

# SIGMA 3 Survival School

## **North American Basic Wilderness Survival Skills Manual**

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First off, SIGMA 3 Survival will teach you how to live off the land with little to no resources. We are not a school that will teach you to get rescued; we are a wilderness immersion school. We also teach urban survival, tactical skills, disaster preparedness, and wilderness medic training. Once you get training from SIGMA 3, then you won't need rescue, instead it will be a survival vacation! This book is not designed to be completely comprehensive, but it will cover numerous basic skills and the things we have learned to be of greatest importance. So let's begin!

The priorities for survival are always the same order and should be followed if you want to survive! Shelter, water, fire, food, & tools. That is the main focus of this short manual; it's to ensure that you have the basics down to ensure your survival. There are very few exceptions for breaking these rules and many of the times that I have broken the order I have later regretted it. It is extremely important to

bring gear with you in the woods but if you do get caught out without the needed gear to survive then these are the skills you will need in order to survive.

For more instruction on how to do anything you see in this manual, please visit our YouTube channel and you can see these skills demonstrated first hand! <http://www.youtube.com/sigma3survivalschool/>

## **Chapter 1**

### **Tools**

We begin with tools first, because if you don't want to have to recreate tools in a primitive setting and these are the items that most important and the most difficult to reproduce primitively. The survival tools you carry should be at a minimum of a 5-10 piece kit to ensure your comfortable survival. You don't have to have this equipment in order to survive, but having these basic items will exponentially improve the amount of time it takes to do things in the bush. These items don't weigh very much and it typically isn't too expensive to purchase some quality items that might end up saving your life one day. You should think of your basic survival equipment as an extension of your mind and body and these are things that you should never leave home without, because you never know when you will find yourself in a survival situation.

**Knife-** Your blade is your first and most important survival item that you must have all the time. There is a different type of blade for every job but for our needs we will want a specific type of knife to do a variety of tasks well. We are only going to mention a general use knife, there are several multi-tool options out there that may be better for your area, but these blade types mentioned will work anywhere and do any task that you might need. The best blades for bush craft are typically 3/16" thick, they have a flat grind style Scandinavian blade. They should be between 4-6" long and have a high grind on the edge to ensure they are good at cutting wood. The majority of the tasks we will use the knife for will be to process wood for various bush craft projects and nothing out performs a good flat grind style knife. The model below is a Diving Sparrow Knives Model Ranger. It is a custom handmade blade that is quite expensive at about \$300, but is like owning a Ferrari in the bush craft knife world. I do personally believe that your knife should be your biggest investment in your survival kit because all other things can be made with a good blade. But if you don't have the money for a blade of this quality then I recommend the TOPS Brothers of Bush craft Field craft knife (\$130) or just a good cheap Swedish Mora knife for about \$20. Any of these knives will do the job well but the two more expensive blades will perform a variety of other tasks.



**Folding Saw-** A folding saw is an absolutely indispensable item to carry in your kit and in my opinion is more important than carrying an axe. You can process wood more quickly and do more tasks with a saw than you can an axe. The saw is also great for making notches when doing primitive trapping. I recommend the corona and silky saw brands because they cut the most efficiently and are cost effective. The corona is around \$25 and the silky saw is around \$50 for the mid-sized model. The silky is the better of two but both very close in cutting speed; the silky has better durability though.



**Stainless Steel Canteen-** A good quality stainless steel canteen is an essential piece of kit that you can't do without when doing bush craft. It's not only a water container but it will also purify your water because you can boil in them. Never buy a Nalgene bottle because you want all your equipment to be multi -functional and have several uses. Only buy stainless steel bottles that have no plastic on the bottle, the cap is fine, but no plastic on the main bottle. Also you can't boil in insulated bottles, so make sure to get an un-insulated model.

**Fire Starter-** The Ferrocium Rod is by far the most dependable ignition source for fire starting and will work in any environment and will work wet. They are lightweight and very cheap to purchase. I usually have one on my knife sheath as well as a backup in my other kit. Get a thick one, the thin ones break easily. The larger the better they are and the longer they will last.

