

Emergency Shelter Building Guide



Use whatever you have

If you have a broken down vehicle, aircraft, sea vessel, or any wreckage or building debris, use it.

Be very aware that building a shelter takes time, and a good one takes some work and therefore energy-especially to make it windproof and waterproof. If you are lucky enough to have all that sorted out for you, or if you're in such a pleasant climate that you can do without, then maybe you would consider not even making a shelter.

Forget that! In the best of conditions, I still recommend using something for cover. Weather can change quickly, night temperatures may be very different than daytime temperatures, and most of all, you never know what critters and creepy crawlers are about.

Just don't risk it.

And don't fool yourself by thinking you're tough and try to slick it up and go without a shelter. I read in a book once where a guy slept in the snow, so I tried sleeping out in the cold one night without anything but my clothes.... I was sick with a cold for a week, ha!

Thinking you're rough is foolish thinking. Preserve your health and energy like a precious jewel. It is your life savings at this point, and it just might be what saves you. Guard it in all you do, and let common sense and concern for unnecessary risk be a major factor in all your decision making criteria.

So, first use what you have. If you don't have a readymade shelter, use what is readily available in your surroundings to make the easiest thing first. Of course, the situation dictates. If you need to keep dry from the rain or heat or snow, cold, and wind, then do what you need, but just past the minimum is what I recommend the first night.

You will have plenty of other things to do.

- **THE TIME FACTOR**

Give yourself at least one hour to make a minimal shelter if you have good stuff around you. If there's not much around, give yourself two hours. Shelters take time to build. Build time into your plan. If it's early morning, great, you have time; if it's afternoon or evening, move shelter higher on the priority list. Even if you have something for shelter already, get in it and test it before dark.

I've had great shelters in cars, dumpsters, hallways, caves, and in bushes, but at times still had a bad night of sleep because I was too confident in a particular shelter and little things like a few holes or lumps caused me more grief than I bargained for.

I have also taken all day to make a very good shelter, but only after I had food and water sorted out. In some shelters I have slept as good as I ever have in any bed anywhere. In these I took the time to get it off the ground and protect it well from wind and rain and critters, and made sure that I was well padded and covered while inside. With every shelter, be sure to gather lots of cushion for sleeping and lots of leaves and foliage to cover yourself for warmth.

But on Day One, you need only to create a shelter that's just good enough. Otherwise, hydrate, eat, keep dry, tend wounds, make fire, make tools, make signals or do anything productive if there is plenty of daylight once you've made the shelter.

- **SLEEP!**

Sleep as much and as long as you can the first night. You have likely just gone through hell. You are more tired than you know, and scared, afraid of the uncertainty of your situation. This is normal.

Everyone is concerned when they are not in control. But you can control yourself.

Start by getting rest or "recovery." It is necessary for your machine, your body, to have down time to recover its strength and maintain its health. Do not underestimate the power of sleep to do this and do not neglect it as a mandatory part of your planning in all phases.

It is a fact that airborne troops who parachute into a tactical scenario are often at just fifty percent of their fighting capacity when they arrive as compared to ground troops who were transported by other means. This is because the airborne troops went through hours of strenuous preparation and then a stressful jump where risk of death is real for every jumper every time. And that adrenaline surge takes a tremendous toll on your mental and physical reserves of energy.

The kind of event that leads to a survival situation is also usually an adrenaline surge. So your energy stores must be replenished, and the only way to do that is by sleep. I know it doesn't sound like tough-guy thinking, but sleep is imperative to your survival.

If you're fatigued, you'll likely pass out until daylight wakes you; if not, you'll likely find the first night to be the longest and that works on people's heads.

Just remember: the first night is the roughest, and odds are good that the rest won't be like that. So, do not let yourself become demoralized during the next day, and instead, focus on remedying the situation by making your shelter good enough to ensure you get a good night's sleep the second night. The whole world will seem better to you after that.

- **STAY OR GO?**

After you've rested you can make a more informed decision to stay or go. If you decide to go, then having spent too much time on a shelter would have been a waste of time and energy, and one that could cost you dearly later. This is another reason why you should only make a just-better-than -needed shelter for the first night.

Also, even if you do decide to stay at your location, you might find your actual shelter site might not be the best one available in your immediate vicinity. You might be in an opening to the prevailing winds, or be open to a trickle of water if the rains pour.

So, SCOUT! If you're staying put, scout around and see what you have available. I call it shelter shopping. If I can find me some super digs that are already dug, I am all about being lazy. I've only ever found one great cave-that is, that a critter hadn't already made home. But I've found lots of natural holes, indentures, or concave pieces of terrain suitable for building up into a nice low-level hooch.

And I've found many nicely leaning trees, large-rooted trees, and well-placed boulders, all good for turning into a nice shelter.

If you decide you need to go, as you walk, always be on the look out for a good deal, that bargain shelter waiting for you to pay a visit.

I have stopped a long trip short simply to exploit a nice target of opportunity when it comes to shelters. If you're making a movement, you have no real idea how long you'll be going.

I always plan for a long time, so I get my head around the fact that "I'm here ... until I'm not." So when I see Nature offering a nice natural place for shelter, I accept her courteous offering graciously. It's all about small victories. Every little break Mother Nature gives you, bask in it and enjoy.

