

## CHAPTER 11 SPEAKING OF WARMTH

How MUCH more interesting an event is that man's supper who has just been forth to hunt the fuel to cook it with.

The ability to build a campfire swiftly and certainly in every type of weather that may one day beset us can, at a decisive moment, also mean the difference between existence and finality; and the way to acquire such skill is a bit at a time over as long a period as possible, using on each occasion only whatever natural materials may be at hand.

From this stems the principal objection, and as I think you'll agree a grave one, against getting in the habit of unnecessarily cutting corners with any of the fire kindlers that are on the market. For there may come a blustering winter night when the trees are bent with sleet, and the individual up against it may very well not have a chemical tablet to ignite instead of the bark and shavings to which, although they have always been available as they are now, he has not become accustomed.

### BOUNTIFUL BIRCHBARK

Snow, certainly, imposes but a scant handicap to starting a campfire in birch country. No more does rain for that matter, as you can substantiate if you have ever arbitrarily dipped birchbark into a lake, touched the pronged flame of a match to a frayed corner, and had the singular satisfaction of watching the strip still crackle into flame.

The graceful tree need not even be disfigured, for it is sheathed with layer after layer of tissue thin bark, enough shreds of which can be peeled free by the fingers alone to start under favorable conditions any fire we may want to build.

Can one ever forget the first occasion when alone in the murmurous forest he heaps that initial handful on a cleared bit of ground, leans a wigwam of small dry softwood self-consciously above it, adds with increasing hesitation now a few larger sticks, and then feels deliciously stabbing his nostrils the first sweet black wisps of smoke when that single match stirringly catches hold.

### WHEN THE WOODS ARE WET

When you are in the deep forest and it's maybe drizzling, you start with the same inflammable wisps, but next to them you lean and crisscross larger ribbons of birchbark. These can also be secured by the finger alone, although it will be easier, unless there may be a reason for not so doing, to cut the tree lengthwise, pry up a long roll of bark, and pull that around and off. The thick sheet thus obtained can be then ripped to narrow strips which will burn much more readily than would the intact section.

In more extreme circumstances, you get so that you commence almost automatically to lay a broad sheet of birchbark in as sheltered a nook as appears handy. Atop this go the shreds and the stouter fragments, and these you may cover with still larger portions. The small and then the bigger pieces of dry softwood go up in teepee formation, forming a compact but well ventilated peak through which the flames can hungrily climb. Rectangles of birchbark finally roof the pile, blocking out wind storm.

The time comes to light the match. You realize you must hold it so that whatever air currents reach it will run the flame down the match stem where will be the initial fuel on which to feed. Perhaps you'll face the wind with your two hands cupped in front of the match. Perhaps you'll elect to lie between the wind and the pile, using your body and perhaps the opened flap of a mackinaw as a barricade.

## INFLAMMABILITY OF EVERGREEN TWIGS

Except on those days when every branch is slick with ice, it is practically as easy to start a fire with a tight handful of small dead evergreen twigs as with birchbark. Quantities of these dead, resinous little stubs angle scratchily from the undersides of all conifers.

They may be broken off in thick uniform fistfuls, lit if desired while turned most advantageously in the hand, and finally laid down in such a way that the flames will sputter toward the center. Already gathered fuel can then be quickly angled and crisscrossed above this blazing nucleus in well aerated patterns through which fire will be able to ascend quickly.

## MAKING AND USING FUZZSTICKS

Some bushmen start all fires, indoors and out, with fuzzsticks, for although in terms of initial effort they are often more bother than a handful of dry pine twigs, this shortcoming they counteract with the ingratiating characteristic of dependability. Fuzzsticks are a solution, certainly, in that most trying of weather conditions when every bit of fuel in the forest is covered with ice. You may have to go to the extra effort of splitting or breaking out firewood under such circumstances, also.

Fuzzstick is merely the colloquialism for a piece of wood to which a contrived cluster of attached shavings cling. One is easily enough made by shaving a straight-grained stick of dry, preferably split softwood with single knife strokes until one end is a mass of wooden curls.

The usual procedure is to bunch no less than three such fuzzsticks so that the daves will be able to eat into the shavings, toss on any stray whittlings, light the mass, and then go through the usual procedure of adding progressively larger firewood, allowing always for draft.