**Poncho-** Any good poncho will work and they will keep you somewhat dry in wet weather. They are not as good as having a full rain suit, but the poncho can be used as shelter. So the



poncho has a more diverse set of uses. I typically prefer to carry a rain suit and a poncho, you can never have enough water proofing gear!

**Paracord-** Rope can be made from wild plants and trees anywhere you go in the world but the problem is how long it takes to make the rope and its durability. While primitive cord is sufficient to get the job done, it is not durable or abrasion resistant and requires exorbitant amounts of time to create. I can make fire easily with a piece of cord, it can hold my shelters together, there are literally a million and one reasons for having some paracord in your kit.

**Fishing Kit-** A fishing kit is the single best piece of food gather equipment you can have in your kit. They are lightweight and can be deployed to catch fish and all types of other small game. They can catch all types of birds, and other small game. It takes some training to know how to catch land game with a fishing kit but it can be done. So if I have to choose one piece of food gathering kit, I will always choose a good fishing kit. The kit should have a wide variety of small hooks and treble hooks. Remember that a small hook can catch a big fish but a big hook can't catch a small fish. So pick hooks that will universally catch a wide array of fish.

**Clothing-** Your first line of defense is always your clothing, which will protect you from the environment better than anything else if you choose the right gear. You need proper wet weather and cold weather gear. Hot weather gear is a little less important than cold and wet gear because these elements kill you the quickest.

Cold Weather I recommend wool clothing for your outer layer, Columbia has great wool for low costs. The Colombia Gallatin Range line of wool clothing is very affordable and my personal choice for wool winter clothing. Down insulation is great but when it gets wet its worthless, wool is good even soaking wet and it's much more durable. One problem with modern clothing is that because of the petroleum products used in making them, they tend to be flammable. And if you're doing bush craft then you're going to be next to fires all the time. Always wear wool socks, even in summer, I love Alpaca wool the best. Wool is naturally anti-microbial, burn resistant, super tough, stays warm when wet, and all around the best cold weather material available for survivalists.



For wet weather gear I recommend a PVC lined rain suit, Helly Hansen makes the best rain gear in the world so I typically wear that. Gore-Tex is un-acceptable for extremely wet conditions, you will get wet. If the temps aren't that low and getting wet isn't an issue; then I prefer a good nylon type clothing. Nylon based clothing dries super-fast and is also very lightweight which can be a big advantage when have to move greater distances. I definitely wouldn't want to go on long hikes in my wool outfit, but would relish it in nylon gear. Rail riders are a great company but expensive, so any company that produces a high quality nylon shirt and pants will do the job.

If bugs are an issue then clothing plays the biggest role in your overall comfort, because nothing makes a trip more





miserable than getting eaten alive by bugs. The single best way to beat the bugs is to tuck your pants into your boots, and tuck your shirt into your pants. It's like wearing armor for the bugs and there is only a couple of places they can get in and that's on your arms and face. You will rarely miss seeing a bug in that area, and if you wear long sleeves then that has even more protection.

Permethrin is also the best bug repellent out there, so if bugs are an issue then you should purchase some permethrin from Wal-Mart or other retailer and treat your clothes with it. Much better than DEET based products and lasts way longer. The average permethrin treatment will last from 10-30 washes where DEET wears off in hours.

**Tools Note:** While this is nowhere near a comprehensive list of items that you can carry, this is a good list of the minimum amount of items you should carry without fail. With these items, anyone can learn to live like a king in the bush. If you take this minimal kit away then things become much harder and survival will become much more labor intensive and difficult. For more information on survival tools, please visit our YouTube channel and our website @ <http://www.survivalschool.us>

## **Chapter 2**

### **Shelter**

**Location-** Shelter should be located away from danger areas such as dead overhanging limbs (widow makers), potential water flow areas in a downpour, animal trails, avoid poisonous plants, or avalanche areas in snow country. The shelter should be built near an abundance of building materials. You should look for areas that are protected from the weather on Southern exposures. The ground should be dry and well drained. And finally make sure to face the entrance of your shelter away from prevailing winds in your area. You should always locate your shelter somewhat close to water, because shelter and water go together. You can't afford to hike miles for your water, so build where water is available. Just make sure to put yourself in a good spot that won't be a threat of flash flood or other water hazard.