Bottom line, the function of a shelter is to protect you from the elements when necessary, and to protect you while vulnerable

during sleep. Its quality level will affect your sleep, which in turn will affect all your decisions, judgement and reaction time.

CONSIDERATIONS FOR SHELTERS

- **THE BASICS.** First of all, let me say that there is no exact "right way" to build a survival shelter. You will be making your shelter out of the materials available to you, and so each shelter you build will look different. However, there *are* basic principles that you should know and practice that will enable you to make fine protective shelters in practically any environment, regardless of what tools or resources you may or may not have.

Some terms describing the most basic shelters include A-frame (a stick frame shaped like the letter "A"), tepee (shaped like a common Native American tepee and made from sticks and foliage) and lean-to (basically, a wall of sticks built on a leaning angle to protect from elements). You can also burrow out a shelter, make a shelter from rocks or logs, dig into snow and so on. Let's get into the details

- **BOX OF ROCKS.** That is, do not be as dumb as a box of rocks and sleep on rocks! They're too hard and will cause body parts to fall asleep resulting in aches and pains that may wake you or cause pain

the next day. They're also too cold, and will zap your energy and you'll wake up fatigued. Be careful in the desert, as rocks feel warm by day but by night get very cold. It's also wise not to sleep *under* rocks, either. I've seen big rocks fall for no reason, like they waited a millions years just to fall when I was around. And critters like to get in there under low-hanging rocks, sometimes the dangerous kind.

- **GET OFF THE GROUND.**

The first rule in all cases, really, is to get off the ground. I always look to the trees for shelter first when I need shelter fast. It gets me off the ground and keeps me safe from most things-flash floods, mean beasties, and bad bugs. No shelter is perfect, and there is always risk of something like snakes or insect, but rarely is this more likely in a tree than on the ground.

In a worst-case scenario where you have no tools or little time, simply find two good branches-one to sit on, straddle, or otherwise hold you up, with another one close enough to wedge yourself in so you won't fall out. And then let the rest of your body lean against the base of the tree. I call this "airplane sleeping." You're high up, and you can almost sleep, but not quite, like in the economy seats on airplanes.

But it will get you off the ground, provide you some shelter (if it's bushy enough, and not too windy or rainy), and it is safer than nothing unless you're so high that a fall would be harmful or fatal. In any case, it's wise to use a belt or shoe strings or an extra item of clothing to "tic in" so you don't fall completely. For one example, you can tie your arms or legs together and, if you should fall, the tug will hold you up while you quickly respond. It's up to you to picture and figure out the best way to tie yourself into the trees that you choose; I'm just giving you the basic principles.

- **IMMEDIATE ACTION DRILLS.**

I always rehearse my immediate action drills before I go to sleep. If in a tree, I practice a few times, preferably before dark, by reaching and seeing where I'd grab if I fell this way or that. So if something happens or gives way, my response will be rehearsed enough that I'll react appropriately and immediately, even from a dead sleep. I practice this if sleeping on the ground, or in a cave or rock shelter, or anywhere for that matter. I imagine what could happen, make a plan, rehearse it in my head, and practice it if it's something that requires a physical response.

It's a good starting point for any exigency.

I also always have some sort of weapon for defense, whether it's a stick or rock or something else and I rehearse reaching for it and using it, so that if I'm disturbed from slumber, something is going to get a strong and painful response.

- **BUILDING A TREE SHELTER.**

When picking a tree or trees, I first look to see if it is easy in and out or in this case up or down.

All things considered, I try to find an easily climbable tree with a nice fork of two very strong branches so I can lay some other branches between them as a platform-and now I have a pretty good start point for a shelter. It helps to lash these branches down before building up on them. I also look for a nice third branch as my roof center-piece, above.

The height of your shelter off the ground will be dictated by the trees you find, but ideally you'll be at least shoulder height and not so high that a fall would be fatal.

If I'm among trees that are simply too big, too high, or just not right for a shelter, look for groves of smaller trees, ideally three or four close enough together that I can, again, lay some other small log-like

branches across their branch joints near the base to give me a platform off the ground.

Think of these strong branches laid across as your bed frame. Try to make them as level as possible. Using the trees' forks in this way will save you from having to make and apply lashings, which is especially handy if you don't have any.

Also, don't be self-restricting in your preconceived ideas about how this should look. If you can't make a square bed like back home, maybe because you only have 3 trees close together, then make a triangular bed and sleep curled up. Or if you have many trees, like five or six, but they can be linked together by your branch poles, then make that situation work. Getting yourself off the ground and on a fairly flat platform upon which you can rest safely is the key.

Outside of those two criteria, there are no limits to what you might make and no number of drawings can cover all the possibilities.

Once I build my bed frame, whatever its shape, I lay more branches in between and parallel to the outer structure.

Think of these as the slats for the bed frame. Then I put down lots of sort bushy stuff for my mattress, actually about two-feet thick since

much of the green stuff will mat down as I sleep on it and none of the slats I laid will be exactly flat and smooth.



I then fashion a roof in the same manner. Use the higher up branches to lay slats and cover if available and if not, you can make a pyramid roof by angling long loose branches starting from the four corners of your platform and connecting at the center point above.

Leave the open side away from the wind direction as best you can, and stack as much foliage as possible on the roof as the more there is, the less chance of wind and rain getting in.