## DIFFERENCES IN FIREWOOD

The difference between the so-called hardwoods and softwoods is, as you already understand, a matter of botany, having nothing to do with grain, texture, or weight; for is not yew which is a softwood tougher than many a hardwood oak? Softwoods come from coniferous trees such as pines, tamaracks, firs, spruces, and cedars. Hardwoods are derived from the trees that, instead of needles or scales, have the various familiar types of flat leaves.

The resinous softwoods when seasoned generally make the best kindling. They catch and burn quickly. They are smoky, however, short lived, and prone to throw sparks. They are most valuable, in other words, when either we wish to start a fire or when we desire a fast brief blaze.

The seasoned hardwoods in most cases provide both a steadier and a longer lasting fire. They are particularly suitable for most cooking, as they disintegrate into hot enduring coals that afford the intense even heat usually then desirable. When we can, therefore we'll probably start most of our fires with softwood and hold them with hardwood.

**WHAT WOOD TO USE** We do not have to build many campfires before learning that when dry fuel is called for, fallen wood that has absorbed moisture from the ground should be avoided. About the only time this is worth bothering with, unless fuel is scarce, is when it is desirable to keep a fire going for a long period without very much heat.

Standing deadwood is what we ordinarily come to seek, and we soon realize there are varying degrees of quality even in this. An upright stump that is rotten is of little value except to hold a fire, although we can occasionally uncover a tough resinous core in decayed softwood that will burn as if long soaked in oil. Dead birch, on the other hand, quickly loses most heat producing ability if the bark remains intact to hold in the moisture. A few green woods, such as birch and white ash, burn best when alive. By splitting out kindling and making fuzzsticks, you find you can even start a fire with either one. Green wood in general, however, is best used mixed with dry.

Some of the barks, such as that of hemlock, are valuable for giving off steady warmth. Experimentation with what happens to be at hand seems usually to be the best teacher, for the same species of wood vary to some extent in different parts of the continent because of soil and atmospheric conditions. Among each family group, too, are often many separate types each with its peculiar characteristics.

Hickory leads the North American fire woods in heat producing ability. Oak is not far behind. Beech ranks next in numerous areas, closely followed by the birches and maples. Ash is a favorite with many of us. So is elm. Then come tamarack, yellow pine, chestnut, poplar, white pine, and spruce.

Much depends on where we happen to be at the moment. In some eastern localities we've burned mostly birch, while the woodpiles that take us comfortably through sixty-below zero stretches in the Canadian Rockies are mainly poplar and lodgepole pine. Some sections have to get along with the poorer oaks, such as willow oak, which are among the least effective hardwoods in caloric energy.

You'll naturally do the best you can, remembering the general rule that the heavier a wood is, the greater is its heating potential.

## WAYS OF CONSERVING ENERGY

Although there are any number of often ingenious ways to make little sticks out of big limbs without the use of either knife or ax, the point remains that frequently it is easier, and therefore at least under emergency conditions preferable, to burn firewood in two instead of expending energy unnecessarily in otherwise sectioning it. One other strength-conserving dodge is to lay the ends of long sticks in the blaze, continuing to advance them as they are consumed.

Another pertinent factor often overlooked in this connection is the fact that a long fire is very often preferable. If you want an open fire to lie beside, for example, it should be at least as long as your body.

Suppose we wish to cook with several utensils at the same time? Perhaps we'll want to suspend these above a long slim conflagration, from a green pole laid between two crotched sticks.

Possibly we will prefer to set them, instead, in some steady position where they'll get sufficient heat. Two of the simplest ways to go about achieving this will be to build a long narrow fire, either in a narrow trench or between two green logs laid closely enough together so that the pots can straddle them.

To take advantage of the best available draft, a long fire should be laid in a line with prevalent air currents. When the fire is confined by two logs, these may be advantageously placed in a slim V with the open end toward the wind.

## SLEEPING WARM WHILE SIWASHING

We can build a long large fire, brush it carefully to one side when ready to retire, and then stretch out on the warmed ground.

We may also want to consider the merit of heating stones in the fire for use as substitute hot water bottles, being wary of any which have been in or near water. Attractively smooth rocks from stream beds are particular offenders, the fluid often trapped within them expanding to steam and thus causing sometimes dangerous explosions.

