, our bodies are warm and dry, our beds are soft and the fishing is terrific. Packing for a trip takes about 1/2 an hour (try that on a car camping trip). Many a young lad has caught his first Brown trout or seen his first deer on a trip that would have been impossible with our old packs.

Our troop just returned from a 5 day, 60-mile trek through the Sierras that caused every one of the Scouts to grow an inch. Scoutmaster Getty brought along eight pounds of food, returned with one and a half pounds, and ate well the whole time. Total pack weight was about 32 lbs. We used to top that on an overnighter.

Not to say that backpacking is the lap of luxury. We sweat in the sun, swat at bugs, curse the stinging nettles and long for ice cream and a hot shower. But instead of focusing on these things, a backpacker will notice the beauty around him, revel in the solitude, take photos of the scenery to brag about at the office and doubly enjoy the amenities of civilization upon returning home. I always have a great time.

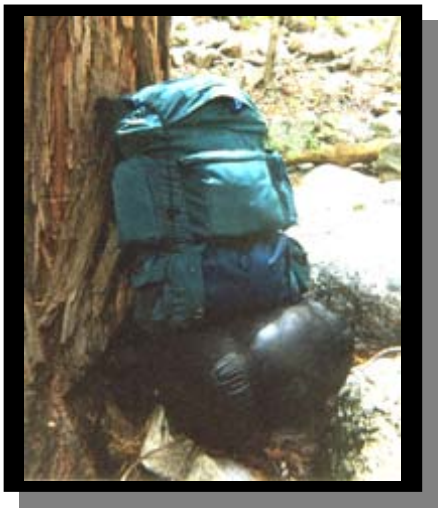
SECTION ONE:

GEAR

PACKS

$40 to $50 at Wal-Mart

External frame packs are easier to access and are not as hot on warm days



Internal frame packs are more compact and closer to the body, and are good for brushy trails or rough terrain

External frame pack

Choosing between the two main types of packs, internal-frame and external-frame, is a personal decision that I'm not going to delve into (get whatever's on sale). Both work equally well and both have their strong points. What is emphasized is that a small, light pack be chosen. The main benefits of this are:

- A small pack saves 3-5 lbs. over a large one: the same weight as ½ gal. of water!
- A small pack keeps you from bringing unnecessary junk along
- A small pack is easier to bushwack through narrow trails

Typically, a junior-size backpack will work fine. (I appropriated my wife's new pack two years ago and have been using it since.) Cut off all the straps and gizmos that you haven't used in the last two trips. Also, try to avoid bright colors: it's annoying to those seeking wilderness to be confronted with blaze-orange. Don't worry about the name brand or if it's rugged enough. The whole idea is not to carry that much in it.

Forget trying to buy a waterproof pack or messing with a pack cover. The best way to protect from rain is to line the inside of the pack with a trash bag, put your gear in, then twist it shut. The same goes for your sleeping bag.

A useful feature to look for is a zipper between the upper and lower compartments that allows you to place your sleeping pad vertically inside the pack. This way it doesn't hang out on both sides to be grabbed by branches like it does when you carry it under the main flap or along your sleeping bag.

SLEEPING BAGS

Summer Bag $30 at Big-5
Coleman 15 Degree Winter Bag $60 at Target

45 degree Summer Bag

Coleman 15 degree Winter Bag

I use two bags; one for summer and one for late season and winter. In extreme conditions, such as snow camping, I put the summer bag inside the winter bag and use them both.

As for bag construction, a mummy style is the only style worth getting. Square-foot bags are for slumber parties and padding moving vans. Goose down bags have superior insulating qualities and are very light and compressible, but are useless when wet, take forever to dry, and are very expensive. Synthetic bags such as Hollofill can be wrung out and still keep some insulating qualities even when wet.

Square-foot bags are for slumber parties and padding moving vans

Both summer and winter bags should have a hood that totally encloses your head and can be drawn tight with a drawstring, exposing only your face. Never breathe inside your sleeping bag; it will get damp very quickly. Also, a bag that is too large or long will only be extra weight to carry and more empty space that your body has to heat. The bag should come with a stuff sack for carrying, as it is bad form for your bag to be hanging out all over the place to get dirty and snatched away by branches. That stuff sack will also double as a bear bag or pillowcase. Line the stuff sack with a trash bag to keep the sleeping bag dry.

For summer time use, a 3-lb. bag is adequate. Temperature ratings for it will be around 45 degrees, but will vary by manufacturer, and the ratings are very optimistic. (I think a polar bear does the testing for them.) Add about 15 degrees to their rating and that will be more realistic. For early and late season, a 5-lb. bag should work best.

Line the stuff sack with a trash bag to keep the sleeping bag dry.

In the morning while you're packing your stuff up, unzip your sleeping bag and spread it on some bushes to dry and air out. It absorbs moisture from your body during the night, which robs insulating qualities and adds weight. This will hopefully help it smell a little nicer also.

GROUND PAD

Ensolite pad- $8 at Target
Thermarest™-$40 for an irregular at Sport Chalet

L to R: Therm-a-rest™, two insulating pads

The secret for a comfortable bed is to find soft ground to start with. Thick forest duff and pine needles are wonderfully soft and have excellent drainage and insulating characteristics, requiring the smallest of sleeping pads.

Unfortunately, overused campsights are usually scraped clean of forest litter and the dusty, mud-prone ground is compacted hard as a rock. Camping in the desert usually means sleeping on sand, and winter can mean sleeping on snow. Youngsters can usually get by with a 3/8" or ½" closed-cell foam pad. My old bones are happier with a self-inflating mattress such as Thermarest™, which comes in various sizes and weights.

If using a foam or insulite pad, don't be afraid to trim it to your size; 18" x 4' is plenty for summertime. Put some extra clothes under your feet and use the cutoff scraps to pad your pack. The ¾ length Thermarest ™ works well for many situations, but when laying on your side, there is a pronounced drop-off where your legs hang over the pad that is annoying by morning. Put extra clothes under your feet or pile up leaves and pine needles (or sand in the desert) before laying your ground cloth.

Swimming pool-type inflating mattresses are a poor choice, as they always go flat and have little insulating value. However, I used to get sore from sitting on rocks all weekend, and found happiness in a little inflatable pillow I bought for three dollars. It is also handy at night under my stuff sack pillow to raise my head a little higher (an inflated large zip-lock Baggie will do the same purpose in a pinch). Some in our troop also use a small beach ball for a pillow.

STOVES/COOKPOTS

Stoves- $30 at Big 5
Pot w/ lid- $12 at Sport Chalet

The only utensil you need is a spoon

An aluminum foil windscreen helps cook food faster on windy days

Propane/butane stove, Cook pot with lid/cup

The lightest stoves run on a Propane/Butane mixture, and fortunately, are also the cheapest stoves and easiest to use. Avoid propane-only stoves, as they tend to be large and the propane bottles much too heavy. White gas (Coleman Fuel) stoves work well in cold weather, but are more complicated and can be persnickety. White gas removes pitch and sap from your hands and clothes, however. Propane/Butane stoves work lousy in cold weather, but work better at high altitudes, so these usually cancel each other out. You may have to take the fuel canister to bed with you in freezing weather, and set it on an insulator when cooking.

The cook pot pictured above is about the perfect size, and the lid doubles as a drinking cup or as another pan to simmer sauce in while the pasta cooks in the main pot. The stove pictured easily folds up and stores inside the pot, along with a butane lighter and spoon. The only utensil you need is a spoon, as you already have a knife in your pack, and you can live without a fork. I dislike traditional mess kits that are common to backpacking which come with a bowl, small pot with lid, cup, and frying pan that has a handle that holds the kit together. The pans are too shallow and tip over easily, especially off small backpacking stoves.

Svea Stove $60

Primus Butane Stove $35

CLOTHING

Most found at the thrift store

One of the main problems encountered in dressing for the wilderness is the range of temperatures. It may be hot and sunny on the trail up the mountain and you're sweating like a pig. Lunch is in the shade and the breeze is blowing through your sweat-soaked clothes, giving you a chill. The afternoon is warm again and you may even take a dip in the creek, but as the evening shadows get longer, you find yourself moving closer to the campfire. Then once the sun goes down, yowza! That's cold! If the clouds start moving in or the wind kicks up at all, it's hard to remember the heat of the morning, and all you think about is how cold it is.

Yet, the next morning after the sun has risen a ways, you start peeling off sweaters and hope to make the toughest part of the hike <u>before</u> it gets *really* hot. And so it is, hot and cold, wind, fog, drizzle, rain, and even some honest-to-goodness snow. How can you handle it all without looking like an Everest expedition? The answer is: SYNTHETICS AND LAYERING!!

Natural fibers like cotton jeans, cotton T-shirts, cotton sweats and cotton socks absorb water into the fiber itself and stay wet. Once a pair of jeans gets wet, they're wet forever like a damp wash rag on your legs. Add a little wind to this situation along with some fatigue and you're playing patty-cake with hypothermia. Synthetic fibers like polyester, nylon, polypropylene and rayon don't absorb water and can be wrung out and worn, even after being soaking wet, as they keep most of their insulating properties. They dry quickly and are easy to launder. As an added benefit, they are terribly out of style, so you can find all kinds of synthetic clothes at the thrift store! (Not for long though…Disco is back…)

Cotton gets wet and stays wet forever

Layering allows you to fine-tune your thermostat, to allow for the temperature and activity level differences throughout the day. Staying at just the right temperature keeps you from sweat-soaking the insulating clothes that you will need as the day gets colder and you're not as active. Here's an example of how this works:

Leaving the trailhead around 9:00 AM, you're wearing nylon running shorts, nylon socks and a cotton T-shirt. You're sweating up a storm as you lug up the mountain on a hot, exposed ridge. Finally, you make it up to the ridge where there's a fine grove of trees to eat lunch under. Halfway through lunch, Brrr! That breeze is getting cold! So you change your cotton T-shirt for a polypropylene fleece shirt and tie the T-shirt on your pack to dry. Once back on the trail, you warm up again, but the bushes are really tearing at your legs. So you slip on a pair of nylon running pants that protect your legs and also block the wind. All goes well

until the first clouds peek over the mountain and block the sun. O.K., time to get out your nylon windbreaker. Who cares if a few sprinkles get you wet? Your clothes are still warm and will dry out soon enough. If the sun breaks through again and you start to heat up and sweat, unzip the jacket or take off the running pants.

Once in camp cooking dinner, the evening is getting chilly so you put on a pair of synthetic long johns under the running pants, and a fleece jacket with a hood under the windbreaker. The hood keeps your head warm along with protecting you from mosquitoes, while a pair of fleece booties feels nice and light on your feet as well as being warm and covering your ankles from the same mosquitoes.

Any wet clothing you hang out to dry, as it will easily dry before morning since it's synthetic. That cotton T-shirt doubles as a pillowcase that you've filled with empty stuff sacks and anything else extra you have. Now don't carry all that insulating clothing up the hill just to take it off at night. Wear most of it to bed, then you can get away with a lighter sleeping bag. Why carry both a heavy bag and heavy clothing?

Here's a list of clothing that will get you through most of the season:

- Synthetic underwear
- Nylon running shorts
- Synthetic (not cotton!) long underwear pants (long johns)
- Nylon running pants (athletic kind that resemble sweat pants-leg zippers allow you to put them on without taking your boots off)
- Cotton T-shirt (feels good on hot days, and doubles as a pillowcase)
- Synthetic shirt
- Fleece jacket with hood
- Nylon windbreaker

- Sun Hat with a wide brim ("Boonie" hats are our favorite)
- Fleece booties with hard soles for around camp
- Extra pair of polartec fleece socks
- Thin nylon socks (white socks look dirtier: get colored)

Wear most of your clothes to bed: why carry both heavy clothes <u>and</u> a heavy sleeping bag?

In cold weather, add:

- Synthetic long underwear shirt
- Polartec fleece pants

- Insulated waterproof/breathable parka
- Knit watch cap or “beanie”

Wearing your jacket backwards in heavy brush both protects you From scratches and makes it easy to take off without stopping (A Ray Jardine Trick)

Boonie Hat, Flyfishing hat

Footwear

Backpacking books will tell you that you have to have thick, heavy boots in order to be safe from foot injury. I wear thick, heavy steel-toed boots all day at work, and I can tell you, they are not what I want to be wearing on a hike. Lugging that much weight around on my feet makes climbing hills miserable. When I get home and change into sneakers, yahoo! I'm ready to go on our evening walk.

Now if you were carrying a 50-60 lb. pack, then I could see the logic. But we don't bring that much, so we don't need such heavy-duty gear that adds misery to an already heavy load. On his 2000-mile hikes on the Pacific Crest Trail, Ray Jardine wears running shoes, conditioning and strengthening his ankles before the trek. We compromise with lightweight boots that are a cross between a boot and a sneaker, and weigh about half of what a traditional boot weighs.

Don't make the mistake of buying your shoes or boots right before a hike. Just because they felt O.K. in the store doesn't mean they'll still fit right after three miles. Wear them to school or work a few weeks first in order to find if they need alteration or exchanging.

For socks, synthetic is again the preferred material, as wet cotton socks are notorious blister machines. Polypropylene or thin nylon socks in the summer and wool socks in the winter are the norm. Many people prefer a thin nylon sock under the wool to wick perspiration and protect their feet from the scratchy feeling of wool. I have a pair of Polartec socks

that are wonderful in cold weather and dry almost instantly.

In the evening time, fleece booties are a nice change from hiking boots, especially if your boots are wet. I wear mine to bed to keep my feet warm and in case I have to get up in the middle of the night. Since it is foolish for one who's relying on his feet for transportation to go barefoot and risk injury, footwear should be worn while swimming in lakes or streams (especially considering all the lures and fishhooks I've lost over the years). An old pair of sneakers would suffice, or pair of specialized water booties.

Blisters

When we pose for a photo before a hike we say "blisters" instead of "cheese." All kidding aside, blisters can ruin a perfectly good hike. Any treatment should also address the cause of the blister, such as footwear too tight, wet socks, poor fit, etc. Hikers should be alert for "hotspots" and take action early before blisters can start. Switch socks right to left, loosen or tighten laces, cut out a little padding from your boot or apply moleskin or some of the new blister pads available now. With moleskin, cut a hole out the size of the blister and use the piece with the hole to cover around the blister.