The main concepts for the tree shelter are that it's off the ground, you have a strung platform, and there's a decent overhead cover. A lot of times it will end up looking just like a bird's nest, but these things are easy to build, require nothing but the trees around you and they'll protect you and help you sleep well. The only thing is that they do take time, so make time.

- **SWAMP BED.**

A swamp bed is sort of like the tree shelter, except instead of using standing trees as the "legs" that hold your platform, you create the legs by hammering three or four logs into the ground and then creating a platform frame on those. Many survival books encourage you to build these, but I'm here to tell you now, that is nice fiction.

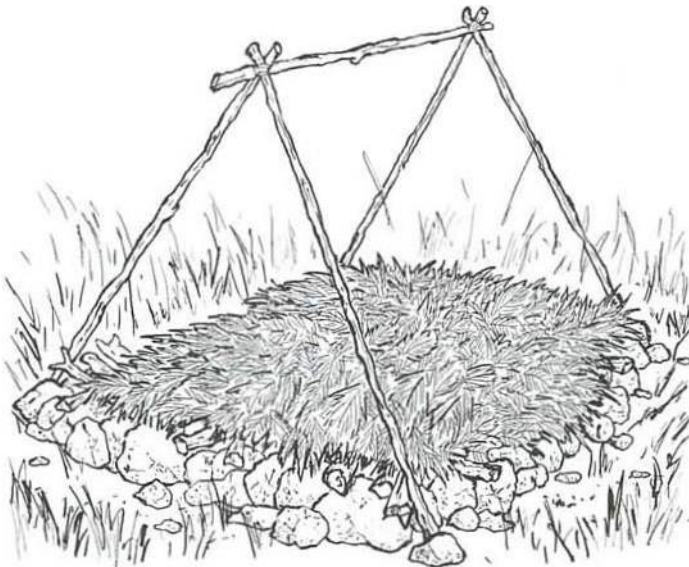
Unless you have incredible tools or amazing strength to drive the log legs into the ground, they will give and sway sideways until you end up on the ground-exactly where you don't want to be. You will also be more depleted from all the effort needed to make it in the first place.

- **GROUND-BASED SHELTER.**

Let's say you don't have trees nearby, or they're so huge or tiny that they won't work for shelter purposes. No problem! The ground is where most mammals live, and so can you. Just get comfortable with the idea and apply common sense to your situation.

So we're on the ground, but we're not. We want to get ourselves as separated as we can from the ground. If we have to find logs, rocks, piles of vegetation. Even a stack of flat cacti can be used (make sure you tamp down the spikes if your boots are solid and the spikes aren't too long and hard!).

After you've laid down your sticks or logs or rocks, soften the base by covering it with sand or topsoil or more vegetation.



There are no limits to what you might find and use; the key is to look at everything around you as a resource and see it not for what it is and what you know of it, but for what you need and how it can be made to serve your purpose.

Survival situations are all about imagination and creative problem solving. This is why I find it one of the best ways to teach leadership and family counseling as it forces you to search for new and different ways to solve common problems.

Once you've got the platform laid out, start to fashion walls and a roof if you have the time, energy and materials available. You can just sleep right on the ground platform if necessary.) Again, many survival sources instruct you to build a classic "A-frame" structure, which is all well and good. In reality, anything you can come up with that makes sense in your surroundings, works.

Now, the A-frame is simple to make. Start by angling two long branches from the ground up (about three to five feet apart), meeting at a center point a few feet off the ground, and lash them together, creating what looks like the letter "A." This is the front end of the frame where you get in. Then make another "A" for the back of the shelter. Then lash one end of a long thick stick to the top of one A

and the other end to the top of the other A, and you've got the basic structure. Then lay many sticks on an angle from this top beam down to the ground on either side and cover with as much foliage as you can find.

Remember that you can also use existing trees, rocks, ledges, and anything else to help create walls and a roof above your platform - just make sure you SCOUT the area and make best use of all resources available.

Once you've got the platform and walls/roof set, if you're in a cool climate, fill your hooch to overflow with leaves and burrow into them; it's kinda like a big comforter blanket, and will do much to keep you warm and make you feel cosier. If you're in a really hot spot, try to give yourself more space in your hooch for air flow, like a higher roof or wider walls or edges, so the breeze can get in and you don't trap your own heat.

- ON, NOT IN. On the ground is typically better than in the ground (or numerous reasons. First, if it rains, you likely won't be flooded out. Second, creepy crawlies just naturally seem to find holes in the ground, and you don't wanna wake up with bug bites or worse. Next,

the ground is colder and more wet if you dig into it, not usually a plus for the survivor.

And finally, the biggest factor- it takes hard work and energy to dig into the ground! Ask any infantryman who has had to dig a trench, only to pick up and move out shortly thereafter.

And without a decent tool, this can be a very tasking endeavor. So, unless you have the tools, time, strength and necessity, it is better to go on the ground. But of course, there are exceptions....

- IN, NOT ON. If it is excruciatingly hot or cold, try to get into the ground. Usually in such environments the ground tends to be very hard, so look for the soft spots.

If you are in a desert area that is all sand dunes, you're in a bad place. Be exceedingly frugal with all energy and make conservative decisions. The key is to save water, so, dig into the sand to get to a little cooler spot and then use something to shade you from the sun. Even if you have to get naked to use the clothes on your back as the layer that separates you from the sun, do it. Make a small hole, lay your clothes across it and put more sand on the edges to hold them in place, then get into the hole and rest by day and work or move by night.

