

Finally, there is one other piece of advice for the prospective shopper. Ask the salesman what he uses. Or, even more pointedly, why he would or would not buy the item.

A SHORT WORD ON GEAR

The first rule about buying gear is that you do not have to go out tomorrow and buy it all. Quality gear, like anything of value, is acquired over time. However, there are some items that you are going to have to buy early in your career as a searcher so that you can be of use and, most importantly, be safer in the field. And it can be done with a minimum of expense. The numbers in parentheses provide the cost range for the items listed; they do not include tax, shipping, or discounts.

- 1) Field pack: a book will do excellently. If you want to get a dedicated search pack, look for one with about 2000 cubic inches of volume. We will assume you have one. (\$19.00-98.00)
- 2) Headlamp or flashlight: one of each is best. (Headlamp: \$6.95-23.50; Flashlight: \$3.00-20.00)
- 3) Trashbags: the Hefty type for use as shelter and rainwear, 5-10 in total. (Free or \$1.00)
- 4) Whistle: preferably plastic. If you have to get metal, cover the lip with tape so it won't freeze to your lip in the winter; also, make sure it has a non-cork pea so it won't go plllhhhtttt when it gets wet. (\$2.00-4.00)
- 5) Compass: any basic orienteering compass will do as long as the base is clear so it can be used on a map. Also the bearings should be marked off in 2 degree increments. (\$7.00-45.00)
- 6) Water bottle: empty liter size soda bottle or Nalgene bottle. (Free- \$6.95)
- 7) First aid kit: personal kit, so whatever you feel comfortable using. Do recommend some moleskin, bandaids, and aspirin. (\$7.00)
- 8) Pen & paper: for writing down information, firestarting, etc. Assume you have it. (\$1.00-3.00)
- 9) Firestarter: waterproof matches & candle. A Bic is also fine. (\$1.00-4.00)
- 10) Mirror: cheap acrylic type for signaling or getting things out of your eye. (\$1.98-2.09)
- 11) Food: whatever you want, but it should be high in complex carbohydrates and proteins, and low in simple carbohydrates and fats. (?- \$10.00)
- 12) Warm clothing: wool shirt or sweater, hat, gloves, etc. Will assume you already have. (\$40.00-150.00)
- 13) Extra batteries and bulbs: for light sources. (\$5.00-28.00)

So from this, you can see that it is possible to get the basics

for a minimum of about \$30.00; obviously, you can go much higher. This is not so bad when you keep in mind that you will also be able to use these items for a variety of other pursuits.

There is one additional investment that you may have to make- boots. The most important thing to keep in mind when buying is that no matter the cost, the features, the looks, or the ruggedness, the boots must fit. If they don't fit, they'll turn your feet into a bloody pulp, leaving you a temporary cripple and of limited use to the search. Worse, it could mean that you may have to be evacuated, hindering the search effort by removing searchers from doing their primary job- looking for were the subject ain't. The general rule for getting a good fit is that the boots shouldn't be loose or tight, but snug, and that the heel should not lift more than slightly when walking. Also, you should have enough toe room so that your toes don't hit the front of the boot when you lightly kick a wall. In addition, the boot should have a shank and a substantial heel cup for support. Finally, you have to break them in or they will be blister factories. The bad news is that the only way this is going to happen is by wearing them.

SOFTWARE

The primary goal in dressing for the wilderness is not really to stay warm, but to stay dry and to remove the wind, thereby keeping warm, albeit indirectly. To do this you must counter the five mechanisms of heat loss:

- 1) evaporative;
- 2) conductive;
- 3) convective;
- 4) radiated;
- 5) and, respiratory.

Countering this is best done by adopting the layering system- the use of many thin layers rather than one or two big, fat layers. The concept of layering must meet what we call the rule of the 3W's; that is the clothing must be windproof, waterproof, and warm when wet. When layering, the clothing next to the skin should be what is called a wicking layer, capable of moving sweat out from your body either by vapor transfer or spreading action or by pulling it away. The next layer or layers provide the insulation for your body, even when wet. The outer layer must be able to block wind and moisture penetration. An additional layer, called a vapor barrier layer (VBL), which traps your sweat next to your skin and adds about 10-15 degrees of warmth, is best used in conditions well below freezing except on your feet where they work well in cold weather. This principle of layering should be

adopted for the entire body.