Blister first aid calls for sterilizing the blister with alcohol or equivalent and piercing with a sterilized needle. Drain the fluid out, cleanse again and cover with a Band-Aid or blister pad. It will be as good as new in a couple of days as soon as you stay off your feet.

Shelter:
Tents, Tarps and Mosquito Nets

Tents can be divided into two types: Self-supporting and Non-self-supporting. Self-supporting tents are like the popular dome tents, as they need no external ropes or stakes to hold them up. Non-self-supporting tents are like the classic "pup-tent" that you see Beetle Baily always sleeping in, that requires external ropes and stakes.

Non-self supporting tents tend to be lighter, since they need fewer and thinner poles to hold their shape than say a dome tent would. Dome tents are less stable in high winds and will blow away if not securely staked down. For that matter, we had one roll down a hill with a boy still in it who wasn't very happy about the whole situation.

Outdoor gear catalogs are filled with every shape, type, color and style of tent ranging from $50 to $400. Volumes have been written on the subject of tent selection and millions of backpackers have spent large sums of money on them trying to achieve two primary goals of using a tent:

1. Shelter from rain and the elements.
2. Shelter from bugs.

I would like to propose to you that a tent does neither of these things well, and that we need to re-think our view of tents.

The Tent as a Shelter from Rain

The problem with staying dry in a tent is that water comes from outside <u>and</u> from inside. Our bodies constantly give off moisture (get stuck in a small, cramped room with a bunch of people and you'll see how humid it gets). You can see the moisture in your breath on a cold day. What you probably don't know is that your skin gives off moisture too, even when you're not sweating.

I saw this demonstrated one morning on a camp-out. In the past, the foot of my sleeping bag kept getting wet in damp weather, and I was blaming it on a leaky tent. Rain was expected that night, so I stuck the foot of my sleeping bag in a large trash bag.

The rain never showed up, and in fact, the night was very dry, with not even any dew on the ground in the morning. Yet the outside of my sleeping bag was wet exactly where the trash bag had covered it up. This showed that moisture from my feet traveled through the sleeping bag and condensed on the inner surface of the trash bag, where it could travel no further. You can get the same effect by tying a baggie around your hand and seeing how clammy it feels in a few minutes.

Any tent wall that can stop rain on the outside also stops moisture from escaping on the inside. Tent manufactures try to allow for this by making an outer tent wall of waterproof fabric called a "fly." The fly is stretched over the inner tent wall made of breathable fabric or netting. The theory is that moisture from your body will pass through the first wall, leaving it dry, and only condense on the second wall, an inch or so away from you. The fly is stretched all the way over the tent, leaving no way to ventilate the inside.

Well, great. Now you're carrying basically two tents that still leave you damp and clammy. Water is condensing on the inside of the fly that showers down on you when you jiggle the tent, and hard rain hitting the outside of the fly knocks loose the water on the inside of the fly so that it seems the rain is passing right through the fly.

In the winter it's worse. Your breath builds up even more quickly in freezing weather. Ever see the pictures of those arctic dog-sled racers with ice covering their beards and eyebrows? That's from their breath. Not only does the inside of the tent get covered in frost, but also the outside of your sleeping bag. When the day warms and the frost melts, it's like a flood.

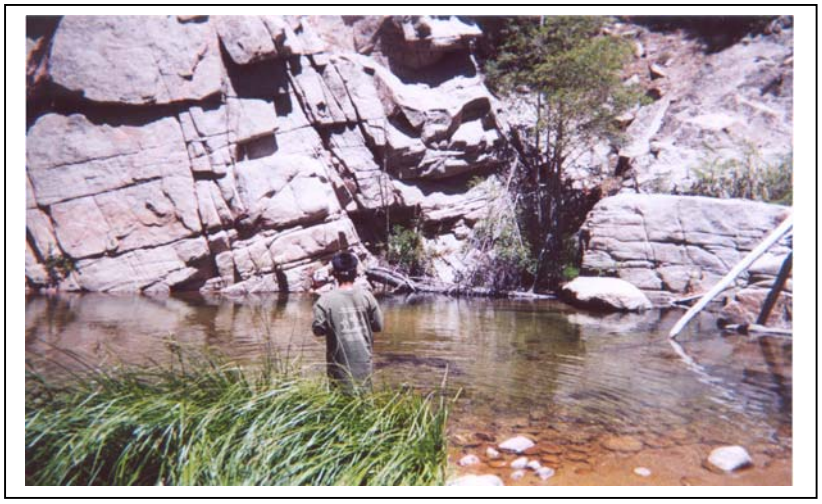
So what's the answer? Thought you would never ask. The key is VENTILATION. In a tent, this means leaving the door or both doors open. This is the only way that moisture can escape fast enough, especially if you have some clothes hanging in there that are drying out. But what is another word for a tent with both doors open? TARP. (More on this later)

My tent is made by Coleman and is as about as cutting-edge as a tent can get. It has an inner tent of mosquito netting, a shock-corded pole, aerodynamic design, two side doors, a full fly with room for gear under the fly, weighs about 4 lbs. and cost about $80, which is a very reasonable price. Yet, the only weather I can comfortably sleep in it is dry, warm nights such as on our desert outings. But then again half the guys sleep those nights without a tent at all, so why bring it?

My Coleman Tent

Bug Protection

"Alright already!" you cry. "I don't care about bad weather, I just want to get away from the bugs!" So what you're saying is that you're using a 4lb. $80 tent to do the same thing that a 12-ounce, $15 mosquito net can do just as well? Bad Form! But enough of this madness. Let's re-think our shelter needs and see how we can do better.



Tarp

Enter the humble and lowly tarp. How can this simple sheet keep you drier than the sophisticated and pricey tent? Ventilation my boy, ventilation. With both ends open, moisture doesn't have nearly the chance to accumulate inside. You can pitch it however suits you: as a single sheet for a dining fly, as an A-frame for a standard night, as a low, sleek wing for windy and blustery nights. It weighs almost nothing. The floor space is much larger than a tent (useful if your tentmate tends to squirm about at night) and the price is right: about $5.

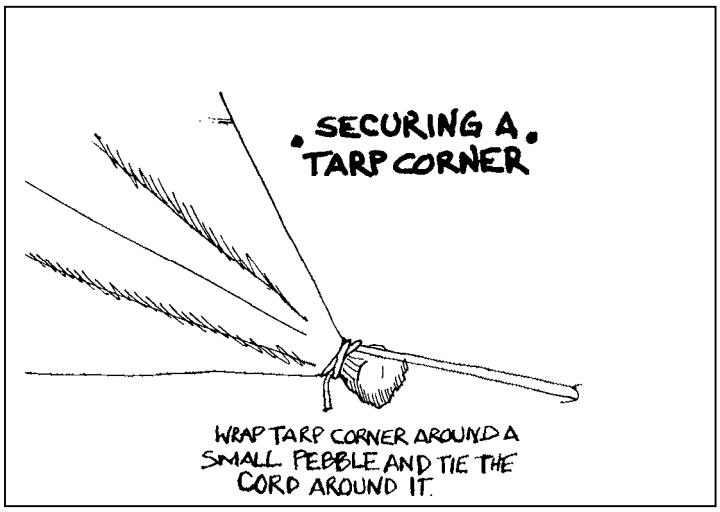
"This sounds all fine and dandy," says the skeptic, "but what about bugs?" Most of your body is covered with your sleeping bag, leaving only your face and arms. A large piece of mosquito netting draped over your face takes care of that. I also use my jacket hood at night and place my mosquito head net over my hood. The hood protects my face against the coarse head net.

Tarp Technique

In windy conditions, pitch the tarp low.

Clear away rocks and pinecones (to be put back later) from an area the size of your groundcloth. Some people prefer to dig a shallow depression for their shoulder or hip to fit in. Spread out your ground sheet and set a few pebbles to hold it down; your head should be uphill, and the ridge of the tarp perpendicular to the wind. Choose one of the techniques illustrated that best suits the situation. I prefer to use materials on hand to pitch the tarp, making my own stakes or using rocks in order not to have to carry poles or stakes. Often the ground is too rocky for stakes anyway: use large rocks or bushes.

The tarp also allows you do something only **fools** do in tents: cook. The danger of carbon monoxide buildup is too great in a tent, besides the danger of an inferno with you as the main course. My white gas stove sometimes has flare-ups that could signal passing jetliners.
Yet it is safe to cook under a tarp when pitched as a dining fly, or when the stove is set just outside the A-frame style.



Mosquito Nets

O.K., say there's no chance of rain and it's way too hot for a sleeping bag (plus the ants are marching two by two, hurrah, hurrah). Well buck up, Buckaroo, there's no reason for despair. The answer is a mosquito net. Typically box-shaped, a mosquito net is suspended from its four corners or from a single point above like in North Africa. Mine is a nifty little package that has its own net stuff bag that is useful for holding down a bottle of instant milk in the creek to chill overnight, weighs about 12 ounces and costs $15. For a ground sheet, a large trash bag opened up the long way is the perfect size, and allows the bottom edge of the net to be tucked under, excluding all but the most persistent ants.

The Ten Essentials

Things to have on every trip

First Aid Kit

Note: It is not within the scope of this book to try to teach you backcountry First Aid, as it cannot be taught in just a few pages. It is best to take the First Aid and CPR classes from the American Red Cross. They are well worth the time and nominal fee. Several Mountain Rescue and First Aid books are listed in the Suggested Reading List, and it is highly suggested that they be consulted.

The best First-Aid kits are homemade, as store-bought Kits don't address the needs of backpackers and usually contain silly things such as tongue depressors. The following list should be carried in a hard-shell case about 6"x 4 1/2" x 1" deep. A thick rubber band (like the ones that come on broccoli) keeps it from spilling in your pack.

Small mirror- For signaling, shaving and seeing how bad that cut on your forehead is…
(2) 2-3/8 x 3-1/2 Adhesive Bandages
(6) Large Band-Aids (flexible fabric type)
Several Butterfly Closures
(2) Alcohol cleansing wipes
(2) 4" Gauze pads
Small roll of Adhesive Tape
Moleskin-4" square
Small Precision Tweezers- The ones from the hardware store for pulling splinters out
Clean Needle (sterilize over a match flame)
Almost Empty tube of Antibiotic Ointment
Almost empty tube of Anti-itch (Hydrocortizone or similar)
Several doses of Aspirin or Tylenol
Decongestant pills
Lip ointment
Tiny tube of sunscreen
Several Antacids

In addition to carrying extra flashlight batteries, carry a spare bulb

Carry a sanitary napkin in your pack: they are sterile, cheap and make an excellent compress to stop bleeding.

Flashlight (About $5)

I prefer the plastic, two "AA" battery flashlight that uses a krypton bulb, as it's lighter than the aluminum Mini-Mag flashlight. Turn one of the batteries the wrong way while carrying it during the day so it won't turn on accidentally in your pack and run the batteries down. In addition to carrying extra batteries taped together, carry a spare bulb. I keep mine inside a 1" long piece of ½" PVC sprinkler pipe with tape on both ends to guard it against breakage.

Pocketknife (About $5)

Forget the survival knifes and hunting sheath knifes that are popular in camping stores, and spare me forever the Swiss Army knifes with all the saws, screwdrivers, magnifying glasses and fish scalers. The best is indeed a Swiss Army knife, but the one with only a 1 ½" blade, scissors, nail file, toothpick and tweezers. This works well if kept razor sharp, and is what I've used for cleaning fish for years. The scissors are top-quality and are the handiest things to have around.

Firestarter

I carry a couple types of firestarters. In my ditty bag I have a box of hurricane matches. These are wooden matches that have an extra-thick sulfur coating that goes halfway down the matchstick. When lit, they burn intensely about four seconds and cannot be blown out. The match is paraffin coated, and thus waterproof. Unfortunately, the box is not waterproof, and you need the box to light the match. The answer would seem to make the matches strike-anywhere, but the thought of a box of these accidentally setting themselves off is enough to deter that thought. So I compensate by carrying the box in a ziplock sandwich bag. Also in this bag is a generous quantity of dryer lint, which burns easily and makes good tinder, besides being free (I like free). A candle stub or several birthday candles rounds out your emergency firestarter kit. Plus you can put a birthday candle on a Twinkie and sing "happy birthday" to the birthday boy.

For everyday pyrotechnics, such as lighting my stove, I use a butane lighter. So that I don't get my hand too close to my white gas stove, I light a pine needle first and then use that to light the stove, that way I don't burn the hair off the back of my hand. Even when out of butane, the spark wheel on the lighter will light the dryer lint tinder and get a fire going. See the chapter on "Fire" for more information.

Sun Protection

The thought of getting sunburned legs or back on a backpacking trip should scare the daylights out of you. Imagine putting a pack on or trying to wear pants and walking for miles with a bad sunburn. Protective clothing or sunscreen is necessary in all seasons and weather. When applying sunscreen, don't forget your ears or the bottom of your nose; these two commonly overlooked areas are horrible to get sunburned.

The glare from water or snow can give you a splitting headache or lead to snow blindness. Sunglasses eliminate this risk and also make you look cool in the pictures. My sunglasses are prescription and are also my ticket out if my regular pair of glasses get damaged.

Rain Gear

Conventional wisdom says hikers should be covered head to toe with waterproof rain gear in a rainstorm. The problem with this is that if the fabric doesn't breathe, it feels like you're wrapped in Saran Wrap. The exertion of the hiking and climbing makes you hot and sweaty, the very thing you don't want to be while being sealed in a baggie. Of course one answer would be to have waterproof/breathable clothing such as Gore-Tex™. But at $300 for the jacket and pants,

Egads! This doesn't fit well with our philosophy of "think cheap," does it? My word, $300 would buy my whole outfit!

To the rescue is our old pal, Ray Jardine. He praises the virtues of the lowly umbrella. His is slightly modified to save weight, but an off-the-shelf model would probably work just fine. Surprisingly Ray uses a full-size length, and probably presents a dashing, dapper figure as he strolls down the trail with his umbrella. It doubles as a tarp pole in a pinch. I compromise and carry a mid-size fold-up style that fits in my pack.