In a non-sand-dune desert environment that is also extremely hot by day and cold by night, dig ill. Fortunately, most deserts have a rich variety of terrain. So, again, scout about, find an area that is more sandy or soft and dig in there.

Always try to use a tool if you can to prevent scratches and small injuries which could lead to infection easily and quickly.

In cold mountains environs, like mountains or forests, look for areas covered in snow to dig a cave. Do so right away-as heat will surely cook you, cold will quickly freeze you. Get out of it. Just digging into the snow and burrowing in will be surprisingly warmer than the outside air around you. Also try to put something between you and the snow; as your body warms it, you'll get moist if not in waterproof clothes. When all else fails, at least keep your torso dry and head warm.

If there isn't enough snow to burrow into, but there is some, then try to fashion it into some form of shelter, like an igloo or a couple walls with sticks and branches on top. I've found igloos are hard to make without a snow shovel to cut nice blocks. But you can make large snowballs, place them as you would bricks and then fill in the holes and gaps with snow and pack it in. I find a pyramid shape works

best because, as you stack your walls, each one a little closer in, the last row of snowballs will make your roof.

But again, this takes time and, without gloves, it can be very difficult. So, weigh out the time and energy expenditure with the value added you expect. If planning to hold tight for a spell in the cold, it might be worth cold hands the first day while the strength is good to make a snow hooch.

Again, the point here is if you don't have shelter or something to make a shelter with, and it's really cold, don't stay on the ground-get into it. It will give more warmth as it reduces your exposure to wind and precipitation. In the worst-case scenario, just scrape a burrow into the snow, lay in it and cover up. This will buy you some time to rest and regroup. Then decide if you need to build lip or move out.

- **TIME TO ACT.**

It sounds hateful, but when you're really surviving, everything is out to kill you. Remember that in all things. Always take a moment to think and question before you take an action. What could go wrong? Can I do this in a better way? Do I really need to do this at all, or are there other options? When you have time, take time!

Now, if you don't have time, then make a decision and go hot! Often in urgent circumstances, where time is not an option, *some* decision is better than no decision. I cannot tell you how many times in operations I have seen a person die unnecessarily because someone couldn't figure out whether to start an IV, apply a tourniquet, or dress a wound.

Sometimes, because people are in shock, afraid, or busy trying to call for a medic, they simply don't apply common sense and reach down and plug the hole to stop the bleeding; then do whatever else needs to be done. And in survival, the same thing applies-more times than not, *inaction* to an immediate need will cause more harm or loss than a *poor action*, but action nonetheless. In other words, you might spill a lot of water by trying to catch a falling bucket, for example, but you will lose *all* the water if you don't try to reach for it.

- **THINK ABOUT "SITTING."**

This is another handy acronym that relates to survival shelters, and it makes sense since "sitting" is something you'll be doing a lot of inside it - sitting, thinking, working, planning, doing, and making things.

"S" is for "shelter." Always find, build and use one based on your environment.

"I" is for "improvise." Use wreckage if available, and improvise all other materials from what's around you.

"T" is for "trees". Always look to trees for shelter, whether as a quick sleep spot, as a frame with two or three trunks, or in a cluster.

"N" is for "nature." Use all that Nature provides, including caves, holes, logs, fallen trees, ditches boulders, foliage, dirt, rocks, and so on.

"G" is for "ground." Make a platform on the ground at least, as a last resort and go underground in extremes.

Now let's look at typical survival shelters in specific environments.

URBAN

If a war breaks out or a *coup d'etat* occurs, or there's a natural disaster, you may find yourself in a city with no way out and not wanting to be found. In this sense, it actually is important to teach and learn about surviving in an urban environment.

The first priority tends to be shelter in terms of staying hidden from anyone who might be a threat. Warehouses, abandoned buildings or

vehicles, particularly trucks and trailers, are good places. Containers and dumpsters can be if they're not in a highly populated area. The main thing is to be sheltered from harm by remaining unseen.

A significant factor here will be time. If unfriendly people will be looking for you, you don't have time and so you must make a movement. Or if you don't think anyone is coming to your rescue, you don't have time and must make a movement. Either way, you may have to move around often and find various shelters until you can make a movement out of the urban environment and start living off the land.

There are a few key elements to consider for urban shelters:
How much space it gives you to loiter and rest during daylight, as you'll likely be making any movements at night?

Does a shelter offer an escape route, or would it become a death trap if the entrance was blocked?

Are you able to eat, drink, and utilize the latrine, if there is one, without compromise?

The fact is you won't be constructing anything, but rather, you'll be exploiting objects based on availability and isolation. We've all seen hobos and homeless folks turn boxes into homes, and newspapers into beds, and the tools of their trade is good stuff in urban survival.

Also, think about all the places to hide in plain sight. Overpasses, railroads, bushes in the middle of a highway exit ramp, even sewers and under houses are good places to hole up for the day. I have slept in every one of these at one point or another, and it's amazing to me how many people simply don't look at what's right in front of them.

