

Insulated Clothing

We also realized we could use insulation in many different ways. Not only could we stuff it into rock caves and hollow stumps to make instant sleeping bags, but we could use it for clothing, too.

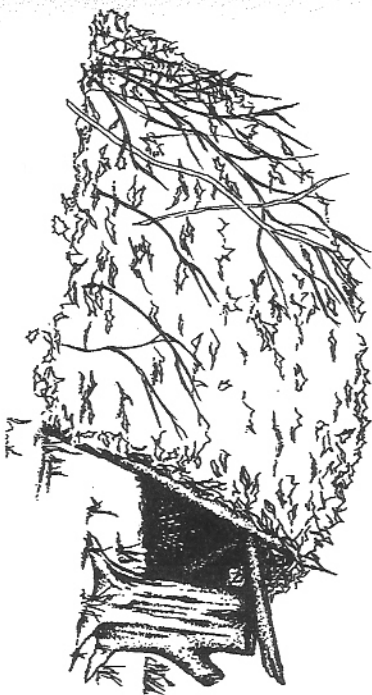
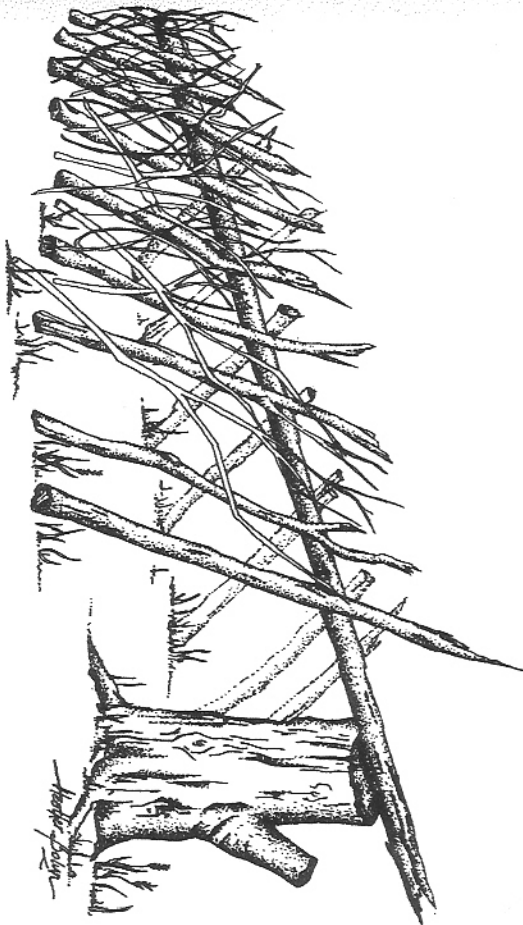
Once I was out several miles from home in an oak forest, wearing a light jacket and a pair of jeans. It rained for a while and I got soaked. Then the temperature started to drop. By the time I was halfway home, I was dangerously cold. Then I remembered the lesson of the squirrels. I unbuttoned my pants and stuffed them with leaves all the way down to the ankles. Next I pushed my pant cuffs inside my socks to keep the leaves from falling out. Finally I tucked in my jacket and stuffed it with leaves—front, back, and down the arms to the cuffs. By the time I was done, I looked like a scarecrow, but I was already warm. After walking a bit, I had soon worked myself into a sweat. The more I walked, the more leaves I had to remove. And by the time I reached home, I realized just how smart squirrels really are.

Not long after this episode, Rick and I took the insulation theory a step farther. Instead of throwing out our old shirts, we sewed two of them together, leaving an opening in the back so we could stuff them with insulation when we needed it. Whenever the weather got too cold in the Pine Barrens, we filled our double-layered shirts with dried ferns, grasses, cattail down, mosses, or even shredded newspaper. Then when we got home, we just shook out the leaves and washed the shirts. In the winter, instead of buying down vests (which we couldn't afford), we simply filled our shirts with cattail down. We wore these for an entire season and dumped them out in the summer.

The Debris Hut

Over the years, Rick and I experimented with variations on the "squirrel" shelter we built in the Pine Barrens, and eventually it evolved into what I call the debris hut, or leaf hut. For warmth and ease of construction, this shelter is one of the best of all. You can build it either free-standing (making a tripod with two short stakes and a long ridgepole) or by placing one end of a long ridgepole on top of a sturdy base—for example, a stump or crook in a tree. Choose a sturdy ridgepole that is at least as thick as your arm and long enough to cover your sleeping and work area. Lift one end of the ridgepole onto the base and position it so your entryway will be facing east.

Once the ridgepole is well secured, prop large sticks all the way along both sides to create a wedge-shaped ribbing effect. The ribbing should be wide enough to accommodate your body, but steep enough to shed moisture. Fill in the entire structure, leaving a hole for the entryway just be-



side the base. Then place finer sticks and brush crosswise to make a latticework that will keep junk from falling through the ribbing onto your sleeping area.

Over the ribbing, heap on a pile of light, airy, soft debris. Leaves, grasses, sticks, brush, moss, bark slabs, tree boughs—almost anything but damp loam will do. The accumulating debris should eventually form a large, dome-shaped mound over the skeletal structure. Don't strive for architectural perfection. Just heap on more debris until the dome is at least two-and-a-half feet thick.