Now before you scoff and snicker, I present to you the case for the umbrella. It offers wonderful, unlimited ventilation. You can point it into the wind to help shield you. You can open your pack and dig stuff out without rain pouring in, as well as read a map without it getting soaked. It doubles as a sunshade. You don't have to take it on and off constantly in showery weather. You can put it at the end of your tarp where the rain's blowing in. If you're Wyle E. Coyote, you can use it to protect yourself from gigantic falling boulders. What more could you ask for in portable rain protection?

The rest of the ten essentials, Food, Water, Map and Compass and Extra Clothing are covered in their own chapters.

Ditty Bag

(Handy little things to have)

Camera

Disposable cameras offer several advantages. They're light, compact, easy to use and come with flash or non-flash. They take decent pictures, and are inexpensive so you won't be whining as much when you drop it in the stream as you would with your high-dollar camera.

Repair Kit

In a 35mm film canister, put some spare packframe clevis pins, some wire, safety pins and a sewing needle (magnetize it on a speaker magnet and it can double as an emergency compass). Use dental floss or fishing line for thread, which leads us to…

Fishing Kit

In another 35mm film canister, put a:

- small clear bobber
- small lure such as a Rooster Tail (black or yellow and black)
- couple of tiny swivels
- couple of tiny treble hooks
- couple of tiny bait hooks
- two small dry flies and wet flies
- sliding sinker and a couple of split shot sinkers

Use a cotton ball to keep these items from rattling around. A 20 yard spool of 4lb. Test leader rounds out your emergency tackle box.

Parachute Cord

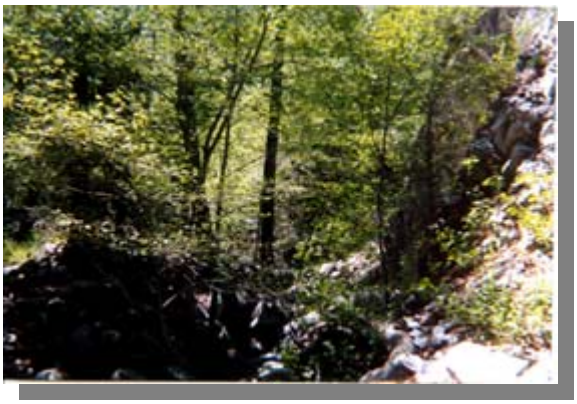
This is a thin nylon rope resembling shoelaces. It is used for setting up your tarp, hanging your bear bag, clotheslines and any other pioneering projects you may have around camp. Carry two or three 25' coils in your pack.

Space Blanket

This thin Mylar sheet reflects body heat, is windproof and waterproof, and weighs next to nothing. The uses are numerous enough to justify including it in your ditty bag.

Gizmo Overload

Beware of the "gizmo" aisle in the camping sections. You know the aisle, the one with saltshakers and camping showers, toast-cookers, mosquito coils and mini cuppacino makers. While browsing through these things you're already on vacation in your mind, as shopping for your trip is part of the actual trip. Not that there aren't any useful and necessary items in this section; just weigh carefully any benefits received from that item compared to the misery of hauling it. Honestly. Do you really need that plastic hammer to pound tent stakes in? A rock works just as well. For that matter, do you really need tent stakes? Can a sharpened stick work just as well, or tying a cord to a log or bush? I'm still amazed at the people who buy hiking sticks. I step over thousands of "hiking sticks" every outing into the forest, and occasionally have to move a half-dozen "tent peg hammers" in order to find a place to sleep.



SECTION TWO: FOOD AND WATER

Water

Water is a popular destination in backpacking, whether it is a mountain creek, pristine lake or raging river. Since water is so heavy (8 lbs. per gallon) and we need so much of it (2 gallons per day per person), it makes sense to use the water that's already there.

The problem is, backcountry water can make you sick, sick, sick. Getting stomach cramps, vomiting and diarrhea are bad enough, but having these problems in the middle of the night, squatting over a cat hole, freezing to death, three days into a five day hike with only a pine cone for toilet paper…are we having fun yet?

Water that is crystal clear and cold can still be polluted. Two of the main sources of backcountry pollution are carrion and feces (dead things and poop). Nasty things live in both of them and include bacteria, viruses and parasites. These wash into the stream or lakes, or are deposited by animals or careless hikers, and if swallowed, they can make you sick to varying degrees. But before you run screaming from the water, cheer up! There's hope!

People used to get sick and die all the time from bad water. Indeed, many armies had more deaths from water-borne diseases than from actual combat. Now most city water is filtered and treated with chlorine to make it safe, and chlorine is what keeps swimming pools from turning green. I must add that any illness we've contacted from backcountry water is nothing compared to a couple of food poisoning cases we've caught at restaurants.

Water Purification

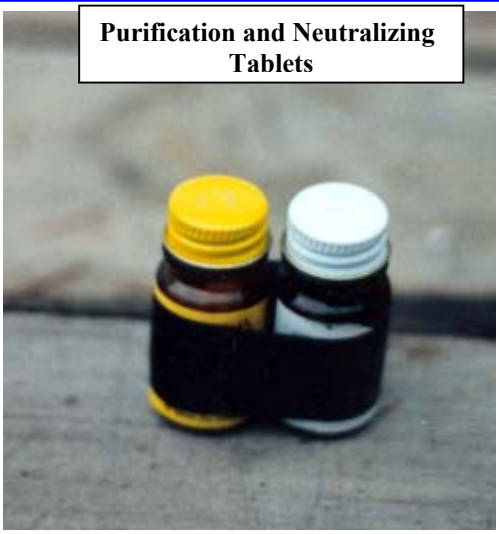
Chlorine is not very practical for backpackers, and so the three main ways of treating water are **boiling**, **filtering or iodine tablets**. (There's no guarantee that any of these will make the water out of a mud puddle taste any better: only that it won't kill you.)

Boiling is an excellent way to treat water you're cooking with, since most dehydrated foods require boiling water to re-constitute anyway. This also sterilizes your pot and spoon when you stir it. But boiling uses way too much fuel for your drinking water needs.

Filtering is more popular with the advent of microfilters that strain out the bacteria and parasites. My filter also adds iodine to the water to kill viruses also. Prices range form $45 to $150, depending on how small of particles it will filter and how long it lasts.

Iodine tablets have been around a long time and are for short-term use only. When they are added to the water, the water must sit for at least 20 minutes afterward. The tablets must be kept dry and out of the sun, and a new bottle used every year, as they have a limited shelf life. Water treated with iodine can have an off taste.

My personal favorite is the **iodine tablets**. I bought one of the best filters available at the time, which cost me about $85. It weighs about a pound, and is 12" long. As with all filters, it can be hard to prime (you sit there and pump and no water comes out), clog up or fail without notice. It leaves an iodine taste in the water from its iodine virus-killing cartridge. Because it was so unreliable, I carried along a bottle of tablets for backup.



Purification and Neutralizing Tablets

Then one day an idea slapped me upside the head: "Shazam! Why am I carrying both filter and tablets, when the filter makes the water taste like tablets anyway?" So I leave the filter at home now and just use the tablets. Iodine neutralizing tablets are available that take the bad taste away, and they work great. I finally get to taste the good mountain streams without any funny aftertaste. I tape the bottles of iodine and neutralizer together, so they're easier to keep track of, and scratch a 1 and 2 on the lids in order to avoid confusion. The tablets weigh almost nothing, and cost about $5.

To use the tablets, stretch your bandana over the mouth of your water bottle to act as a pre-filter (the wide-mouth bottles are faster filling up) and lower it into the water, being careful not to stir up sediment. If the water is cloudy or muddy, collect the water in a container and allow the dirt to settle to the bottom. Then use the clearer water on top. Add the iodine tablets according to the recommended dosage on the bottle. Allow to work for the full stated time! This may involve some planning of your water needs.

After this time, you may add the neutralizing tablets, usually one for each iodine tablet you used. The effect is instantaneous and dramatic. Almost as soon as you add the tablets, the color changes from murky green to crystal clear and the taste goes from chemistry set to mountain spring. The tablets are mostly ascorbic acid (vitamin C). Both tablets have binders in them that remain in the water and resemble "floaties," but are harmless.

Water Containers

Now that you have this clean water, how are you going to carry it? I fear that there is more argument over the best water bottles than all other camping equipment combined. Some people swear by those water bags that strap on your back with a tube to your mouth (dromedary bags or "Sport Hydration Pacs"), others prefer empty 2-liter Coke bottles. Green plastic military canteens, wide-mouth nalgene bottles, Bota bags, felt-lined western canteens, aluminum canteens: the list goes on. I'm certain that no matter what method I advocate I'll get hate-mail saying, "*You ignorant pathetic greenhorn! Whoever told you you know how to camp? The* (enter water container here) *is the worst contraption ever conceived by man!*" But out of either foolishness or courage I'll jump into the fray.

Being of the cheap and light persuasion, I'm partial to the empty Coke bottles. When empty, they can be scrunched down to save room and the one-liter size fits the side pocket on most packs. When it gets dirty, just throw it away and get another one. However, because I use my bandana as a pre-filter, the wide-mouth bottle fills faster and my hand doesn't go numb from the

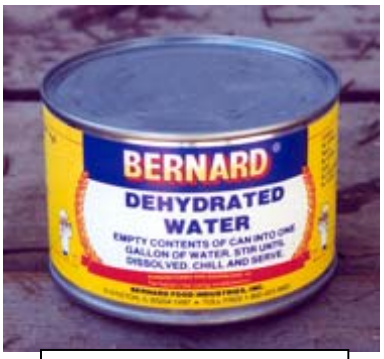
cold stream. The heavier plastic also withstands boiling water, so it can double as a hot-water bottle.

I don't think I would trust a bottle that you can't see in or get inside to clean, which eliminates dromedary bags, green and aluminum canteens and bota bags. Too many grungy things can grow inside unnoticed, or upon cleaning, bleach or soap is left inside as a surprise for your next outing.

Large Capacity Storage

For the times when you need to carry a large amount of water, such as in between water sources on dry stretches or desert camping, your choices narrow down a bit. Several empty two liter bottles work well and have "systems redundancy" in that if one springs a leak, your whole water supply isn't lost. Collapsible two-gallon water bags also work well and are surprisingly strong and relatively inexpensive. Plan on carrying about one and a half to two gallons a day on dry campouts.

If you need to purify the water in your large-capacity storage, do so as you need it, filling up your one quart drinking bottle. This prevents unnecessary purification of water used for cooking, washing, etc.



My Personal Choice

Food, Chow, Grub, Vittles, Mess, Comida, Munchies, etc.

"An army marches on its tum-tum"- Napoleon

To some, food is just the fuel that gets them where they're going, a necessary evil that gets in the way of their rock climbing, peak bagging or photography outings. But to us mere mortals, good food lifts the spirits, warms the heart and fills the tummy, giving energy and resolve to face the challenges ahead.

Times were when you said "backpacking food," one would think of freeze-dried Turkey Stroganoff with mushrooms and cream sauce that was bought in a backpacking store, came in a foil pouch, and cost $11. By the time you bought the whole weekend's menu you were dinged over $50, which could buy dinner at a very nice restaurant with real ice cream instead of freeze-dried ice cream.

Dehydrating

To the rescue is the **Food Dehydrator.** Once relegated to survivalists and hippie stores, the dehydrator is your answer to lightweight, wholesome, delicious and **cheap** cuisine that tastes even better out in the wilderness.

Don't pay more than $30-$40 dollars for a dehydrator. (Better yet find one used at a garage sale.) All models basically work the same, in that they blow warm air around the food, which evaporates the food's water content. The resulting dry food doesn't support bacteria growth very well, and will keep much longer without refrigeration.

Drying was one of the main preservation means for centuries. The Indians mixed dried and pulverized meat with dried fruit, nuts and lard to make **pemmican**, a main staple on long journeys. Lewis and Clark mention making jerky many times in their diary (which is recommended reading for anyone who loves the outdoors), and ate dried salmon along the Columbia River.

Many commercially dried foods contain sulfur and nitrates in order to keep the food from turning brown or spoiling. The home dehydrator isn't as worried about these things, and can concentrate on the main event, which is TASTE! Many of your favorite foods can easily be dehydrated, and you will be amazed at how good they taste when re-constituted. Any food you don't eat on your trip can be stored for the next time, and many find themselves dehydrating instead of canning their extra produce or meat. (Dried foods take up much less room and are safer to store.)

The procedure is simple. Peel, core and slice the fruit or vegetables ¼" thick or less. Arrange the slices on the tray so they are barely touching each other. Put them in the dehydrator until they shrivel up and feel dry (times may vary: it may take hours). Some foods that dehydrate especially well are:

- Apples- Fujis are the best (way better than those leathery apple chips in the store).
- Pineapple- Drain a can of chunk pineapple in heavy syrup and spread on the tray.
- Watermelon- Unusual but delicious. Shrinks dramatically as it's mostly water.
- Banana- Slice and soak in sugar water first. The ones in the store are fried (icky-poo).
- Peaches, apricots, etc.- Remove the seeds and skins, slice thin. Start with sweet fruit.
- Strawberries, boysenberries, blueberries, etc. Good mixed into oatmeal.

Just about any canned soup or sauce can be dehydrated. Pour out on a sheet of foil or waxed paper and dehydrate as you would fruit or vegetables. Spraying the foil with a non-stick cooking spray helps the removal of the resulting "leather" that the dried food resembles. Fold this up and keep it in a baggie. This technique works well for:

- Spaghetti sauce
- Salsa
- Campbell's soups

No chapter on dehydrating is complete without one of the main treats, which is jerky. This can be made with fish, beef, venison, turkey or whatever the hunter in the family brings home. I'm partial to beef, so here's a recipe for beef jerky:

Start with the leanest cut of London Broil you can find. Freeze it, and then while it is still partially frozen, slice it with a sharp knife into ¼" strips, cutting out as much of the fat as you can. (When dried, the fat is tough and chewy, almost inedible). Marinate this overnight in the refrigerator in the following mixture:

1/2 cup water
1/3 cup soy sauce
2 teaspoons seasoning salt
1 teaspoon MSG (Accent™)(optional)
1/2 teaspoon garlic powder
1/2 teaspoon black pepper
1/2 teaspoon Worcestershire sauce

1/4 teaspoon liquid smoke

This recipe is enough for about 1 pound of meat.