You can even sleep in the row of bushes outside of a mall or corporate building as everyone is so busy there during the day, they never think to suspect someone might be hiding in the bushes in broad daylight right in the public view. Sewers are rough and smell, but they have the advantage of being overlooked by most, and you can discreetly track what's going on around you, and often you'll have an egress route.

The other thing I have learned, having been discovered in a few hide sites, is that dogs and kids will always find you.

When we would build a hide site to overlook a drug field, for example, the exact places we seek to make a hidey hole are the same

things kids look for to play in. Likewise, if you're close enough to people, you'll be close enough for their pets, and pets are always sniffing around for places to defecate or urinate.

I've had two dogs, one teenager, and one adult use the latrine right next to my hole over the years, and it never ceases to amaze me how that works. Think about this if you ever find yourself in an urban survival situation and need a place to hide. Better to go right in public than *near* public. **In** plain sight, will serve you right; Public too near, much to fear.

Two of the most important factors for urban improvised shelters are to always have an egress or escape route, and to set up early-warning alarm systems by placing bottles or twigs or leaves or gravel around your sleeping area. This way, if anyone happens to walk near you, they will make a crunch or other noise to wake you. At that point you have to decide whether to utilize your egress, or freeze and wait. Often the sound will distract them, too, and they'll be less inclined to notice you.

JUNGLE

The best types of shelters are the store-bought kind that are a combination of a hammock, rain fly roof, and mosquito net.

There are great lightweight ones available on the market. Of course, if you're in an unplanned survival situation, you won't have this. But if you're travelling into, over, or through a jungle region, it's good to pack one of these in case. The concept is that these set the standard for you to strive for as you go about improvising your own shelter in the jungle environment.

Tents simply are not a good idea in real jungle as it's hard to find a clear, level, dry place to put one down. Any rain or critters pose more of a hazard to tent shelters as well. Best to think hammock and get off the ground.

But when it comes to jungle survival, I find old-fashioned is best. I go for the jungle trio "HiPiN" (Hammock, Poncho, Net)-and I prefer these to be separate units. For hammocks, I prefer the old-fashioned US Army jungle hammock. Not because it's the best; in fact, I often get a snag or button caught in the netting during the night. But I prefer them for their multipurpose utility. I can make them into a rucksack for carrying things or a litter for a wounded person or a trap for animals or a net for larger fish.

They just make a good generic tool for a lot of uses. But I mostly use them as a bed, as opposed to the "survival" nets which can be used for everything *and* a bed, but they don't make the best bed, as they're not primarily a bed. Best to have a true bed that can also do other things, than to have a multi-purpose tool that serves as a bed secondarily.

I also like my rain fly to be separate. Again, I prefer the US Army poncho. The reason is the same as with the hammock: I can use it as a poncho for shelter against wind, rain, and sun; I can make a raft or a huge water-catcher with it; I can use it to smoke meat; and any number of other uses.

The general rule in survival packing and planning is to get the most use for the least weight and space.

Most of the expensive specialty items that are designed for one specific thing offer less practicality when surviving, as the basic day-to-day needs of a human require many implements to fulfill.

Therefore, your best tools are those you can rely on to handle a variety of jobs.

If I'm going to take the time to buy, pack, and carry stuff, I want to make sure I really get all I can out of it. And so it goes with my

mosquito net. I like a separate mosquito net as I can use it in so many ways. Besides being a must-have item for sleeping, it can be used as a bird trap or a fish net.

Sometimes you can get enough tiny minnows in them to make a nice simple meal all by itself.

Sometimes it's so sweltering hot and humid, that poncho is just a huge heat retainer. If it's not pouring rain, I'll skip the poncho and just spread the skeeter net and have a bugfree slightly cooler jungle night's sleep. Let's say it's late, dark, and I'm too tired to build the three-part jungle hooch of poncho, hammock, and net. Then I will use the net as insulation, the poncho as a blanket to protect from rain and bugs, and the rolled-up hammock as a pillow- I've had many decent nights' sleep this way.

- **JUNGLE SHELTER WITHOUT GEAR.** Now if you don't have any gear, it gets back to the beginning on shelters- take to the trees. The swamp bed comes to mind here. But the smart way is the easiest way that works. Don't bother with the classic method of making a swamp bed described above. Instead, take three smaller sticks/ logs about one-foot long each.

Hold them in a bundle, and tie them with cordage (shoe string, ripped cuffs off your pants, natural material, whatever is available) and make one lash and a granny knot. When securely fastened, open the sticks like a tripod and place them down on the ground. Make four tripods and you got a swamp bed stand that you can take with you.

These will set on the ground sturdily, no force needed, and they're easy to adjust as well. Once the four tripods are down, lay two long "poles" (branch, limb, thin log, etc.) lengthwise onto the tops of the tripods, and two shorter poles as your width and then lay slats, and then lay foliage to lay on and under.

As for the lashings needed to put this all together, if you have no manmade cordage available, find some flexible vines or pliant young sapling branches, or rough longer roots of small trees or plants, and wrap them into bundles; these should hold as a temporary lashing. It all takes a bit of feeling it out, but that's what it takes. Some getting used to your environment, opening your mind to your new surroundings, and taking in what is available to you and seeing how you can make it do your will.

If you have nothing, and it's dark, or you're zapped of energy you can always grab a few large-leafed plants and make a sort of blanket over yourself while leaning against the dry side of a tree. Try to find a tree that rises on a bit of an angle, and always look above for loose branches that may fall. Be sure and lay a lot of foliage underneath you for that ever-important elevation and you'll make it through the night.