When picking clothing, there is a choice between natural and synthetic fabrics. Although natural fabrics have many strong points, their absorption of water and long drying time essentially removes most of them from consideration. Wool is the only exception to this since it retains most of its insulating capacity when wet; yet, it still has an extremely long drying time and becomes heavy once wet. Synthetic fabrics, on the other hand, do not absorb much water (about 1% of weight) and dry quickly.

Beneath is a list- by no means complete- of different fabric names in relation to their layers.

First Layer

- 1) Polypropylene: wicks well, but has problems in hot driers, tends to be itchy, and has problems with odor retention. Also, it pills and loses its wicking ability over time (this can be restored by washing with a fabric softener). It wicks by not absorbing moisture and vapor transfer.
- 2) Capilene: a chemically treated polyester that wicks by spreading action. Can be dried in a machine and does not retain odor. It pills very little and is very soft.
- 3) Thermax: a hollow core polyester that wicks through capillary action. Very soft and warm, it is also drier safe and does not retain odor; it does not seem to wick as well as Capilene.

Second Layer

1) Pile:

- a) Single faced pile- looks like a pile rug. It is very warm and durable but is not wind proof and pills.
- b) Polarfleece- also known as Bunting, it is a double sided fleece that is more windproof than other piles but less warm. Pills as well.
- c) Polar Plus- a double sided pile, it is warm, light, comfortable against the skin, and stretches very well. It also wears extremely well and does not pill. Also known as Synchronilla.
- d) Polar Lite- fleece on one side, pile on the other. The least warm pile, but the best for layering in regions like Virginia. It has tremendous stretch, but its durability is not as great as the others.

Third Layer

- 1) Coated nylon, Waterproof/ Non-Breathable: totally waterproof. The best is Sealcoat from Patagonia, followed by neoprene, urethane, and, finally, PVC. You will sweat in them if active or improperly layered. Moderately expensive.
- 2) Waterproof/Breathable: either a laminate (like Gore-Tex) or a coating (like Entrant). Gore-Tex seems to be the best of the lot in terms of a compromise between breathability and

waterproofness. Keep in mind that none of these will breathe- allow moisture to pass- in all conditions. Therefore, you should look for features like a mesh or wicking lining and ventilation openings.

With either type of third layer, the seams should be sealed with a seam tape or seam sealant in order to prevent leakage.

FACTORS IN THE CHOICE OF GEAR

When you first walk into an outdoor outfitters or browse through a catalog, you are met by a plethora of choices. Often, these choices are a bit overwhelming. Yet it is still important to have some idea of what you want and why you want it. Why? Because you will be paying good money for whatever you buy. For example, although most outdoor stores are good places to shop, there are some establishments that will try to sell you whatever they can - often the most expensive item possible. And catalog houses often provide descriptions that are limited and exaggerated, and sometimes just misleading. Therefore, you should go in prepared. So below is a list of some ideas that you should keep in mind; with luck, they may help.

- 1) **COST:** Obviously, this is the major factor governing whatever you buy. Although the best items are often the most expensive, you should keep in mind that there are many good items that can be had at lower prices. These also may be better suited for your particular needs. However, you should remember that the old axiom is still true: You get what you pay for.
- 2) **WARRANTY:** No matter how well something is made, eventually it will begin to fall apart. Sometimes this happens faster than other times. Too many times this happens faster than others. So, whatever you buy, find out what the warranty is. Most of the big outdoor companies have lifetime warranties against manufacturing defects. And many retailers have a satisfaction warranty of some type.
- 3) **WEIGHT & BULK:** Keep in mind that whatever you buy, you are going to have to carry. The old rule to keep in mind here is "That light is right."
- 4) **DURABILITY:** This is pretty obvious. If it falls apart the first time you use it, no matter what you paid for it, it wasn't worth it.
- 5) **FUNCTIONALITY:** Once again pretty obvious: the product has to do what it claims or its useless.
- 6) **MULTI-FUNCTIONALITY:** Its nice but not critical if the product can do more than one thing. But it still should be able to do them well.
- 7) **COMFORT:** Simply put, you are not really going to use the product if it is uncomfortable. Worse, the discomfort may distract you from more important matters. This really applies to clothing more than anything else.
- 8) **STYLE:** This is the least important item on the list. However, ugly is still ugly and you are paying for it.