**Time-** The most important thing to remember about shelter building is that most of these shelters will take a minimum of a couple of hours. So you should be prepared to work hard and there are no simple or easy primitive shelters to build that will keep you out of inclement weather except for already made natural shelters.

**Type-** There is an optimal shelter type for every situation and for every ecosystem but many times your shelter is going to be determined by available materials, time, and the current weather conditions.

**Tarp/Poncho/Reflective Blanket Shelter-** This is one of the most lightweight shelter types you can carry and it's something you can easily throw in a cargo pocket or a fanny pack. These are must have items because it can take large amounts of time to water proof things in the wilderness. So a simple poncho is something you should carry if you want to increase your chances of surviving. There are so many ways to



set these shelters up and they can be used in any environment. Simply drape them over a fallen tree, or pull a sapling down and stake it to the ground. Basically anything you can use to hold the poncho up will work well.

**Debris Hut-** The debris hut is the shelter to use when you have at least 3 hours and the weather will be wet or cold. There are so many variations of the debris hut that we can't begin to mention all the types here. You can build internally heated debris huts or you can build them to be heated by your body heat. The body heat version is like a mummy sleeping bag made of debris and the heated version is much larger inside and you use hot rocks in a pit to heat the shelter.



The debris hut will shed water in torrential downpours better than almost any other primitive shelter and will keep you warm to the coldest of temperatures if properly built. The size and scope of the hut depends greatly upon your situation. If it is an emergency then the interior should be made small like a mummy sleeping bag, only big enough to move around in. If you have more time then make the shelter large enough to sit up in so you can work when it is raining. And of course the larger shelter type must be a heated version with hot rocks if you're in colder weather. The large open front debris hut can also have a good sized fire right in front of it also and it will heat the inside of your shelter. Remember that the smaller a shelter is the more efficient because it retains body heat, so larger usually means colder unless other measures are taken. The debris hut is one shelter that must be practiced because an amateur will take much longer to build one and that 3 hour build time rule might not hold up in some conditions. This is the most well rounded and common primitive shelter and should definitely be considered!



**Lean To-** The lean to is the most commonly known shelter and is probably one of the simplest to build. This shelter should be utilized when there is no large windy rain storms expected and cold weather is more of an issue. This is a great shelter for large body length fires. You can weather out storms in these shelters just fine, if you have proper clothing, but if your wet weather gear is substandard then you may not like this shelter as much as some of the others. These shelters will not protect you in downpours with windblown rain coming in sideways. If you are in a cold weather environment then you will have to keep a fire to stay warm. Reflectors can be utilized to help block prevailing winds as well as reflect more heat back to your bed. These reflectors can be constructed from stacking wooden walls, using debris, or finding natural reflectors such as rock faces. If you have the choice, then always locate this shelter near natural reflectors to cut down on building time which in turns saves calories! Or use blown down trees or other structures to build your structure on to save time. Remember the smaller your shelter is and the more reflectors you build, the warmer it will stay. You can also heat hot rocks in the fire next to you and place them at your back to heat both sides of you so that you don't have the rotisserie chicken effect all night long. A body length all night fire is an awesome solution for heating issues and this type of fire can keep you comfortable all night. Check our YouTube channel for how to build them.

**Double Lean to-** The double lean to is an improvement upon the standard lean to. This shelter is used when cold becomes more of an issue and you have another person in the party that can help you build it. It will retain heat much better and block the wind more effectively than a normal lean to because it is much more protected. To create this you just mirror the other side of the lean to with an exact replica. One end should be completely closed in cold conditions and the doorway should be made as small as possible to preserve heat. Make sure to angle your entrance away from prevailing winds for increased warmth. These shelters can be made as long as needed for larger parties and it's effective to create walls at both sides to block wind and make sure your door opening is small to minimize heat loss. The versions below are for a bit warmer weather, but most of my instructors have slept in this shelter well below freezing temps next to an all-night fire with no sleeping bag and been so hot they were sweating. The top opening in the shelter can be covered with sticks and debris when rain is an issue. And it has good ventilation due to a long opening in between the two top rails and the wind sweeping in from the doorway. The fire pit can be made rectangular in order to create better radiant heat the entire length of your body.