- **THE BENEFITS OF BAMBOO.** Of all the great materials the jungle offers with which to build impressive structures, bamboo has to be the all-time best thing growing out there in nature-always be on the lookout for it. Not only can you make a bed or shelter from bamboo, you can also make utensils, weapons, canteens, pots, pans, cups, and more - heck, you can even EAT it! In short, you can do almost anything with bamboo. It's even great for starting fires. So, if you find a clump of bamboo growing, it's a good idea to consider making a home nearby as you'll have plenty of supplies in the store for building.

One of the coolest uses of bamboo is to make a rain-gutter roof. To do this, split a number of bamboo shafts in half and lay them all tightly together with the curved part facing up.

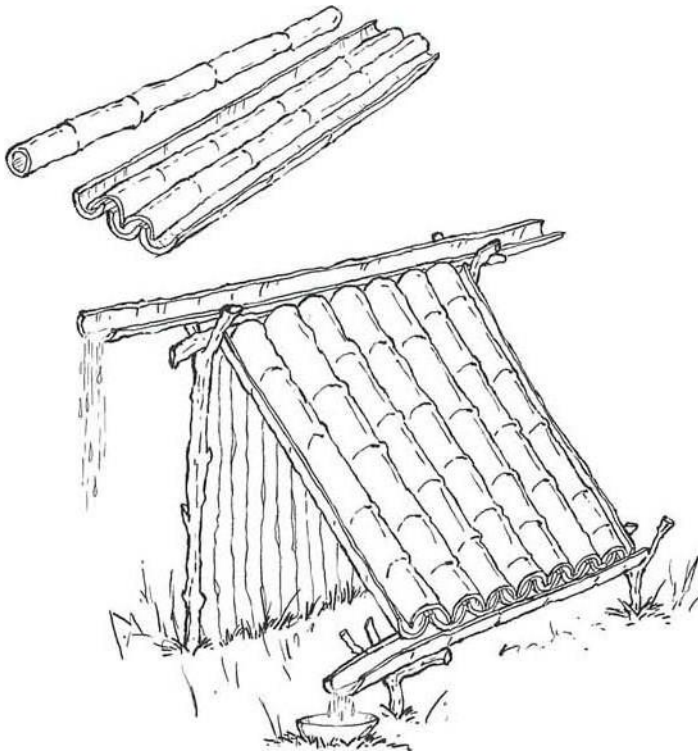
The shafts should be vertical to the ground; not horizontal.

Then lay other halves on top so that one edge is sitting in the groove of the upward facing pieces on either side. This make a wonderful waterproof roof in that most of the rain is blocked by the bamboo and then caught in the upward facing cups of the first row, allowing the water to run down to the edge.

It's important to make the roof plenty long so that the rain falls off the edge far enough away from you. I prefer a lean-to type roof as they're faster and easier to build. I make it at least two feet more around the edges than I need and have it sloping downward in whatever I think is the best direction to block the rain.

If it's rainy season, and you'll be holing up for a while at your site, best to make an A-frame roof with your bamboo, and lay one long fat piece of bamboo across the top to keep the rain from coming down the middle. You should also consider improvising a gutter to channel rain away from you and into some water-holding vessel. Even if it's just a hole you scraped out with a stick and then line with leaves to make a reservoir, it's a good way to save water and energy.

Bottom line in the jungle: you need to get off the floor, mind the bugs and do all you can to stay dry. Think of these things when it comes to shelter building.



DESERT

The desert is a funny place. It can be scorching hot or downright freezing, even snowing.

There can be long periods of drought, and then a sudden flash flood. So, the first thing to do in the desert is to get rid of any preconceived

notions of what it is or isn't. The desert can kill you quick if you're sloppy or disrespectful.

Most likely, you won't have a poncho or parachute or anything else besides the clothes on your back. Every time I've been in the desert, I've had virtually nothing and it is a real challenge to get shelter in pure desert without a cover of some sort.

Start by looking at what is available. There will likely be some sort of physical terrain that will give you shade for a period of the day- find it and use it. In the middle of the day when the sun is at its blazing hottest, if you can't find any natural cover, then *sit* down, take off your clothes and use them to create a shade above yourself.

If you can find or make a hole or depression to get into and then use your clothes as a cover above you, all the better. The key is to not let your flesh exposed. Sunburn is fast, painful and potentially deadly in the desert and the resulting blisters only serve to slick even more water out of your circulatory system.

But when you do have a tarp of some form, use it as a shelter during daytime. Place it a few feet above you to allow more heat to radiate off of it. If you have two covers, use one as the sun shield higher up,

and the other a few inches under it to create a space that will trap heat while you remain remarkably cool underneath. However, this can be difficult if you don't have enough workable lashings and poles to keep your cover in place. So, operate on the principle of simplicity and simply get one cover high up. That will do you just right.

At night in the desert, expect the temperature to drop dramatically. If your overall plan includes trying to walk toward safety wherever it may be, then you may consider doing your travelling at night to avoid the crippling heat of the day. If you need to sleep at night, then be sure to scout a good location long before dark, and to gather the materials that will keep you warm.