Check the thickness of the debris by working your hand down into it as far as you can. You should be in up to your armpit before you feel the ribbing. In cold weather, add another foot or two of debris. If all this junkpiling seems like overkill, remember that the thicker the pile, the better the insulation. Also, the steeper the dome, the better the rain pro-

tection. If your hut is well built, you should be able to pour a five-gallon bucket of water over the top and not get wet inside.

On top of the debris layer, add some protective shingling—say, flat bark slabs or large mats of absorbent moss to help keep the rain out. Finally, pile on a heavy layer of outer brush to prevent the lighter insulation from blowing away in a storm.

Bedding. When the exterior is complete, literally stuff the inside of the hut with the driest, fluffiest materials you can find. Dry leaves, ferns, cattails, and grasses are best, but any insulating material will work, even if it's damp. If you've provided for a work area, stuff only the bottom two-thirds of the shelter and pound in four or five vertical stakes to keep the leaves in place.

Next, squeeze your body inside and mat it all down. This will break down the insulating material and help to create the dead air spaces that are so crucial to maintaining body warmth. Repeat this stuffing and matting process twice more, building up a good, thick cocoon all around you. Then, just before you turn in for the night, collect a final heap of insulation and place it just outside the entryway within arm's reach. This is your sleeping plug. When you've snuggled inside the hut, simply pull the plug in after you. Use part of it as a pillow and part to stuff into cold spots around your body. If it's really cold out, you can even throw some of it over your head.

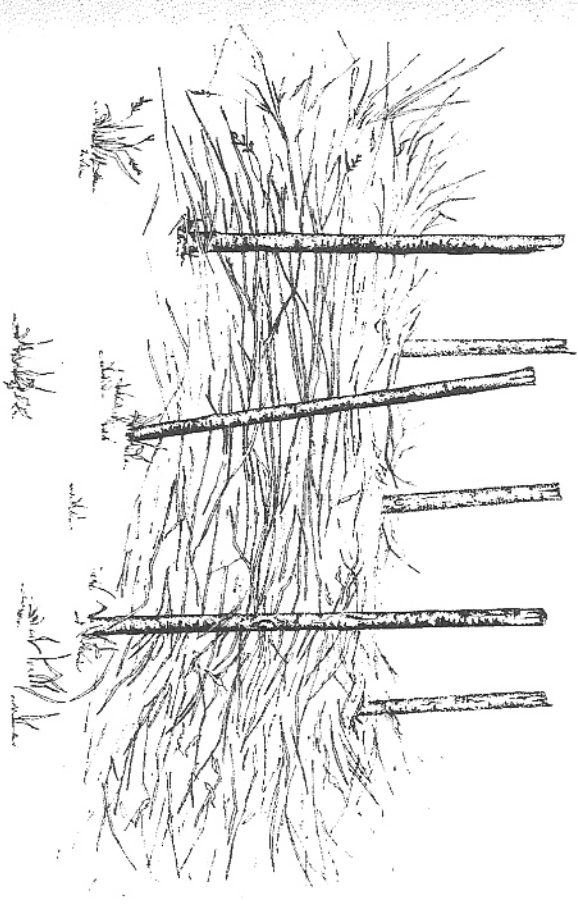
Work Area. The work area should extend from just above your head to the upper end of the shelter. Here you can store dry wood, fashion survival implements, and hang wet clothes to dry. You can also take refuge here during particularly nasty days and still have a sense of connection with the outer world.

Sealing the Entryway. If you have an outside fire providing heat, you'll want to leave your entryway at least partly open. If not, you can close it up by stuffing it with a door plug similar to your sleeping plug. Better yet, stack up a bunch of bark slabs or logs within easy reach and seal the entryway from the inside after you're tucked away. Best of all, fashion a removable door. To do this, first weave a simple matting large enough to cover the entryway (ten or twelve finger-thick saplings woven together like a mat of popsickle sticks). Stuff this latticework with leaves or debris, lay it on its side, and pile a thick layer of insulation on top of it. Then secure the pile by bending parallel saplings through the top and bottom of the latticework. In fifteen minutes, you can have a door that will open and shut at your convenience without having to knock down a wall or gather a new door plug each time you leave the shelter.

With the sleeping plug and door plugs in place, the interior of the debris hut should be warm and cozy. If the outer insulation is thick

enough, you should hear almost no outside sounds and feel well protected from the elements. And you will be. A warm cocoon of insulation under two-and-a-half feet of debris should be enough to protect you to about ten above zero Fahrenheit. Four-foot walls can keep you warm when it's forty below outside.

Variations on the debris hut are endless. Almost any natural shelter, for example, can be made into a serviceable debris hut simply by adding piles of insulation inside and out (see "Natural Shelters," page 26). If materials are available, by all means use debris to beef up your wicking or lean-to. And don't feel you have to stick to one design. The one I've described stresses warmth rather than comfort. You can arrange the skeletal structure and the interior any way you like, as long as you build a steep dome on the outside and provide a warm cocoon of insulation on the inside.



Stacked Debris Wall

Using the same materials, you can build an insulated wall or series of walls to serve many purposes. The stacked debris wall is nothing more than two parallel rows of long stakes with a thick pile of insulating brush in between. For best results, pound these stakes into the ground no more than a foot apart along the length and make the wall a foot and a half to two feet thick. It is also a good idea to interweave the stakes with flexible saplings to help contain the debris. When this is done, fill up the framework with any light, airy material you can find.