After marinating, spread the slices out on a tray that you've sprayed with non-stick cooking spray. Letting them drip awhile over paper towels first makes cleanup easier.
Dehydrate the jerky until shriveled up and dry to the touch. Some people like it a little more tender, but realize that it goes bad quicker the more moisture it contains.

Those lacking a dehydrator can still make jerky in the oven. Spread the meat out on a rack (cake cooling racks work too) and place inside the oven that's set on its lowest temperature. Prop open the oven door with one of the burner grates from on top of the stove while cooking to keep it from getting too hot.

Some commercially dried foods make sense to buy, especially when pre-seasoned and packaged. What was once only carried in health food shops and gourmet stores are now becoming available in grocery stores. Unusual and exotic fruits such as mango, cantaloupe, papaya, Bing cherries and strawberries are all in my local market now. (As an added bonus, I'm able to eat fruit dehydrated that would tear my stomach apart if I ate it raw, such as mango and pineapple.) Especially good are those commercial products in paper cups e.g. dehydrated soups, mashed potatoes, chili, and corn chowder, clam chowder and all kind of rice and bean concoctions. Other foods have always been available dehydrated, such as pasta, dried milk, pudding mix, Jell-O, oatmeal and cream of wheat, coffee and tea. (Some coffee gourmets go as far as to bring a portable drip funnel and coffee filters.)

Sugar 'n Spice and Everything Nice

Pre-packaged dehydrated foods are notorious for being bland, especially those from the health food store. (They often lack salt.) I carry 35mm film canisters of seasoning salt, Molly McButter, and Parmesan cheese. Hot pepper packets from fast food places as well as salt and pepper packets travel well. A small Baggie of sugar sweetens oatmeal and tea. Other options are mustard and ketchup packets, soy sauce and jam packets, honey, butter spread and Steero cubes. Of course, keep everything in a Baggie to keep from spilling any leaky packets all through your pack.

However, for the true outdoorsman, there are only four spices you really need to enjoy authentic outdoor cooking: dirt, ashes, pine needles and bugs. Be sure to add liberally from these four food groups to all your dishes.

Re-packaging

It is usually best to carry your food in different sizes of plastic zip-lock Baggies. The smallest ones, snack bags, are ½ the size of a regular sandwich bag. Take those paper cups of soup or mashed potatoes and dump them into a snack bag, then with a magic marker label the contents and how much water to add. (This prevents mistakes like using salsa instead of spaghetti sauce in your pasta- ay caramba!) Bulkier things like pasta would go onto a sandwich bag, and all these bags together go into a one gallon bag, both to keep it all organized and to contain any spills. This method cuts down on bulk and trash. We will see later that most of the food can be cooked and eaten out of these bags also.

Cooking

O.K.- so how do I get this stuff from resembling sawdust to looking like a gourmet meal? Well, that's where talent and skill come in. "OH NO! WE'RE DOOMED!" you exclaim. Now cut that out. Cooking is a skill that, like lightweight backpacking, can be easily learned by anyone with the proper tools and a hungry tummy. Much of the work is in planning and preparation (what else is new?). Who knows: some of these cooking skills may even come handy in "civilian life" off the trail back home.

Now let's review our tools:

- Stove
- Pot
- Lid / Saucepan
- Spoon
- Water bottle
- Food bags

Pretty simple, huh? I'd like to introduce a couple other things that may help out some. One is a pot grabber, i.e. aluminum grippers for holding hot pots. The other is a tortilla cooker; just a hoop of wire made from a coat hanger. (One of those cheesy aluminum skillets that comes with mess kits also works well.)

Teaming up with another hungry camper and sharing your gear can have great results. One can be cooking the pasta on his stove, the other cooking the sauce, etc. This also creates "systems redundancy," in that if one stove quits, there is a backup and you don't have to munch on dry spaghetti.

Re-constituting (making dried food wet again)

Re-constituting depends on the food. Many are best enjoyed dried, such as pineapple and jerky. Some foods only need to be soaked in cold water an hour or so, like strawberries or mashed potatoes. Others, like oatmeal, need boiling water added to "fluff up." Then there are those stubborn cases that require actual cooking and simmering, like pasta and spaghetti sauce, soups containing meat, and most rice dishes. Practice will tell you what you can get away with, and much of it will depend on your tolerance for the "crunch factor" of partially re-hydrated foods.

Maestro of the backpacking stove

Since you didn't bring a lot of extra food, it would be bad if your stove tipped over while cooking (This, besides the chance of setting the forest on fire.) So find a nice, level spot for your stove to set where errant sparks won't catch anything on fire. If it is a windy day, you may want to use a windscreen or arrange rocks around the stove to shield it from the wind. However if your stove has a fuel tank on the stove itself, never shield the stove so the tank could get hot. Also remember only fools cook in tents because of the carbon monoxide poisoning and fire danger.

Get everything ready ahead as much as possible and only heat up the water you need in order to conserve fuel. Some stoves may get hot enough to melt the bottom of an aluminum pot if there isn't anything in it, so pay attention. Remember that your stove stays hot a while after you shut it off, so avoid burning yourself or melting a hole in your stove stuff sack (bad form).

Scoutmaster Bill Getty's eat-out-of-the-baggie method

Simple meals like breakfast and lunch are usually eaten one item at a time. For oatmeal, dried soups and mashed potatoes, pour hot water right into the baggie with the food (yes, the baggie will hold it fine) and mix by squishing around. It may be too hot to hold, so set it inside your cup or pot, and eat right out of the baggie. When you're done, put the baggie in your trash baggie and lick your spoon clean. No dishes! (Who likes cleaning dried oatmeal out of the pot?) Leftovers are conveniently packaged also.

Tonight, ze chef has prepared…

The main meal of the day tends to be dinner (supper for you Yankees), mostly because it is eaten after camp is set up, and there's not much to do after it gets dark. Sure, long-distance hikers eat a quick meal and then continue hiking until well after dark. But one of the pleasures of the weekend backpacker is putting your sore feet up, pulling up a few rocks for a "kitchen" and dazzling your companions with your culinary prowess.

Here's where that teamwork comes in handy. The team captain, El Guapo, is cooking up the apricot-mango salsa in his saucepan. Juan Valdez is re-hydrating the black beans, and Don Leon has mixed the tortilla flour with water in a baggie, rolled it into little balls, flattened them on the bottom of a pot and is cooking them over a stove on his coat hanger tortilla cooker. Keeping their bandanas handy to catch spills, the three amigos bring the ingredients together and- "viva dehydrator!" All remembrances of Top Ramen are forgotten. Let's see if that teamwork carries through to doing dishes. Speaking of which…

Doing Dishes

Many people bring along assorted pot scrubbers, brushes, brillo pads, etc. for clean up. I've found that the wilderness is filled with pot scrubbers and there's no need to bring extra ones. Put a scoop of sand and gravel in your pot, add a little water and swirl around. Pour in some water and dump out, finishing with a final rinse. Resist the temptation to do this in a stream, as the food will pollute the water and attract vermin. Instead, carry water in your water bag away from the source and do it where there's no chance of pollution, preferably away from your campsite. The cookware

will be sterilized the next time you cook with it. The first steps can be done dry in the desert. It goes without saying to pack **all** your trash out.

Sample menus and Itineraries

Here's a couple of our favorite menus for an overnight outing.

Menu A

- Breakfast- usually eaten at home. Carl's Jr. French toast sticks are the preferred item for procrastinators who eat on the way to our destination.
- Snack- Dried cantaloupe and beef jerky
- Lunch- Mashed potato cup or soup, dried apple, *Chupa-chup* ice-cream flavored lollipop
- Snack- Cashew nuts, Pop-tart
- Dinner- Corn elbow pasta with dehydrated Ragu sauce and Parmesan cheese, cook-n'-serve vanilla pudding made with dried milk, topped off with a crumbled Chips Ahoy cookie. Hot tea or cocoa, lollipop
- Breakfast- 2 packets of apple cinnamon instant oatmeal with a generous portion of raisins added, Pop-tart, hot tea.
- Snack- Jerky, dried cantaloupe, lollipop
- Lunch- Dehydrated clam chowder cup, cashews, lollipop
- Lunch on the way home: Bacon Cheeseburger, curly fries and root beer float at A&W
- Leftover in your pack afterward: Dehydrated mashed potato cup, jerky, dried apples

Menu B
(This menu is assuming that the first night is spent at a "car campground" with a fire ring)

- Dinner (upon arrival late Friday Night)- Herb n' Butter Pasta Roni, Hot tea, cinnamon rolls spiraled around the end of a stick and cooked over the campfire, eaten with frosting.
- Breakfast- Biscuits cupped over the end of a fat stick, filled with jam, hot tea
- Snack- Maple flavored walnuts, dried mango
- Lunch- Dehydrated chili cup, Pringles chips, 1/2 fruit 'n nut chocolate bar
- Snack- Jerky, mixed nuts
- Dinner- Burritos consisting of dehydrated black bean chili, dehydrated salsa and tortillas. Wild greens, 1/2 Fruit 'n Nut chocolate bar, hot tea
- Breakfast- Apple cinnamon oatmeal with extra dried apples
- Snack- Dried papaya and jerky
- Lunch- Vegetable beef soup, dried watermelon, root beer barrel candies
- Snack- (on the way home) jerky, dried papaya
- Leftover in your pack afterward- Mashed potato cup, dehydrated clam chowder, mixed nuts

Suggested menu items:

These are just a few of the menu items available for the lightweight backpacker. Use your imagination and ingenuity to add more to the list.

Breakfast Items

Cold cereal	Cream of wheat	Instant Oatmeal
Pop Tarts	Dry Milk	Instant Breakfast
Pancake Mix (try at home 1st)	Biscuit mix or bannok	Granola
Powdered eggs	Sealed bacon package	Tortillas

Lunch Items/ Snacks

Dry soups	Dry potato cups	Chocolate Bars
Jerky	Dried fruit	Nuts
Chips (Pringles pack best)	Cheese 'n crackers	Cookies
Pudding (instant or cook 'n serve)	Hard candy	Dry chili
Canned cinnamon roll dough	Canned biscuit dough	Cookie dough mix

Dinner Items

Rice-a-Roni (rice dishes)	Pasta-a-Roni (pasta dishes)	Quesadillas
Burritos	Spaghetti and sauce	Dried stew
Pita Bread	Falafel mix	

Tastes just like chicken…

We have a running joke in our troop, that when anybody says "hey! There's a lizard! (snake, grasshopper, skunk, whatever), I say, "yessir, there's good eatin' on a (snake, grasshopper, skunk, whatever). Little garlic and butter… (everyone in unison) ***Tastes just like chicken***…"

One of our leaders had the opportunity to dine on rattlesnake a ways back. We asked him if it indeed tasted "just like chicken." He pondered for a moment and then said, "yeah…like the worst chicken you've ever had in your life!"

This section is not intended as tips for wilderness survival, as insects are commonly the best survival food. Yet, opportunities for wholesome wild foods shouldn't be passed up and a few actually taste good. Fresh greens on a long trip are a treat and who can pass up wild trout?
The following are a few of our favorites that even the novice can positively identify. It may take a little getting used to eating things you've been stepping on all your life.

Stinging Nettles

Stinging nettles commonly grow by streams and meadows all over North America. The knee to waist-high herb has saw-toothed leaves, and the entire plant is covered with little hairs. There can be no mistaking this plant, as the slightest touch to the hairs brings instant pain way beyond a cactus that lingers for hours. Unlike poison oak or ivy however, the effects are not contagious and soon go away, doing no lasting damage. Many a stream fisherman has cursed

these as they were stung through their jeans. Revenge is in your grasp, however, as boiling renders the hairs impotent and the leaves are delicious and nutritious.

Collect young, tender leaves by holding your pot underneath as you snip the leaf off with your knife scissors. Fill up your pot, as they boil down to almost nothing. Bring to a full boil. As the water begins to boil, you'll notice a change in the leaf as it becomes limp and a pleasant aroma comes forth. Drain well and add **bacon bits** and your favorite **vinagrette dressing**. The water you pour off, by the way, tastes amazingly like black (Lipton) tea. Your companions will be skeptical at first, but won't be able to contain their curiosity and will try just a little bit. Then they'll say "not bad" and try a little more. Then they'll laugh and have a helping, amazed that they would have starved to death among abundance.

Dandelion

You've probably heard that dandelions are edible, but when you tried one in your front yard, you found that it was like sucking on an aspirin. That's because with the dandelion, timing is everything (what else is new). The leaves of only the young plant are sweet. The saying goes "If there's one yellow flower anywhere in the field, the whole field of dandelion greens are too old and bitter." All is not lost however; as the yellow flower itself is sweet (really!) and even makes good wine. Use the young leaves fresh or cooked. Even the root is edible.

Blackberries

Anyone who's had a berry bush in their back yard can easily identify this trail treat, although you'll have to beat the other forest critters to them. Eat them fresh or baked into your biscuits.

The blackberry bush has leaves of three like poison oak, but also has **thorns**, which poison oak does not.

Trout

Tradition has it that the butter should be frying in the pan before the trout is caught as not to waste time, as fresh trout have the best taste. My trout are not that reliable, and in fact, I never *plan* on catching any for dinner, as that would ensure that I don't. However, I may sneak along a little cornmeal and butter just in case.

In the strange event that a trout accidentally runs into your hook, clean the trout by cutting it open along the belly and rip out everything you don't want to eat. Lop the head and tail off so it won't look back at you, and scrub well. Some people scrape the scales off by rubbing their knife backward along the fish, but I usually peel the skin off after it's cooked. Pat dry and roll in **corn meal or flour**, sprinkling the inside with **salt and pepper**. Fry in **butter** until the meat comes off the bones easily, which takes just a few minutes. Comb the meat off the bones, watching out for tiny little bones (fingers work best for this). This is all best done away from camp as not to attract bears.