Platform beds are also a nice addition to this shelter because it will get you off the cold ground and will allow the fire to heat your underside. You can also place hot rocks right under your bed and they will heat you well into the night. You must be mindful, to make sure no logs from the fire can fall onto your bed. This is done by putting an excess of rocks next to the bed and making sure no debris is near the flames. This is one my favorite shelters for the north. It's best in super cold conditions with snow and this is not a waterproof shelter unless you have a min of two feet of debris or a tarp to protect you. But in the snow this shelter will do well because the snow will build on it and the snow will act as insulation for your shelter. Just make sure your shelter wall is not too close to the fire so that you don't get drips from melting snow. A big layer of debris will help with this most effectively. The GO TO northern shelter!



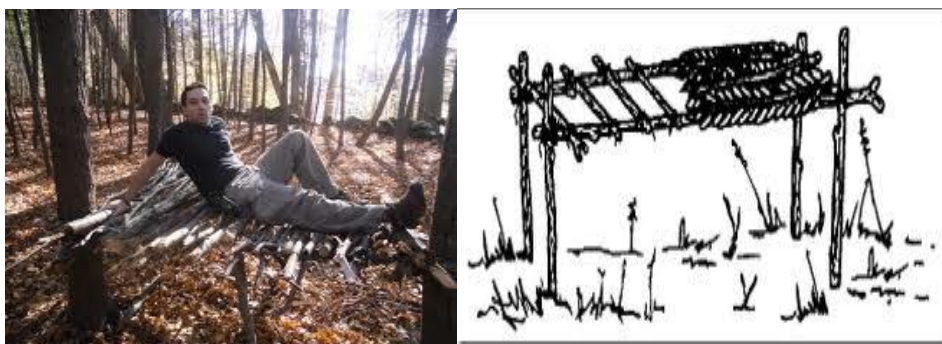
### **A Frame Debris Bed or Jungle Hooch**

The jungle hooch debris bed is by far my favorite shelter to sleep in if I have poncho or tarp to help protect me from rain and the temps aren't too cold. And your poncho or tarp should be standard carry for everyone wanting to be prepared so there is really no excuse to not be carrying one and with that mindset then this will always be a good shelter for you. Other than needing a poncho to stay dry this is the most comfortable shelter you will ever sleep in. We have rich doctors and people that have never even been camping say this is just as comfortable as their bed at home and it's true. The debris creates what we call survival memory foam and it conforms to your body. This is one of the fastest primitive shelters to create and is my go to shelter when bugs are of any issue. You need approximately 25 straight trees and minimum of 10' of rope. Simply create an A frame on both sides of a tree that are about 7-8' apart depending on your height. Then build a platform bed on top of the A frames. Then put a tree on top to hang your poncho from. You can build this shelter easily in 1-2 hours. It is possible to build a roof system over this shelter without a tarp but it is very labor intensive, you can see the roof holding system in the pic below. This grid should be thatched with grass or palm leaves, or whatever is available in your area. Keep in mind though that this will take a very long time to complete!





**Swamp Bed-** The swamp bed is another form of raised bed and its used when bugs or water are a major issue. You can build suspended platform fires on this shelter and that is the only reason it is advantageous to the jungle hooch. These beds can be constructed almost anywhere including in trees. This bed effectively raises you up off the ground away from potentially dangerous bugs and keeps you dry in moist areas. These platforms can have roofs as well as fire pits for cooking and to repel bugs.



**Natural Shelters-** Natural shelter can be great but some are deceiving. Caves for instance are typically full of animals, snakes, and potentially dangerous bugs. Caves are also known to drop huge rocks from the ceiling when someone makes a fire in them because the heat causes expansion that can cause loose rocks to break free. So be mindful when using the natural spots. Blown over logs, flat rock faces, depressions, and all types of different natural objects can be modified to make shelters quickly and easily in emergency situations. Just use common sense and make something that works that is dry and warm. That's all that matters for quick shelters!