If the weather is at all cold, we will owe it to ourselves to take the fullest possible advantage of reflected heat, and although it does not take anyone long to appreciate the efficacy of kindling a night fire against some radiating surface such as a fiat boulder, to comprehend the value of having such a reflector behind us is usually a matter of far greater experience.

One of the ways in the Far North to distinguish a cheechako from a sourdough is to watch how the stranger arranges his heating fire. The newcomer kindles his blaze, however expertly, against a cliff and sits in front of it. The old time Northerner builds his fire farther away from the rock face and sits between the cliff and the fire.

## NIGHT FIRE

The nuisance of being unexpectedly caught out in the bush overnight is that if we need a fire, we'll probably have to rouse up a dozen times or so to add fresh fuel. The redeeming feature is that the chore is not as disagreeable in fact as it may be in theory.

You sleep until deepening cold slowly awakens you, and then, likely as not, you roll closer to the companionship of the embers. Although you can thus win an extra few minutes of repose, eventually you have to stir sufficiently to draw sticks from the pile you've heaped within arms' reach. Flames lick around them, sketching a thousand flamboyant pictures while returning heat brings with it relaxing lassitude.

If you happen to have an ax you can make a fairly efficient job of preparing a night fire. One satisfactory method is to pound a couple of green poles into the ground behind the fire from which they slant. You pile a single wall of green logs against these. The theory is that as the lowest log disintegrates, the one above will replace it.

The operation seldom works out this automatically, but you should still enjoy a considerable quantity of reflected heat which will need feeding only a few times during the night, and which at dawn will still boast enough coals so that over them you can cook breakfast-- or at least toast your hands while coming awake.

## BUILDING CAMPFIRE IN EXTREME COLD

During extremely cold spells, one will ordinarily be advised to find the best shelter available and to lay up beside a fire until the frost moderates.

When vitality starts ebbing and a chill begins to spread throughout the body, one needs nourishment or rest, and preferably both. It is poor policy to keep traveling on nerve unless the distance to be traversed is short and the possible gain to be derived by covering it proportionately large. The best axiom, sourdoughs find, is to get a fire going and eat. If food is lacking the next best thing to do is to keep as warm and as inactive as possible until the cold breaks.

Everything should be ready for the fire before the hands are uncovered. The fingers will probably, be nearly stiff, anyway. If flames do not commence licking upward almost immediately once hands are bared, they should be shoved against the skin to warm before another attempt is essayed. As soon as the fingers are limber enough to hold a match, the try can be made again as swiftly and certainly as possible.

## OTHER FUELS

If where we are no trees are growing, driftwood may be your best fuel. If above the timber line, we may still be able to find enough stunted bushes to serve our purposes. On the plains we come to utilize small brush, roots of vegetation such as the mesquite, knots of grass, and the dry cattle refuse which is the modern equivalent of the pioneer's buffalo chips.

In some country we just naturally fall into the habit of pocketing tinder for the next fire when we come across it, while in a few regions we gather fuel itself whenever it is happened upon.

In parts of the Arctic where there does not happen to be driftwood, coal and peat are occasionally to be secured. Roots and brush are frequently available. The small heatherlike evergreen known as cassiope is sufficiently resinous to burn while wet and green. Moss and lichen can also be used as fuels. All may be secured from beneath the snow if necessary.

## TO BURN OR TO EAT

Animal hair and hides will provide warmth. So will bones and fat, the latter in some instances being laid in strips over a small pile of the former and the starting done and heat furnished perhaps by a mass of moss until oil begins to run over the bones and to burn.

Another way to burn animal fat or oil is to place it in a container, suspend or hang in it a wick of some dry vegetation or perhaps of fishline braided for the purpose, and once the latter has soaked up enough fluid to light it.

A stove for burning oil can be made from a metal container such as a kerosene tin by:

- (1) punching a hole in one side above the fuel level to serve as an air vent,
- (2) making a wick with a rag or by experimenting with plant and other available substances,
- (3) suspending this wick inside the container by means of a snare wire or a strip of metal cut from the can itself.
- (4) and finally lighting the wick once it has become saturated with oil, first melted if need be by outside heat.

None of these animal substances should be burnt, certainly, when any may be needed more for clothing or for food. This, as we have seen, holds particularly true in the case of fat.