SECTION THREE: PRACTICING GOOD FORM

Fire

…"Baby I'm on fiiire…O.K. I won't sing. Campfires are becoming increasingly frowned upon in wilderness areas because of the wildfire danger and damage they do to the environment, with soot-blackened rocks and bits of charcoal scattered all over campsites. Yet in survival situations and certain parts of the country a campfire is no sin if it has been built correctly.

I think everyone venturing out into the wilderness should be tutored in lighting a fire without matches. This way they can see what a pain it is and will make double sure that they have some firestarter on hand. I'm sure some of you Daniel Boones out there can use a bow drill or flint and steel like second nature. I've been instructed in both, including the magnifying glass method, and all I get is smoke. The only time I get fire is when I do it accidentally, such as mishaps in the workshop or job site.

Even if you do manage to get a spark using "primitive" methods, what are the chances of it working when you really need it, such as during a storm at night? I've seen the technique of starting a fire with a 9-volt battery touched on steel wool, but if you can remember the steel wool, you can remember matches and dryer lint. (Collect the navel lint out of everybody's belly buttons).

When I was a Buckaroo in Royal Rangers, Commander Bob demonstrated to us the proper way to start a campfire. He poured a gallon of Coleman fuel over a big log and then flicked a match at it: Poof! Instant ambiance, less a few eyebrow hairs. Hopefully we can use a little better form than that.

An old Indian saying goes "Red man build small fire: keep close, stay warm. White man build big fire: stay warm…hauling wood!" This is especially true for the backcountry traveler. A small fire is easier to manage, feed and put out. Speaking of putting out, make sure that when you're done or go to bed that the fire is dead out. This is best accomplished by drowning the fire, stirring the ashes and drowning it again. Don't assume that if you simply bury the fire that it is out: embers can smolder underground a long time. Since so much water is necessary to douse the fire, have it on hand before you light the fire, since usually nobody is in the mood to fetch it from the creek late at night before going to bed.

Small fire in a hole dug into mineral earth

Make sure that a 3-5 foot area around your fire lay is cleared of all organic matter. If there is an existing fire ring, use it instead of forming a new one. If not, the least damaging and most efficient method is to build a fire in a small pit dug into mineral earth. See that there are no roots

protruding into the fire pit, as a dead root can smolder for days and travel to the surface, igniting a forest fire long after you've gone.

Come on baby, light my fire…

In order for anything to burn, it must be vaporized first. This means that you have to heat it up enough to vaporize it. So it goes to reason that it's easier to vaporize a pine needle than a wet stump. Thus we start small and work our way up. The smallest fuel is tinder; something that will flare at the touch of a match, such as dry pine needles, dryer lint, inner bark or a gallon of Coleman fuel (just kidding…don't try it if you value your eyebrows). Next is kindling, pencil and finger thickness sticks that catch fire readily. These in turn heat up larger and larger fuel, hopefully stopping before you burn the whole forest down (bad form).

A classic method is the "teepee" fire. A generous handful of tinder is placed in the middle of your fire lay. The kindling is stacked on end around it, forming a small teepee, leaving a small gap in order to allow you to light it. The fuel wood is stacked in successive rows around the outside. Upon lighting, the teepee will burn until it collapses upon itself, whereupon you can add more wood or cook on the resulting coals.

To put out a campfire, thoroughly drown it

STAYING CLEAN IN A WORLD OF DIRT

Our Scout Troop goes camping at least once a month. (Another good excuse for being a Scout leader: try telling your wife you're going out with your buddies twelve weekends this year, and you're a heel. But say you're taking a bunch of boys fishing, you're a hero, and all these parents say thank you and give you little presents and certificates of appreciation, etc.) Anyway, with all that camping, instead of getting accustomed to the dirt, it still bothers me. But I've found that with a few simple techniques, even though you're out in the wilderness, there's no reason you can't be "civilized," despite the good-natured elbowing you may get from your campmates. Cleanliness is part of "Good Form."

> Even though you're out in the wilderness, there's no reason you can't be "civilized."

In a 4" x 12" stuff sack, carry the following:

- Trial Size Deodorant
- Toothbrush (We can live without toothpaste for one night, can't we?) Tip: keeping the toothbrush in your food bag makes it handy at mealtimes, when you're most likely to use it
- Small comb
- Bar of hotel soap in a baggie
- Disposable razor (Young teenagers can dream, can't they?)
- Roll of dental floss (doubles as sewing thread and reading mileage on your map)
- Tiny bottle of fabric softener (for giving that "springtime fresh" feel to hand-laundered clothes)

In addition I also pack in this:

- Small New Testament or Book of John
- Micro reading flashlight
- Tube of lip balm

For a washcloth I use my bandana and a 12" x 12" washcloth for a towel. Avoid red bandanas. (They turn your water red when you use them as a pre-filter.) Your morning "shower" goes like this: Hang your water bag from a tree. (Watch out for broken branches that could puncture the side of the bag.) Pour water on your hair, and then use the hotel soap to work up a good lather. Rinse, and then dry your hair with the towel and comb. Soap up the bandana and wash under your shirt, etc. Using a little warm water from your cookpot, soap up your face and shave (if you need to). Rinse and finish off with the deodorant.

If any of your clothes need washing out, now is a good time to do it, putting a little fabric softener in the rinse water. Tie them outside of your pack to dry. Needless to say, do this well away from the stream, as it's bad form to wash dishes or yourself where it could pollute the water supply.

When Nature Calls

The lack of "facilities" is what separates a Boy Scout outing from a Cub Scout outing. Personally, using a "cat hole" is much less objectionable than some of the nasty pit toilets I've had to use at public picnic grounds. In Africa they call them "long drops." For thousands of years mankind had to do without indoor plumbing (flushies). What once was a common skill is now forgotten, and so I will give a few tips on this sensitive yet essential subject.

By law, hikers in our wilderness area must carry a small shovel for just this purpose (get the orange plastic one). Also see Deuteronomy 23:12-14. Stake out a strategic spot in a private area, well away from any streams, lakes or water sources that could be polluted by runoff. Incidentally, if you hear someone approaching your position, the code words are "**go away**!" That person will beat a hasty retreat and you can continue in peace. Dig a 6" hole and proceed, finishing up with the small roll of toilet paper you wisely keep in a baggie, because if your toilet paper got wet you would have to use a pinecone.

> Keep your toilet paper in a baggie, because if your toilet paper got wet, you would have to use a pinecone.

Squatting over a hole for any length of time is hard on the knees, and there is a risk of soiling your clothing (bad form!). An alternate strategy is to find a low log, preferably with another one in front to hook your feet under to maintain your balance. Dig a hole behind the large log and sit on the log with your posterior overhanging the hole and your feet hooked under the smaller log. Of course this only works in forested areas. My good friend David Malone uses two rocks side by side as a toilet seat, with the hole between them. If you can find a large rock as a backrest, it's like being at home (well… almost).

Bury the evidence and return the area to its natural state. Some people put a large rock over the site to prevent some poor innocent soul from digging in the same place. Never attempt to burn the excess toilet paper. Some now-famous hikers tried that in the local mountains and started a forest fire that raged for days, doing more environmental damage than all the cat holes in the Western U.S.

Always sanitize your hands by washing afterward (not in the stream!). A small bottle of waterless hand sanitizer fits in the toilet paper roll, and also doubles as an emergency firestarter, since it's 60% alcohol.

Staying Found:
Map and Compass

Pointing the way back to camp….

The Topo Map

A topographical map (a map that shows the shape and features of land such as hills, valleys, trees, lakes, etc.) is like a book or a story. It lets you go places you've never been… without leaving home. By reading a "topo" map, you can imagine the shape of the mountain, how steep the trail switchbacks up the hill, where the flat spots to camp are, and where the hidden fishing ponds are that few know about. Old abandoned orchards, scenic vista points, cool, sheltered woods, life-giving streams: all these can be found while sitting in your easy chair pouring over a topo map.

Many a winter season is spent by the outdoorsman looking at maps and planning next summer's outings. By looking at a topo map, trails and destinations off the beaten path open up to you to get away from the crowds, to make fun new discoveries, to see things not many people see. No matter how experienced you become at reading the topo map and picturing in your mind what the place may look like, it's always a surprise to see the real thing.

The map is essential in planning your trip; to find campsites, water, recreation opportunities, figure trail mileage and how steep the climb will be, and to decide where on earth are you going to park the car? Only a knucklehead would just start out on a trail for a weekend without knowing anything about it. In many wilderness areas, you have to state your route and campsite on your wilderness permit, and that takes pre-trip planning with a map.

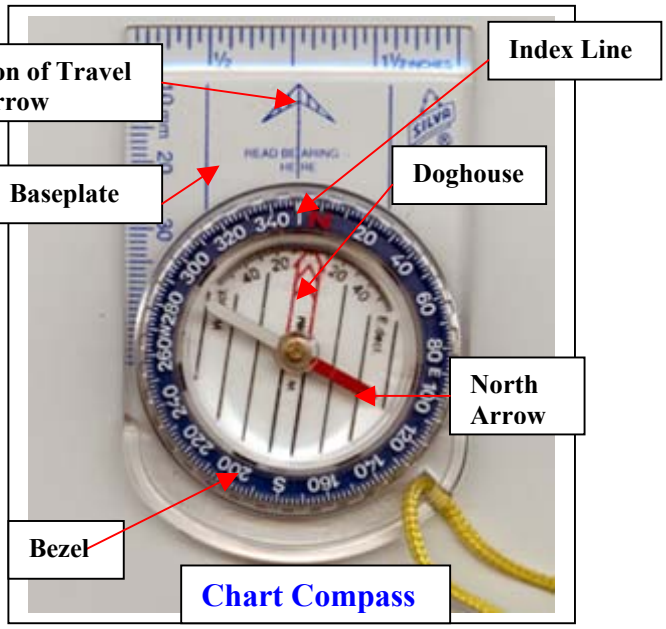
The map is also a guidebook during your trip. Good map reading skills are essential to "staying found," to knowing where you're at and what your options are. If a trail or campsites aren't working out very well, the map helps you select other ones. If the weather is turning ugly and skies are threatening, the map helps you find a more sheltered location.

The standard for topo maps is the set printed by the U.S. Geological Survey. These are available in different scales and cost about $6 a sheet. If you do a lot of hiking in a certain area, it would be wise to get one of the topo CD programs that cover a wide range. They cost about $50-60, which is cheaper than buying all the individual maps for that area. They also have nifty features like figuring your mileage and elevation change, plus allowing you to customize and print out your maps.

Navigation using map only

On most trips you probably won't even look at your compass. Often the terrain will be so rocky or thick with brush that the trail is the only way through it. Navigation then is only figuring out where you are on the trail. The best way is also the simplest way, and that is to follow your progress on the map, checking it often to see where you are. Take note of stream crossings, switchbacks, forks in the trail or other landmarks you pass. By following your progress closely, you will lessen the chances of say, missing a trail turn-off, which would lead to a lot of heart-breaking backtracking.

Compass



The compass is the link, the interface if you will, between the imaginary world of the topo map and the real world. The compass is used to point the map the same direction the real world is pointing, and to put a reference point on the real world that usually lacks the nice lines and grids that the map has printed on it.

Quite simply, the compass is a magnet and it points toward magnetic North. If I could beat that into everybody's brain, navigation would be so much simpler for him or her. So let's give it a shot:

Everybody repeat after me: "A COMPASS IS A MAGNET AND POINTS TOWARD MAGNETIC NORTH."
One more time! "A COMPASS IS A MAGNET AND POINTS TOWARD MAGNETIC NORTH"
I can't heeeeaarrr yeeeewwwww……(REPEAT)
Does the compass point toward true North?
"NOOOOOO!"
Does the compass point the way to go?
"ONLY IF YOU'RE GOING MAGNETIC NORTH!"
So what is a compass?
"A MAGNET!"
And which way does it point?
"MAGNETIC NORTH!"

For an emergency compass, float your magnetized sewing needle on a small piece of wood in an aluminum pot filled with water. (Try this at home to see which end points north).

Very good. Now that we know what the compass is and what it does, we can give a few rules on using it.

First of all, since the compass is a magnet, it will act like a magnet and be attracted to anything containing iron. Pity the poor fool who spreads the map out on the hood of the car and sets the compass on it, trying to orient the map. The compass will be drawn to the steel signpost you're leaning against or to the cast iron skillet on the campfire you're reading by. I've tormented a few scouts during advancement board of reviews by giving them a map and compass and asking

them to point the map north. Meanwhile, the desk we're sitting at has metal legs and frame. The needle is pointing north, but the boy knows that can't be right, as the mountains are north and the compass says they're east.

Another rule of the compass is that magnetic north (the direction of the magnetic fields of the earth) and true north (the imaginary pole that the earth spins around, which happens to line up with the North Star, i.e. Polaris) are often two different directions. This is a very inconvenient feature of the earth I wish God would fix, but we can work around it, as I guess it builds character. Not only are they often two directions, but magnetic north is somewhere around Greenland and moves around a little bit. Hardly a good thing to base mapmaking on!

So it is maps are drawn with true north (the North Star) straight up, and they leave it to you to figure from that which way is magnetic north that your compass is pointing toward. The difference between these two is called **magnetic declination,** and is thoughtfully printed at the bottom of most topo maps, for example 13 degrees East or 7 degrees West. There are also two little arrows, one showing true north (the little "star" symbol) and one pointing magnetic north (MN). On some maps there is also an arrow that says "GN." This is **Grid North**, used for military navigation. Ignore it.

Much confusion arises from trying to account for the magnetic declination, and many errors are made from not knowing whether to add or subtract so many degrees, or when you need to account for it. This leads to despair and frustration, getting people lost or making them believe they'll never get the hang of it. What I'm proposing is that you **forget declination altogether** and I'll show you how to use the compass using **magnetic** directions only, the way the compass naturally points.