For more information on shelters check out our YouTube channel:  
<http://www.youtube.com/sigma3survivalschool/>

## Chapter 3

### Water Procurement

#### Plant Purification Methods

-Tapping trees/ Many different types of trees can be tapped for clean highly nutritional drinking water at certain times of the years. Birch, Sycamore, and maple to name a few are all great trees to use in early spring. If you catch the trees at the right time you can collect substantial amounts of water with no modern tools. I call it Nature's Vitamin water because it is packed with tons on vitamins and nutrients. The only downside to this method is because the water has a high sugar content it will usually begin to ferment within a day or two, especially in hotter weather!



-Bamboo/ In areas where bamboo grows it is usually very abundant and it can be utilized to obtain clean drinking water. In tropical climates where moisture is high the bamboo will store water in the sections of the plant. All you need do to collect it is cut the top of a segment and bend it over and pour it into a collection device. You can also cut the top off and stake it into a water container to drip. Bamboo can also be used to boil water in, whether with rock boiling or using it just like a pot. Also they make great containers for carrying your water. Check our YouTube channel for how to build portable bamboo canteen.

-Volatile Oils/ Many plants contain volatile oils that are highly toxic to micro-organisms, so there are many different ways you can use them. The plants with volatile oils can be cut up and put into your water to kill off any bacteria. They can also be eaten with questionable water and the oils will mix in your stomach to help kill off micro-organisms. Normally these plants that contain volatile oils are typically very healthy for you, so not only are you eliminating bacteria from your water but also giving you much needed vitamins and minerals. Some of the plants that contain these oils include: mints, yarrow, and pine trees. The oils in the plants evaporate very quickly so they should be used soon after picking for increased potency!



-Grape Vine/ The grape vine truly is an awesome plant and has numerous different uses. The grape vine can be tapped or completely cut and put into a container. This method will produce sizeable amounts of water over time and is a method that should always be considered when water is distant or questionable in nature. The plant will filter ground water for you and render safe drinking water with vitamins and minerals to boot!

**Seep Hole-** The seep hole is one of the main go to methods for purifying water primitively because of its simplicity. Dig a hole next to a body of water until you reach past the water table and the hole begins filling with water. The hole should have plenty of depth past the water table line to allow the sediment to clear. Leave the water to settle and come back and drink the top portion to avoid any remaining sediment that is suspended. Make sure there is no animal sign near the water hole. Look for tracks! Scrape the top layer of soil away so that it can't fall back into the well. You can also add hot rocks to the seep hole to boil the water. Very effective method if you have no boiling container. This method doesn't rid the water of all its bacteria, but it limits your exposure to bad bacteria and harmful parasite. You are essentially using the ground as your filter and you can also boil in it with ease.

**Modern methods-** There are dozens of modern methods from filters to cleansers. I recommend a silver impregnated ceramic filter in whatever type of filter you choose or Sawyer also makes a new brand of filter with the largest filter capacity and best flow rate for less than \$100 and is my new personal favorite. Iodine is something I carry as a backup in case something goes down because I have had water filters quit at inopportune times. I don't recommend bleaches and chemicals because they are unnecessary if you are trained. There are also black light filters that are submerged to kill bacteria with UV light. And finally I highly recommend that you have stainless steel drinking bottles or old' fashioned canteen cups in case you need to ever boil anything. Nalgene bottles have no redundancy (multiple uses) and should be exchanged for something that does more than one job. Wal-Mart has these types of bottle for five dollars and they are the most universal modern drinking tool you could carry.



**Conservation-** All animals understand that they must conserve their energy or they will have to work to forage more. When you don't need to be moving, then don't. Use your mind to figure out how to do things the most efficiently with the least amount of work. Don't burn up your water supply unnecessarily! Wear clothing appropriate to the conditions. Don't eat anything if you don't have water. Try to travel during non-peak hours of the day to stay out of the heat. Don't ever drink urine unless you have distilled it. Try to cover your skin with clothing in the open sun. All the little things add up to a large sum saved at the end of the day!