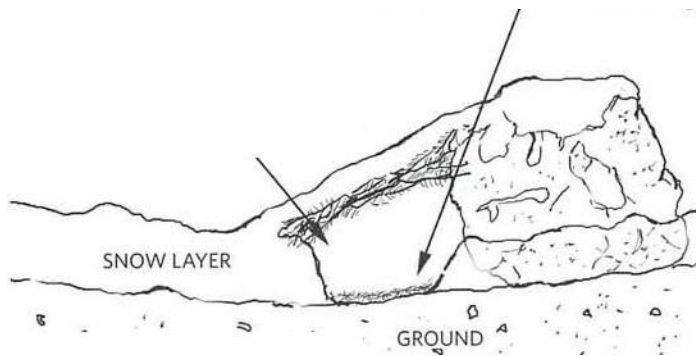
Small caves, the underside of rock ledges, thick brush and other natural formations can serve as cover or shelter. In the desert, if you have nothing else, a rock ledge with a small fire can provide enough warmth and safety to get you through the night.

ARCTIC

When you're in the Arctic, or any sub-zero climate for that matter, the first order of business is to get out of the cold as soon as

possible. As far as priorities go, water, fire, food, and all but immediate life-saving first aid, all come second to seeking shelter and getting out of the cold. Every moment you spend exposed reduces your physical and mental capacities, which leads to poor decisions and ultimately, quick and final breakdown.

If you can find a field or cluster of rocks, seek shelter in them. There will likely be good pockets of space between the snow and rocks and they'll block the wind better than trees can. If there are no such rock resources, get into the trees. Often there is space under the snow-covered tree boughs that make for a really nice, ready made snow den. If the snow isn't deep enough, then use the tree as temporary shelter for breaks from the wind as you build up a snow or debris wall.



Debris includes anything and everything around you that you can simply grab, drag, pull up, break off, and gather around yourself to fashion a rudimentary shelter. It ain't pretty, no two ever look alike,

and they're not ideal shelters as they don't completely protect you from wind, rain, sun, and critters.

But the very notion of having even a rudimentary shelter is extremely comforting and psychologically, that mental security blanket can go a long way in reinforcing your will to live. But even debris shelters take a lot of time and energy to make, so plan on the time to make even this simplest of shelters.

The simplest and quickest technique of getting out of the cold in an arctic or snow-covered area is simply to dig into the snow and cover up. This will buy you time while you think about your next moves. Also, it is remarkably warmer inside a snow cave-even a small one that you quickly dig out-than you might imagine.

Ultimately, anytime you are stuck in a sub-zero environment, trying to stay and wait might not be your best option unless you have materials to sustain yourself for a long wait or you are fairly confident that a search party will be looking for you. Without resources, merely waiting alone can do you in. So, without resources or imminent rescue, quick shelters and quick movements are your keys to survival.

SEASHORE/ISLAND

The seashore is a relatively easy environment for survival. You can pretty much get all you need in most cases on the seashore. I call this easy living.

Unless you're stuck on a tiny islet with zero growth, you can usually fashion a decent shelter when on or near a beach. There is always debris floating up on the shore that can be used to make an elevated shelter. Combined with a small burrow and your clothing as a cover, this will suffice to keep you out of the elements of sun.

Whether you choose to build a swamp bed or an A frame shelter or some such thing, always first look above your chosen location to ensure that nothing is above you that might fall on you, such as coconuts, loose branches, rocks, etc.

Coconuts are especially dangerous, ironically, as they are also lifesavers when in such a locale since they provide water and food. I've seen them just drop at any time and an unexpected number of folks die every year just from coconuts falling on their head!

Also study the ground near your potential shelter location. Look for grooves in the ground that could have been made by flash streams of water. Also search for signs of animal life in the immediate area, such as tracks, holes, nests, or droppings, and if there are many such signs, find a different place to put down.

Another consideration in selecting a location is tidal movement—check the shoreline for signs of recent tidal activity, and notice whether the tide is moving in or out, and determine if it will soon cover the area you are considering for a shelter.

One good thing about seashore survival is that the leaves and branches often found near beaches are great for making a shelter.

The best leaves for making a shelter are the ones that require the least amount of work to use. For this, I prefer "elephant ears," which look exactly as the term implies. If they are not around, I'll reach for palm fronds or any other large-leafed plants. Round palm fronds work well just as they are; other elongated fronds work better if split down the middle.

All require a stick structure with slats, such as a lean-to, tepee, A-frame, etc. to build upon. If you have time, weave the leaves into the slats for extra sturdiness and weather protection. When there is no

time to do so, simply lay enough slats to hold the leaves without falling through and then lay a few more slats over all the leaves to give them security in bad weather.

In the simplest of terms, find the right location, make a frame, lay the fattest leaves, anchor them and rest. If you're going to be in such an environment for weeks or longer, you will have plenty of time and materials to construct a very fine shelter.