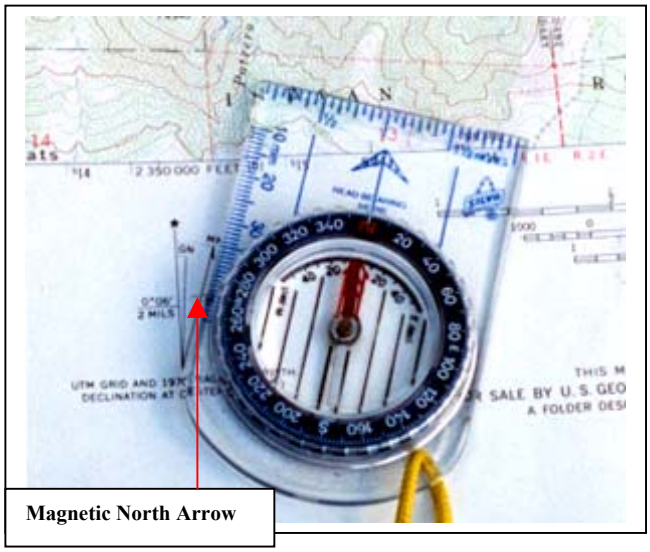
Compass Types

The compass typically used with a map is called a Chart Compass. It makes it easy to transfer bearings from the compass to the map and vice versa. Don't spend very much money on it so you won't whine when it gets crunched. About the only feature you should splurge on is that it has luminous dots to aid in night use, so you can shine your flashlight on the trail instead of the compass.

The other common compass is an Engineer's Compass. It takes more precision field bearings, but is a bit awkward to use with a map. However it does look macho and I've included simple use directions so you won't look like an amateur when somebody hands you one.

Engineer's Compass- Take a bearing by sighting the wire in the lid with the notch on top of the magnifying glass. Then read that bearing through the magnifying glass.

Orienting the Map



No, this doesn't mean sending your map to China. It means pointing the map the way the real world is pointing. So now you've moved away from any ferrous (containing iron) metals and spread the map out flat. Adjust your compass so that the North (N) sign is over the index mark. Lay one edge of the **baseplate** along the Magnetic North arrow on the map. Now turn the **entire map** until the needle is in the **doghouse.** Your map is now oriented and all work can be done in magnetic bearings (also called field bearings) which is a fancy way of saying "direction," and is expressed in degrees, 360 degrees making a circle.

If you know where you are on the map, finding things is simple now. Find what direction they are on the map, look up and you should be looking at it.

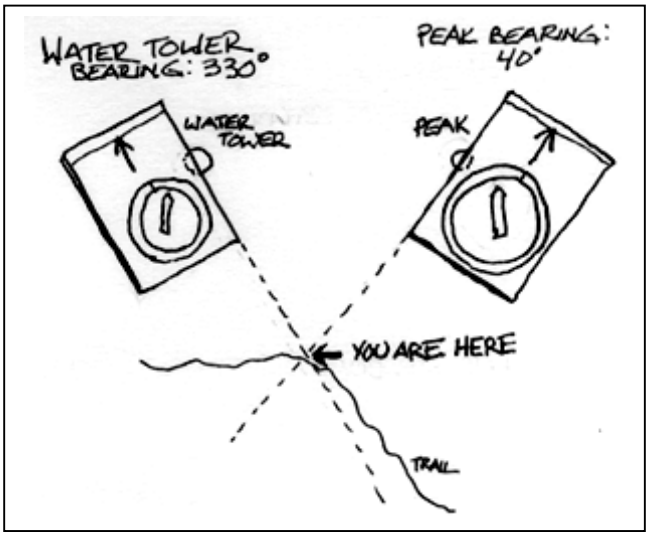
Taking bearings

Say you want to find out what degrees it is to a landmark, such as a hill, lake or building. Face the landmark and point the compass **direction on travel arrow** toward the landmark, holding the compass level. Without changing the position of the whole compass, turn the **bezel** until the **North needle** is in the **doghouse**. You can now read the bearing at the **index line**.

Following a bearing

Turn the bezel until the desired bearing is under the index line. Holding the compass in front of you, turn your whole body until the North needle is in the doghouse. You are now facing that bearing. As you travel, keep the needle in the doghouse by turning left or right. This technique is used to keep from traveling in circles when you can't see well, such as in the fog or at night. But for traveling in a straight line, pick a landmark that matches your desired bearing, such as a tall tree, and simply walk to the tree. This way you're not likely to meander around as when staring down at your compass.

Cross Bearings



Cross bearings are used when you don't know where you are (also called triangulation). But in order to work, you must be able to identify at least two features on the map that are visible from where you're at, such as two peaks, water towers, lakes, etc. Lay the map out in front of you and orient it. Find the bearing of the first landmark by using the directions for "Taking Bearings" in the above paragraph. Without changing the setting on the compass, place it on the map with one of the edges of the base plate along the landmark, and rotate the entire compass until the North needle is in the doghouse. Draw a line along the base plate through the landmark. Now repeat that procedure for the second landmark. Where the two lines cross on the map is where you are. If the lines aren't long enough to cross, you may have to extend them with a straight edge. For even more accuracy, take a third bearing on another landmark. The result on the map where the lines cross will probably be a triangle. Assume you are in the center of the triangle.

Needless to say, it is best to practice these techniques at home on a nice sunny day rather than trying to remember them on a stormy night.

Photo by Barry Conway

Trail Hazards

Stubbornness

Along with being unprepared, stubbornness is a deadly killer. Being too stubborn to realize that you're climbing above your ability, that maybe you should cancel the trip because of weather, that you really should find a shallower place to cross the river rather than risking crossing it here; this inflexibility claims many lives needlessly every year. This is a hallmark of a true veteran: that he could care less if someone calls him "chicken." He knows that things can go from good to bad in a heartbeat and allows himself to adapt to changing conditions. If altitude sickness strikes, he cancels the climb and descends back down. If he feels himself catching a cold before the trip, he cancels the trip. If the trail is washed out on a steep hillside, he goes the long way around or turns back.

Approach each trip with the attitude that your plans can be thrown for a loop. Plan for the possibility that you may have to stay an extra day if an injury or weather holds you up. Adapt yourself to the wilderness conditions instead of trying to adapt them to you. You will enjoy your trips more, and better yet, live to see another one.

Panic

The next deadly killer is panic. The problem with panic is your brains go out the window. Being lost rarely kills anyone. There is little chance of you starving to death. (Many of us have enough…ahem…"reserves" to last quite awhile.) So why is it when they finally find someone who's been lost for three days, they're half-naked, injured and missing most of their equipment?

Doing irrational things after becoming lost is where the danger is. Your mind is the best piece of survival equipment you have. When you feel panic start to set in, stop, lay on your back and look up at the sky. Thank God for the beauty there around you and ask Him for a clear mind. After forcing yourself like this to settle down, proceed calmly and rationally. You will be amazed how solutions seem to appear out of nowhere.

Man

People ask me about wild animals in the forest and if we're afraid of them. "No," I say. The only animal in the forest I'm afraid of is Man. The Boy Scout handbook devotes about two pages warning about the dangers boys face from wildlife. It devotes an entire 20-page pamphlet in the front of the book warning about the dangers boys face from people. I believe the farther you are in the backcountry, the safer you are. (Psychopathic killers and gang members are usually too lazy to hike into the wilderness.) You're much safer sleeping in the backcountry than you are sleeping in a city park.

As a whole, the strangers you meet while backpacking are friendly and conscientious, even more so than those car camping. Backpackers have to expend effort and give up luxuries to pursue their sport, and this builds character. They generally pick up after themselves, are courteous along

the trail and have a slower-paced outlook on life. You will be surprised at how many families you run into, with the little kids carrying packs and even infants being carried in special backpacks.

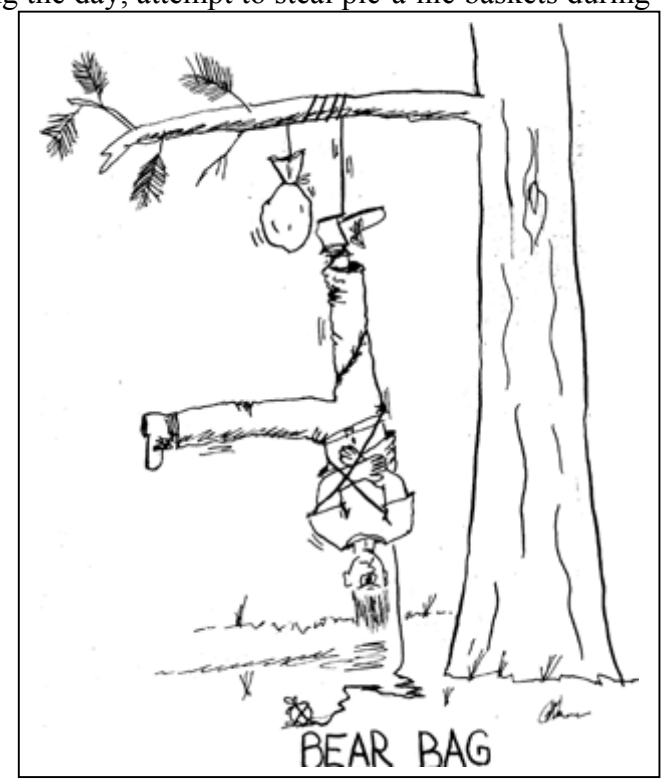
Even so, take common precautions for safety. Lock your car at trailheads and don't leave valuables inside. Also, don't leave notes on your car of where you're going or how long you'll be gone. Try to camp in a hidden area, if for no other reason than to let others think they're alone in the wilderness. Keep the noise down. Carry cheap equipment that isn't a target for theft, or if stolen or damaged, is easily replaced.

Bears

A family stopped at a local mountain restaurant for dinner. As they were getting out of the car, the little girl dropped some french fries from an earlier meal. The mom told her to leave them on the ground, as they were "dirty."

As the family was eating dinner by the window, they saw a bear walk up and start eating the french fries. "Hey, look at the bear, look at the bear!" they gleefully exclaimed. The bear then began sniffing the car door, hooked its claws between the window and the door and ripped the door off the car. "GEEZE LOUISE, LOOK AT THE BEAR, LOOK AT THE BEAR!" screamed the family. They watched in horror as seats and upholstery came flying out of the car as the bear shredded it looking for any remaining food.

This is a sad example of a "campground bear." These are bears that have become like Yogi Bear and instead of eating nuts and berries during the day, attempt to steal pic-a-nic baskets during the night. These midnight raiders of the trash can know where campers congregate and where careless people leave food out to be exploited. There's not much danger of an unprovoked attack from these bears or else thousand of tourists would be dead, as bears can easily outrun you and are incredibly strong. (Our local bears have topped 500 lbs.) But leaving ice chests or food out is asking for trouble, and is doing the bears a great disservice. Once spoiled on human food, a bear is unlikely to return to a natural diet and will continue raiding campgrounds. Wildlife authorities realize that relocation efforts are usually unsuccessful and many times are forced to destroy the bear.



Contrasting to Yogi Bear is the wild bear, which like Boo-Boo Bear, is a good little bear. I can even hear him saying, "mmbut Yogi, Mr. Ranger's not gonna like it…" The bears in our local wilderness are chased by dogs and shot at every hunting season and, thereby, have a healthy fear of man. A bear encountered in the backcountry is most likely to turn tail and run, if you see one at all.

However, to keep them from becoming campground bears, keep a clean camp. Do not leave any food scraps, trash or dirty dishes out. Hang your food and smelly things in a stuff sack from a high branch (not that this will deter a persistent bear; it just keeps him occupied somewhere

away from your tent). A "bear bag" is hung by tying a rock on your parachute cord and throwing it over a suitable limb, preferably one not too thick. The sack is then tied to the cord and hoisted up in the air, and the end of the cord secured.

It is correct, proper and expected to insult and taunt the marksmanship of the person trying to throw the rock over the branch. Some suggested taunts are: "we want a pitch-er, not a belly itch-er" and my personal favorite, "Take cover! Incoming!" These insults are usually rewarded with the rock getting stuck in the branches, or better yet, clears the limb and comes swinging back toward the thrower's head, who emits a Homer Simpson scream and ducks.

If for some reason things go wrong and you find yourself staring at a bear, back off slowly and give it room to escape. Do not run, as you cannot outrun it. If charged, stand your ground and yell, scream, throw rocks and sticks, sing karaoke, etc. Black bears are great bluffers and may turn tail and run if they finds out you can fight back.

Incidentally, these instructions are for the black bear, the most common bear in the U.S. The black bear can be black, brown or cream color. The other native bear, the grizzly, is confined to Alaska and around Yellowstone. If you want to know what type a certain bear is, sneak up behind it and kick it. Run like crazy and climb up a tree. If the bear climbs the tree and eats you, it's a black bear. If the bear just pushes the tree over and eats you, it's a grizzly bear.

Mountain Lion

The cougar, panther and mountain lion are all the same cat. Like the bear, if the mountain lion looked at us as food, we'd all be dead. They're fast, quiet, deadly and hang out in trees. But attacks are quite rare and seem to be connected with them protecting their kittens. Count yourself lucky to see one. Usually the closest you'll ever get is to hear one of their awesome, blood-curdling growls. If encountered, use the same technique as with a bear: back off slowly, giving it room, and fight back if attacked.

Coyote

The coyote has a huge range and you have a pretty good chance of encountering one sometime. At night you'll hear a chorus of them howling that gives you a tingle down your spine. However, besides the usual precautions given to any wild animal, they aren't considered dangerous, unless of course you see a delivery van from the Acme rocket sled company and a pile of free birdseed.

Rattlesnakes

Before you run off like a screaming meamie, come back here and let's talk about this rationally. We encounter rattlesnakes on many of our Scout outings. In every case, the snake has chosen to flee, even when it had an opportunity to strike. Often, we haven't realized the snake was even there until it moved out of the way. Nothing that could be regarded as aggressive behavior has been shown; instead they react just like any other lizard we pass and either tries to hide or get away.