**Collecting Dew-** During certain conditions when humidity is high and temps drop slightly this can cause large amounts of dew to collect on plants in the early morning. When water is scarce you can use your clothing to effectively gather significant amounts of water. Just tie the cloth to your leg and walk through vegetation with dew on it until it is saturated. Wring that water into your mouth or a container for later. Make sure to not drag the rag over any poisonous plants or things that could contaminate your water. It's best to boil this water after you collect it.

**Solar-** The sun is a powerful force is harnessed correctly and it can be used to purify your water should you find yourself with a clear bottle of some type. UV rays kill micro-organisms very effectively and you can use the sun's ray to kill the germs in your plastic water bottle. Fill a plastic bottle up from



your water source and leave it to set in direct sunlight for 6-8 hours. The only method that kills all germs is boiling, but this method can significantly reduce the concentrations which is very important. It is not exposure to the germs that causes the problems most of the time, it is high concentrations of those micro-organisms that overrun your system and cause you to be sick. So, when possible always try to reduce your risks in a wilderness survival scenario. The SODIS method is highly effective, it won't kill all the germs but it does kill all the bad ones so it's one of my go to methods if the resources are available.

**Snow-** Snow can be an abundant source of water in the winter but you need a method for melting it and drinking it primitively. Eating snow for hydration can rob you of vital calories and warmth and should only be done if you have an abundance of food to replace those calories. If you don't have a container to boil the water and then you will have to improvise something. If you have a piece of clothing such as a sock you can hang it next to the fire and put a container under it to catch the drips. There are dozens of ways to melt snow with no pot. Just remember to stay hydrated even when it is cold because the sun can be even more intense in the mountains than it can in the deserts. Winter weather has a way of dehydrating you extremely fast and this is something you need to really stay aware of.

**Rock Boiling-** Rock boiling is the number one method for purifying water in a primitive situation. All types of containers can be created to hold the water and then rocks are super- heated in the fire and dropped into the water to bring it to a consistent rolling boil for 5 minutes. This method is full proof and if done correctly will eliminate all hazards from your drinking source other than chemical contaminants.



### **Dangers:**

**Giardia and Cryptosporidium/** Both these water borne diseases can cause massive issues in a survival situation. They can cause diarrhea and dysentery which could inevitably be fatal in a serious survival situation. These symptoms can cause you to become extremely dehydrated in a very short time, not to mention allowing the possibility for other issues to flare up. Never drink from water near animal watering holes because both these diseases both come from animal feces contaminated water sources. So look for tracks and make sure you are using areas un-frequented by local animals. Some instructors say that you can build immunity to these but you definitely don't want to try your luck in a true survival situation when you don't know how long you will be out there. I have personally had both and while the symptoms aren't terrible, it can lead to a cascade of other events that will line up against you in a real survival scenario. Both diseases will make you extremely dehydrated and that can quickly work against you. So it's always better to lean to the side of caution and purify your water the best you possibly can.

**Chemical/** These contaminants can be the worst kind because there is nothing you can really do about it other than finding another source. Distillation is always an option but that isn't usually and option in a wilderness setting. But the problem is that usually you won't be able to tell if these contaminants are in the water because of un-obvious sources. Just use common sense when avoiding

these dangers such as to be aware of the area you, whether you are close to anything industrial or near farms that use pesticides. Think about what is up river! And never harvest anything near a road! If you are concerned about chemical contamination in the water then you can grind up charcoal and add it to your water. Charcoal is great for helping you pass through your system with less harm, because charcoal attaches itself to chemicals and allows you to pass it through without absorbing.

## Chapter 4

### Fire

#### Tinder

Natural / There are an endless amount of things that can be used for tinder but they all have one thing in common. Light, wispy, and easily catches a spark! Cedar bark, dried grass, cattail fluff and hundreds more. Cattail fluff can be made into char fluff that acts just like char cloth. My favorite natural tinder is ignite which is basically charred poop. It burns amazingly long and hot and catches sparks instantly. Gather small bits of dried horse or cow manure and bake until black. Just remember to gather the driest materials possible and they can usually best be gathered on southern exposures where they have been exposed to consistent sunlight. Be creative!