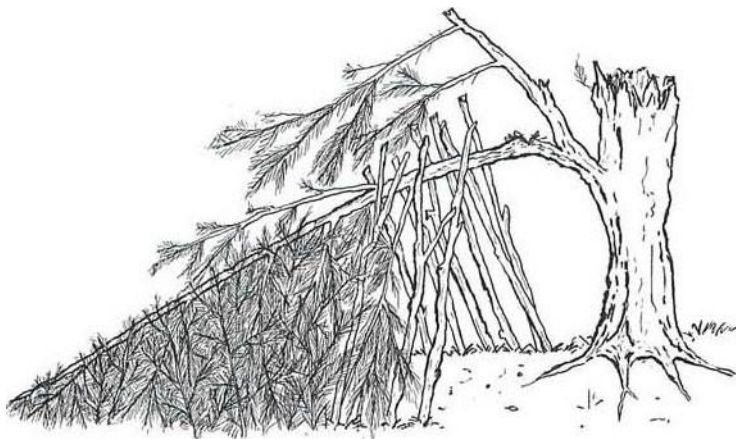
WOODLANDS

The type of shelter you can create in woodlands is relatively more sturdy as the environment produces stronger resources. In most woodlands there are many branches on the ground that still retain a lot of their original sturdiness and, unlike equally sized branches in the tropics, they have not been corroded by the fast-decaying tropical climate.

Also, the vegetation in woodlands is easier to deal with than jungles, as it doesn't grow as thick. Another helpful aspect of woodland survival is there isn't a real need to get off the ground; therefore the logistics are quite simple. Just lean some sticks together in an A-frame or teepee structure or construct a basic lean-to, or use a tree

as a lean-to and start stacking pine boughs, various leaves, soil, and/or other resources, and you're sorted.

If it's still daylight after you've made your shelter, perform a quick "sun-spot check." Just lay inside your shelter and look up, and if you can see any sunlight, that's an area that will be susceptible for rain to come in-so quickly fill those spots in with more debris. You can also do a similar leak-check by building a small, safe fire in your hooch and look for smoke leaks coming out. With the smoke-check technique, you'll have the added benefit of repelling bugs.



MOUNTAINS

Mountain area shelters are about the same as the woodlands, except you might incorporate boulders as walls against which you can

fashion your lean-to. You may also find clusters of boulders to be your walls and you'll just need to make a roof and fill in any gaps in your walls with brush and branches.

If there are no boulders to work with, there will likely be plenty of stones or rocks you can stack to make a good wall.

Another technique is to make a shape of stones-square, circular, or triangular-simply piled one or two high. Then use them as a form against which you can wedge your sticks and make a nice little shelter.

Often a fallen tree or log can be found in the mountains and these make a nice starter structure for a shelter, or even a good self-contained temporary shelter if you're wounded or too ill or depleted to make a shelter in time. Just pull up some soil or debris for coverage and get as comfortable as possible.

In fact, whenever you're building a shelter, make use of all your effort. What I mean is, when you dig up dirt or break apart sticks or rip up leaves, there will be debris from that activity. Use that debris! Put it to use by forming it into a small wall around your shelter, or as an insulator to keep out bugs or as a stopgap to prevent leaks of water and wind or as a small rain ditch around any ground shelter.

The basic idea is to use all resources available in your situation, and to maximize all your efforts.

Another trick to handling rain is to tie a piece of string where it is entering and angle it so the water will be diverted away from you. Or, for the edges of a roof or the top joint of an A- frame, have your foliage overlap a good six inches or more so that the rain is dispersed long before it gets to the joint and then flows down the side walls instead of dripping into the middle of your home.

If despite all that, it still rains into your hooch, dig a little channel and direct it out the door and sleep on the opposite side. You've got nothing better to do but home improvement in these cases, or conduct personal hygiene and take a bath instead!

SWAMP

The swamp can be pretty tough going. If you get stranded there, be prepared for a mental battle as it can be very intimidating as you're frequently submerged, which reduces your body temperature and softens the skin which increases exposure to damage and infection.

Also, swamps are often filled with gators and snakes. However, like the jungle, mountains, or island settings, one can survive there a long time- unlike the desert and arctic. But the chances of being found in a swamp are extremely slim unless a plane wreck left a good imprint in the ground.

Even then, the marsh usually just swallows these up and the traces of a wreck are very hard to find for rescuers. So, staying in the swamp is not a real good plan. What that means here is that you don't really want to spend a lot of time making a shelter here.

Therefore, swamp shelters should be the minimum needed to get through the night, and then you should continue moving by day unless you're ill or injured.

The ultimate rule of swamp shelters is to seek high ground. Often you'll find small patches of drier, harder ground to make a shelter on. It's still good to get off the ground even if it is harder, it will often moisten very quickly as you work around your site and turn into quite a muddy mess. If you can get off the ground, take extra care and time to stack a very high pile of grass and padding to keep you dry at the top.

I've spent days in knee- to waist-deep water, and it isn't fun. In these cases, start early and make a swamp bed. Forget the method of driving poles into the ground and instead tie into some trees. The ground here is often so wet and sloppy, it's pure foolishness to try making a platform of sticks stabbed into the boggy ground.

Again, like the nest platform described earlier, chop or break some strong branches, lay them into the forks formed by branches of a closely grouped set of standing tree branches, and build a platform to get you up out of the water.

Hang everything off the trees around you to dry while you rest, and do all you can to keep yourself dry as well.

Once you have a platform constructed to hold you up and get you out of the water, try to fashion a roof over your structure in case it rains. But if you don't think it necessary, don't spend the time on a roof. The platform alone will take longer than you think. Again, the key is that you won't be staying long and therefore, it's more like a roadside motel instead of a nice vacation resort. Just get dry, get rest, and then get moving.