Since the snake is doing his part in avoiding confrontation, you can do your part by watching where you step. When climbing, never put your hand where you can't see. If you spot a rattlesnake, alert the other members of your group by saying, "Hey, there's a rattlesnake." They'll

respond by saying, "There's good eatin' on a rattlesnake, yessir. Little garlic and butter, *tastes just like chicken…*"

Snakebite

There is much confusion about the current method of treating snakebite. To help remedy this, I called hospital emergency rooms and asked for an expert in snakebites. This information comes from Sean Bush, M.D., an emergency room physician at Loma Linda University Medical Center, who has done much research in treating snakebite. He also has an excellent web page at www.emedicine.com, in the emergency medicine section. This website covers all kinds of poisonous snakes and spiders and is a valuable resource.

According to Dr. Bush, the first rule is "do no harm." Techniques that have been proven to have no benefit and can be harmful are the traditional cutting and sucking, as well as tourniquets and packing in ice (frostbite on top of snakebite). The only effective treatment for snakebites is anti-venom and is available only in the emergency room. The best first aid is to get the victim to the emergency room as quickly as possible.

The venom of North American snakes primarily causes local injury: it affects the area bitten the most, and death is rare. Since local complications are common and long term overall complications are extremely rare, techniques that concentrate venom effects to an arm or leg (such as tourniquets) may cause more harm than good. Remove any rings, watches, etc. that could constrict if swelling occurs. The only treatment suggested for field use is *The Extractor* from Sawyer Products (a large suction device), and only because it probably does no harm, not that it's been shown to help. Your main mission is to get the victim to an emergency room quickly. If this means hiking on a snake-bitten leg, so be it if it means getting there faster. If one person can summon a helicopter quicker than you both could hike out, then go that route.

Of course, panic is a detriment to everyone's well being. Many snakebites are dry, in that no poison is injected. A clear head is needed to make rational decisions. Remember that death from snakebite is very rare, not nearly enough to justify an auto accident on the way to the hospital.

Horses

Although technically a vehicle, horses are still allowed in many wilderness areas. Always use caution around horses, especially near urban areas where beginners may be on their first wilderness horseback outing. When approaching a horse on a trail, move off to the uphill side of the trail and stand still, speaking calmly to the animal. Do not try to touch or pet the horse unless the rider invites you to. The horse may be inexperienced around people wearing backpacks, and the rider may barely have control over the poor animal. Some of my scariest wilderness experiences have been trying to pass a group of skittish horses on a steep trail, expecting any minute for both horse and rider to go over the edge.

Bugs

O.K., now we're getting into the wildlife that **does** look at you as food and will actually attack you. Actually, insects are engineering marvels, and the best NASA has to offer pales in comparison. Take the common housefly for example. It's smaller than a pea and yet it flies, can walk on the ceiling, has a range of two miles, is self-cleaning, is faster than you are, reproduces itself and spends half its life as a worm. Not only that, the whole thing runs on horse manure. Let's see NASA top that! But will this make you more appreciate that mosquito that's sucking blood out of your ankle? Probably not.

Gnats

Gnats are at the first order of irritation with insects: pesky, but not parasitic. Repellent will keep them from landing, but won't keep them at a respectable distance. Besides buzzing around your eyes and ears, their most endearing trait is a kamikaze run in your gasping mouth and down your throat, which invariably causes a coughing and gagging fit. In parts of our forest, survival is not a problem, considering that just by walking around with your mouth open you'll swallow enough gnats to gain five pounds. Relief is easily obtained in the form of a headnet, since gnats don't seem to pester the other parts of your body. They also seem to be about only during daylight hours: my guess is that they have some arrangement with the mosquitoes' union. You can almost hear the conversation at the time clock: "Ka-ching…"Hello Ralph." Ka-ching…"Hello Sam."

Mosquitoes

Universally hated, the mosquito presents a formidable foe to the unprepared hiker. The standard defense for years has been DEET, the active chemical in most repellents. It comes in different concentrations from 2% to 100%. Now DEET is nasty stuff, but the latest study in Outdoor Life magazine found that it's still the only repellent that really works. All the other natural oils, vitamins and ultrasonic buzzers only worked three to five minutes; I could outrun a mosquito for that long.

But DEET has its drawbacks. First of all, it stinks. I hate rolling over at night and smelling repellent on my arm. DEET melts certain plastics, such as rain ponchos, tackle boxes and furniture finishes. It stings the eyes, feels oily, soaks into your skin and accumulates inside your body. Only the parts of your body that are treated are protected: if you missed somewhere, you might get bitten.

Except on the hottest days, my first line of defense is mosquito-proof clothing. Mosquitoes can bite right through jeans, but my nylon pants seem to stop them. I keep my hands in the pockets of my jacket in the evening. Often just a hood will keep them off my face, but to avoid annoying bites on my forehead a mosquito headnet worn over my hat is indispensable. It's fun to see them buzzing in front of your face outside your net, frustrated and desperate. Kill them slowly if possible.

Ticks

Slower and easier to kill than mosquitoes, ticks go for the stealth approach. Upon reaching maturity, a tick will climb a bush or blade of grass, extend out its hooks and wait. And wait. Waiting for months at a time for something warm to pass by to which it can latch onto and begin

looking for a suitable place to feed. They can crawl under elastic cuffs, beneath waistbands and under hats. Often the first sign of their presence is a stinging sensation after they've buried their head in your skin to suck your blood, leaving their body sticking straight out. Don't panic, as it takes over an hour for any diseases it may be carrying to be transmitted to you.

We've had ample opportunity to try the many wives' tales for removing ticks. A hot match head, repellent, castor oil, etc: none of them work. The only sure way of removal is pulling them out. This is best done with a specialty pair of plastic tick-pulling pliers (lacking these, the tweezers on your Swiss Army knife work well). Grab hold of the vermin as close to the skin as possible. Pull with a smooth, steady motion, waiting for it to let go; do not twist or yank. Afterward, cleanse the area with antiseptic and crush the bloodsucker between two rocks.

Before bed and after you get home, examine yourself thoroughly for any remaining hitchhikers. (Ticks seem to prefer hair or warm, moist areas). If you fall ill after your trip, be sure to tell the doctor you were in tick country in case you've contacted a tick-borne disease.

Poison Oak and Ivy

In the foothills near our house is a campground that seems as if the planners found the

thickest patch of poison oak they could find, hollowed out some tent spaces and put a campground there. It provides an excellent opportunity for the cub scouts to learn to identify the poisonous plant, and in some cases see the effects of contact with it.

Poison oak, ivy and sumac contain oil called urushiol that reacts with human skin almost instantly. This oil is contained in all parts of the plant including the stem, leaves, berries and roots. Even the dead parts of the plant contain the oil. (Many a poor gardener has contacted bad cases by grubbing out the roots.) This oil doesn't seem to affect animals, and is indeed an important food source for them. But for us humans, it provokes an allergic reaction that is evidenced by a red, itchy rash which turns to oozing blisters that dry up and crack. (Scratching the blisters doesn't spread the rash, but any oil remaining on the skin can infect other places.) Worst affected are the thin areas of the skin, such as the tops of feet, neck and forearms.

Many people are confused and perplexed when they break out in a rash after visiting poison oak country, as they don't think they ever contacted it. But the invisible oil is easily spread and may travel a ways before finally infecting your skin. While gathering firewood, your clothes may brush up against it. Your dog may run unaffected through thickets of poison oak. Your pack or

equipment may have touched some of it. If any of these contacts touch you, you're gonna' need an ocean…of Calamine Lotion ...

Identification of the noxious weed can be difficult, as it has a few disguises. It can resemble a bush, groundcover, climbing vine or small tree. In wintertime the leaves drop off leaving bare, curving stems sticking up like little land mines. The smoke from burning poison oak has hospitalized many a firefighter with life-threatening infections. The leaves are shiny and can be green, red, yellow or brown. (I have to confess that if it weren't for the poison, I would consider it a beautiful plant.)

The old saying goes "leaves of three, let it be." The leaves are in three-leaf clusters, with the center leaf having its own stem. The raspberry bush has three leaves, but the stem also has thorns, which the poison oak lacks. (I guess poison is all the protection it needs.)

Despite the popular song, standard Calamine Lotion has been shown to be ineffective in treating poison oak infections. However, new products on the market promise some relief. One is a lotion that helps block the absorption of the oil into the skin. Another is a soap that aids in washing the oil off the skin once contact takes place. Finally, there are some gels that dry up the blisters and contain anti-itch ingredients once a rash has broken out.

For severe cases or smoke inhalation, medical attention should be sought, as prescription medication can greatly reduce your suffering.

Hypothermia

Hypothermia, which used to be called "exposure," is a dangerous condition, which occurs when your body is too cold. It means that the body core has lost the ability to heat itself, thus cannot keep up with the heat being lost and is in danger of severe injury or death.

The temperature need not be below freezing for it to happen. In fact, the most common cases result from a combination of wet clothes, wind, exhaustion and cool temperatures. Uncontrolled shivering, stumbling, slurred speech, bad judgements and fatigue are all danger signs that the person requires immediate attention. The same sobriety tests given to a intoxicated person can be useful in spotting hypothermia, such as walking a straight line, touching your nose, etc., as hypothermia hinders the brain functions and coordination.

Treating hypothermia means getting the victim out of the wind and removing any wet clothes and warming the body core. Wrapping the victim in blankets alone won't help, as their body isn't producing any heat to save. Heat must be introduced, either by someone sharing a sleeping bag with them, hot packs or hand warmers, or by starting a fire. If the victim is conscious, warm drinks can be given.

Making sure your body's heater can function at its best can prevent hypothermia. Good fuel is a requirement of any heater. Cold weather means eating higher calories, especially before going to bed. Many winter packers nibble on hard candies while hiking to keep their fuel up. Proper insulation and moisture management are also requirements. Using the layering system to avoid soaking your clothing with perspiration helps keep you dry and warm during rest stops.

Finally, know your limits and do not allow yourself to become over fatigued, as your muscle movement produces heat. (This is why you shiver: your body is uncontrollably making you move.) If you run out of energy to move, you cannot heat yourself anymore.

Be aware of hypothermia symptoms among your group, as the victim may be the last to realize it because of the mental debilitating effects of it. Someone may have wet boots or skipped breakfast and be vulnerable in seemingly moderate conditions.

Things that go bump in the night

We were camped by a creek one night, and about 11:30 P.M. I was awakened out of a dead sleep by a "whoosh...BAM!" that shook the ground and sounded like a giant had picked up a boulder the size of a minivan and dropped it on another one. I shot up in my tent thinking "What was that?!" Shining my little flashlight out the tent door, all I could see were leaves in the pitch black night. Not hearing anything more, I was almost ready to write it off as some prank by the boys when I heard someone yelling, "I've been treed!" "Now what?" I thought, getting dressed and heading up the creek toward the noise. I soon met up with some other leaders and the victim, who was saying something about a tree and not being able to find his tent door or shoes.

Escorting him back to his tent, there was a pile of branches on half his tent that were connected to a limb as thick as my thigh. The live limb had been sheared off a tree about eight feet off the ground, but what did it? Going to the other side of the tree, my heart stopped as I saw that a 75 foot tree had washed out and fallen from the other side of the creek, clipping that limb on the way down, and missed the tent by about three feet. This was the BAM! I heard. The impact knocked the victim's boots across the tent and blocked the door, forcing him to tear through the side of the tent to get out. He spent the rest of the night over by us.

Trees and dead limbs can fall anytime and anywhere. I don't know what made that 150 year old tree decide to fall the night we're sleeping under it. Use caution by looking up and seeing

if there are any ominous dead branches above you, or if any trees are leaning your way. Our Scoutmaster says that's why he likes the desert. Two years later we returned to the same spot, and that victim spent the night in the same place. I guess it was a safe choice, as what are the chances of a tree falling there again in the next 150 years?

My Darkest Fear

So what am I the most afraid of on our outings? That's easy: vomit. When you hike with a dozen boys, one of them is bound to vomit at any time. They get carsick on the way up. They get carsick on the way down. They eat gummy worms and marshmallows and s'mores and pop rocks and hot chocolate before bed, and then during the night stick their head inside our tent and say "Mr. Scoutmaster, I don't feel so g.…bleauch!" My primordial fear is being in a situation where someone "doesn't quite make it." It's enough to send chills down your spine.

Getting Away From it All

Outside of hiking for miles and miles or going to dry, desolate places, how does one get away from other people? My favorite way is off-season camping. Between Labor Day and Christmas is a window for many outings that offer spectacular beauty and uncrowded locations. The crisp autumn air and fall colors are welcome after a long hot summer. The potential for cold, wet weather is a concern that can be met with careful planning and proper equipment.

Typically, these outings are for more experienced hikers, since wet weather around 40 degrees can be more dangerous than dry weather below freezing. Synthetic garments and sleeping bags are essential not only for comfort, but survival. Tarps are the preferred shelter because of their extra space and dryness. Count on decreased mileage because of extra weight from additional clothing and high-calorie food.

Snow Camping

Snow camping has almost a mystical magic to it that too many people miss out on. A covering of glistening snow that softens the features of the land also shows a record of all the wildlife that tracks across it. The glittering stars at night, the crunch as you walk on the snow, the frost of your breath hanging on the air: such images stay forever on your mind.

Not that snow camping can be considered lightweight backpacking. The extra gear necessary as well as the difficulty of traveling in deep snow often limits your trips. But the nice thing is, no one else is crazy enough to be out there and solitude is just a short tramp away from your car.

Snowshoeing is a mode of travel worth investigating. Snowshoes can be rented for about $12 a weekend, and very little practice is necessary. Buy a couple of ski poles from the thrift store to help balance yourself. Some people put their pack on a sled or toboggan and tow it behind them. Unlike downhill skiing, leg injuries are very rare. (It's hard to get hurt when you're only doing 2 miles an hour.)

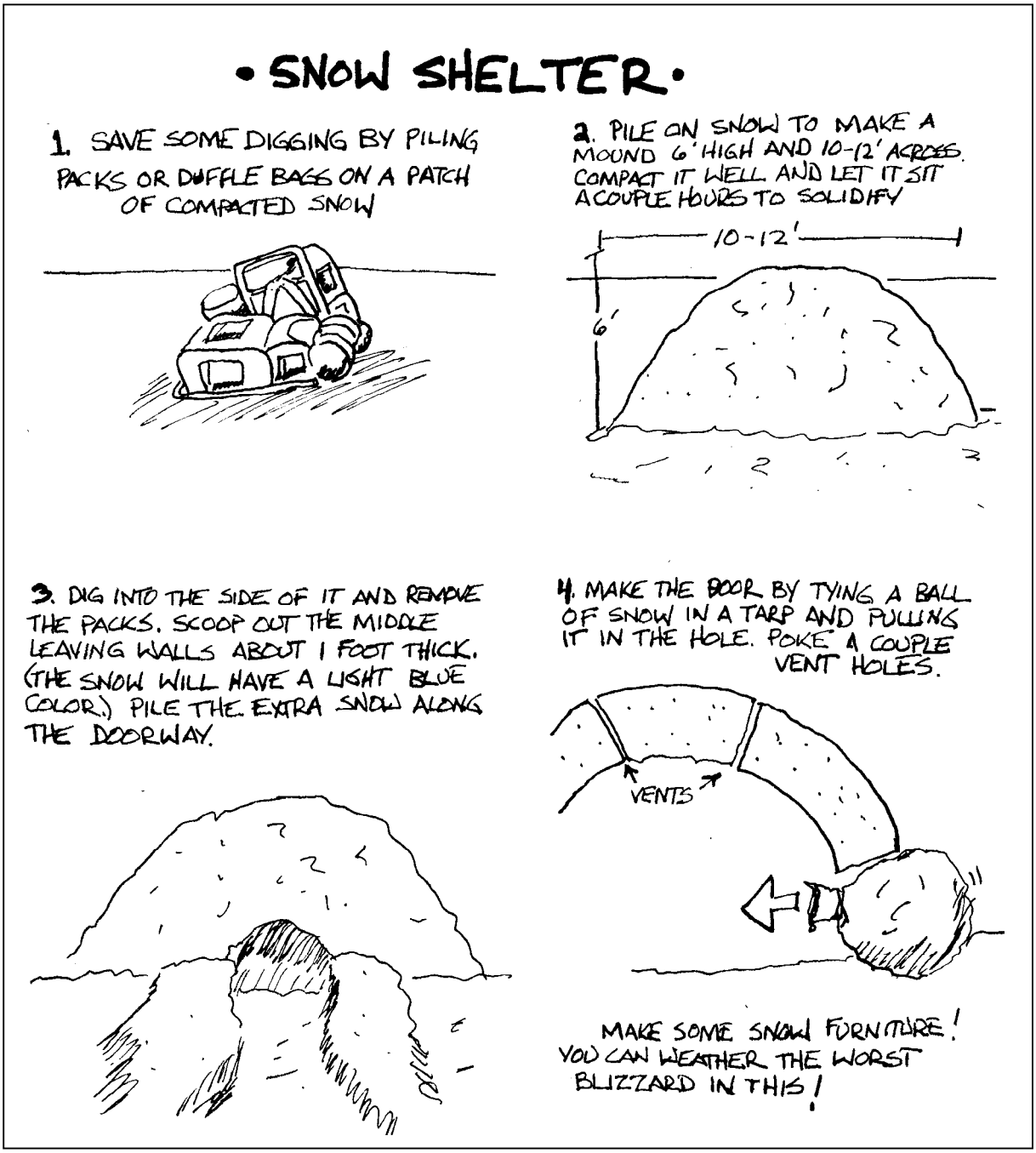
Your first trip should be with someone experienced in cold weather camping. Several books are mentioned in the bibliography that will also help take the fear out of winter.

For those timid folk, your first night can be near the car, so you can "bail out" if the going gets too rough. However, more likely than not, you'll find yourself laughing at your former fears and find yourself enjoying the winter wonderland.

Some benefits of winter camping are:

- **Solitude**. The summer crowds are gone.
- **Water**. Plenty of water in the form of snow is all around you, waiting to be melted.
- **No Bugs**. Usually no bears or snakes either.
- **Low impact**. Snow shelters and campsites melt away leaving no trace that you were there.

If there's enough snow, you ought to try sleeping in a snow shelter. It's just as warm or warmer than a tent, especially if it's windy outside, and is an excellent survival skill to learn.



Desert Camping

Many of the things about snow camping can be said about desert camping. Winter can be a delightful time to explore a wilderness that is unbearable in the summertime. Crowds are almost non-existent, so you don't have to go far to get away from it all.

Because water sources are marginal at best, you must carry or cache all your water. This eliminates any hope of being lightweight, as water weighs 8 lbs. a gallon, and the ***minimum*** you need is 1/2 gallon per day. But this frees you up to prepare good meals, as you're not limited to dehydrated foods since you have to carry the water to re-hydrate them anyway. Canned chili and handmade tortillas make a good combination, especially since many times you can sleep tentless.

Don't make the mistake of sleeping by a water source such as an oasis or watering trough. The desert is gloriously free of bugs, but introduce any water and the mosquitoes rival any northwoods forest.

Winter weather in the desert is notoriously fickle, going from 85 degrees in the day to 35 degrees at night. The wind can howl, flash floods are common and the sun can fry you like an egg. But there are times the weather can be absolute paradise.

As with snow camping, go with someone experienced at first. Home up on your navigation skills, especially triangulation, as all those canyons and hills look alike and it's easy to get lost. Although the minimum water you should carry is 1/2 gallon per day, most people are happier with at least three quarts per day, allowing for washing your hands and face, doing dishes, a cup of cocoa at night, etc. Take your good camera, as the beauty can be breathtaking.

True Rest

Millions of people head to the great outdoors to get as Elmer Fudd put it "west and welaxation." Yet coming home from the wilderness back to the daily grind, they find themselves disappointed and unfulfilled. What is it that draws us to nature and the unspoiled wilderness, that makes us want to leave the comforts of home to sleep under a sheet of plastic?

I believe it's a built-in desire to see God's Creation. In the city we're surrounded with the works of man: Creation has been chopped down, dammed up, filled in and paved over. Whatever sky and stars are left are blotted out with smog and artificial light. Yet when we venture into the wilderness, we see the works of God and realize the incredible creativity, beauty and design of nature. The works of God are far superior to the works of man, as evidenced by organ transplants. Man could never design something as beautiful or complex as an alpine meadow or desert vista. Obviously someone designed and put these things here, as nothing but chaos ever happens by itself (just ask any project manager).

But as Creation testifies to us the existence of God, it doesn't tell us of His love. Indeed, sometimes you may think Creation is trying to kill you, such as during blizzards or mosquito attacks. But the God who was powerful enough to create the universe made sure that a testimony of His love for us would be recorded and preserved.

So what is God's love for us? Why do we seek Him? God obviously wants us to seek Him, as we are designed with a God-shaped "hole" inside that can only be filled and satisfied by Him. Now many people may try to stuff all kinds of things into that hole trying to fill the emptiness. They may try money or power or sex or drugs or their family or any other diversion, some good and some bad, that never satisfies the emptiness. What keeps us and God separated, that we cannot have a relationship?

What separates us from God is sin, which is "missing the mark." God is a holy God and can't stand sin. What kind of a God would He be if He put up with it in His Kingdom? But we can't help from sinning: it's in our very heart and nature. God says that the penalty of sin is death: whoever sins (even once) is a sinner and death is the sentence given.

But just as God is a holy and righteous God, He is also a compassionate and loving God. Not wanting to be separated from us, He stepped in and paid the penalty imposed, death. Now if God had paid money, what would that have proved? God owns everything on earth and trillions of other planets as well. If God the Father had come and died, that still wasn't a total sacrifice. No, instead God sent the One most precious to Him, His own beloved Son, to die for a people who for the most part, hate and shun Him. God sent His Son Jesus to be born into a primitive human civilization to walk and eat and live with us, to experience firsthand the sufferings and temptations that we face. Jesus willingly gave up His life for us and took our sin upon Himself, so that by believing in Him we can have that fellowship with God that God desires and designed us for.

This is the "true rest" that satisfies beyond the weekend, that gives hope when things seem hopeless. My prayer for you is that you come into this rest and see that "the Lord, He is good."

"God loved the people of this world so much that He gave His only Son, so that everyone who has faith in Him will have eternal life and not really die"- John 3:16

Good Form.

Lightweight Backpacking Checklist

For an overnight outing (for longer treks add more food)
Makes up about a 24 pound pack (**Make as many copies of this page as you need- K.H.)**

Pack Frame
Ground Sheet
Sleeping Bag w/Stuff Sack
Tarp or Mosquito Net
Sleeping Pad

Small Aluminum Pot w/ Lid
Cup (Tupperware)
Spoon
Stove

First Aid Kit
Matches and Firestarter
Knife
Water Bottle
Water Purification Tablets
Flashlight with extra
Bulb and Batteries
Map and Compass
50 Feet of ¼ " Rope
Sunglasses and Sunscreen
Rain Poncho or Umbrella
Large Trash Bag
Small New Testament
Whistle

Nylon Jacket
Nylon Sweat Pants
Nylon Short Pants
Long Sleeve Cotton Shirt
Synthetic Long Underwear
Class B Shirt
Polartec Shirt or Sweater
Sun Hat ("Boonie Hat")
Knit Beanie
Slippers or Booties
Two Pair Extra Socks
Change of Undershorts
Insect Head Net
In a small Ditty Bag put:
Travel Size Deodorant
Hotel Soap in Baggie
½ Comb
Toothbrush (no toothpaste)
Bandana (acts as Washcloth)
Washcloth (acts as a Towel)
Orange Shovel and Toilet Paper
Packframe Repair Kit
Blistex Lip Balm, Bug Repellent
Dental Floss
Sewing Needle (magnetized)

Suggested Menu:

Dehydrated Potato Cup
Dried Fruit
Beef Jerkey
Burritos Consisting of:
Tortillas
Black Bean Soup Mix
Parmesan Cheese
Salsa or Ketchup packet
Trail Mix
Dry Milk Packet
Vanilla Pudding Mix
Elbow Pasta
Dehydrated Ragu roll
Granola Bars
Pop-Tarts
Hard Candy
Tea or Hot Chocolate
Inside used 35 mm Film Canisters put:
Seasoning Salt
Molly McButter
Parmesan Cheese
Sugar

Put every scrap of food, down to your last Skittle™, in your bear bag at night, including any unwashed dishes.

Put your food in a one-gallon zip-lock Baggie to keep things neat.

Glossary

These are definitions of selected camping terms in order to help you not to feel so much like a "greenhorn"

Bear Piñata- Bear Bag

Survival Food- Bugs

Chemical Toilet- Bucket

Flushies- Campground with flush toilets

Longdrop- Pit toilet (Shortdrop during rainy season in Kenya)

Touron- A term coined by Yosemite Rangers to describe tourists who feed or provoke bears: A combination of the words "tourist" and "moron"

Rugged- Heavy and expensive

Basic Four Food Groups- Dirt, pine needles, ashes and insects

Single Spike Crampons- High heeled shoes (term coined by Palm Springs Tramway Rangers)

M.R.E.- U.S. Military's **M**eal, **R**eady-to-**E**at (Meal, Ready-to-Eject)

Top Ramen- Rubber bands with a bullion cube

Woods Kitty- Skunk

Buzzworm- Rattlesnake

Tastes Just Like Chicken- See Basic Four Food Groups

Statute Mile- 5,280 feet

Getty Mile- Scoutmaster Getty's optimistic guess of how much farther it is. About 4 statute miles.

Scout Mile- Scouts' pessimistic description to his buddies of how far we hiked. About 1/4 statute mile.

Bear Bells- Tiny bells tied to hikers' boots to alert and scare away bears. Usually found inside bear droppings.

Suggested Reading List

The Pacific Crest Trail Hiker's Handbook, Ray Jardine, AdventureLore Press, 1997
Required reading for anyone contemplating a long distance hike.

Fieldbook, Boy Scouts of America, 1984
A wealth of information regarding the outdoors. Easy to read and reasonably priced.

The Boy Scout Handbook, Boy Scouts of America, 1998
What a boy needs to know to be a man. Look in the phone book under Boy Scouts of America to locate the nearest BSA store.

Backpacking One Step at a Time, Harvey Manning, Vintage Books, 1980
The benchmark text for years.

Okpik: Cold Weather Camping, Boy Scouts of America, 1992
Essential information for winter camping and backpacking.

Backcountry Medical Guide, Peter Steele, MD, Mountaineers Books, 1999

The Basic Essentials of Rescue from the Backcountry, Buck Tilton, ICS Books, 1991

Wilderness 911, Eric Weiss, Mountaineers Books, 1999

The Backpackers Field Manual, Rick Curtis, Random House, 1988

High Trail Cookery, Linda Frederick Yaffe, Chicago Review Press, 1997

Simple Foods for the Pack, Claudia Axcell, Random House, 1986

Lightweight Backpacking: The Importance of Good Form

Lightweight Backpacking: The Importance of Good Form **is "Quick Start" manual for those who might be interested in the freedom of backpacking, but have been intimidated by the heavy pack weights, imagined hardships and equipment expense.**

In a simple, humorous and insightful manner, ***Lightweight Backpacking*** explores the deep mysteries of wilderness trekking and explains how to stay warm, eat well and sleep dry without spending a fortune. Get the scoop on selecting ***Sleeping Bags, Packs, Clothing, Boots, Shelter, Food,*** *and other equipment.*

Of special interest are sections on ***Staying Clean in a World of Dirt, When Nature Calls, Staying Found, Getting Away From it All*** and ***Things That Go Bump in the Night***.

Born from the adventures of BSA Troop 127, ***Lightweight Backpacking*** follows the evolution from packs resembling Jed Clampett's truck on *The Beverly Hillbillies* to packs weighing under 25 pounds. Inspired by Ray Jardine's *The Pacific Crest Trail Hiker's Handbook* (1997 AdventureLore Press), ***Lightweight Backpacking*** adapts Ray's techniques of hiking thousands of miles for us mere mortals who are lucky to do five or six.

Although intended for the novice, ***Lightweight Backpacking*** will challenge any veteran who has an open mind about shedding pounds and practicing "Good Form" while becoming safer and more independent in the process.

65 pages with over 60 beautiful full-color photographs and illustrations.
Includes sample menus, itineraries and equipment checklists.

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