Man made/ There are hundreds of different tinders that can be had but the old standby is the cotton ball. They catch sparks phenomenally and burn a long time. Burn time can be increased by adding any type of oil product such as women's lip stick, Vaseline, or even the salve we make at the school works great! Char cloth can be made by baking clothing in a tin can until it turns black.

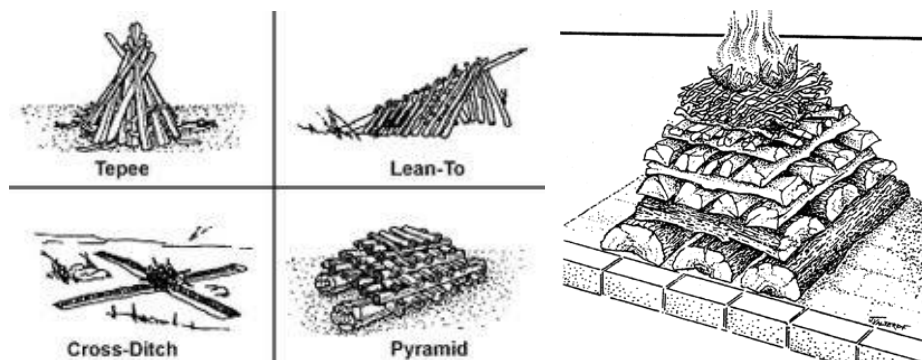
#### Stacking

Teepee/ The teepee is the most common method for stacking tinder and starter wood to get a fire ignited. The best way to do this is to start your smallest tinder pile first to act as a frame support for the larger sticks and then successively stack larger and larger sticks until completed as desired. Then cubby out a little hole at the bottom of the tinder pile opening so that you can put your burning bundle into the base of the Teepee.

Blowing Methods/ Gather a hollow tube from a non-poisonous plant to make a straw that you can blow air through to concentrate the airflow where you want it to go. If there are no hollow tubes in the area then the method I use more than anything is to simply pinch my thumb and pointer finger together on both hands. Then put them together to form a small triangle between the four fingers so that you can blow through it! We have a YouTube video called the diamond blowing technique you can watch for more detail. This will increase the effectiveness of the air flow tremendously which means that your fire will get much hotter much faster. This is my go to method 90% of the time.

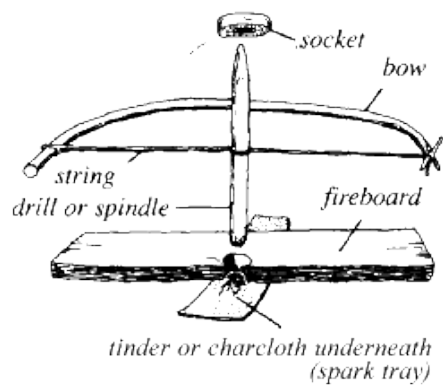


**All Night Fire/** The all night fire should be used when sleeping in cold conditions where fire is essential to stay warm all night. It is the best fire setup for a lot of reasons. It conserves fuel better than any other fire type, it puts out more heat, and it burns much longer. Our record all night fire at the school is about 46 hours of open flame from one upside down fire. It's also a no maintenance fire and one you don't have to wake up every hour to tend. It will burn without any tending or adding wood to the fire. The fire can also be modified to last longer by adding green wood and dirt in between the layers. Build a large base of sticks and stack them tightly together to make a tightly packed four sided pyramid. The larger the stack, the longer it will burn but it's essential that all the logs be closely butted together. Otherwise coals will fall down and burn the stack too quickly. To prevent this from happening, pack dirt in between the layers of wood so the coals can't fall to the bottom of the stack. Start the fire at the flat space left at the top of the pyramid and you are done. If you find that the fire is burning too fast you can sometimes throw dirt on them to tame the fire down.



**Primitive Bow Drill-** This method needs no introduction because it is the second most commonly used method all over the world. Hand drill being the first, but the more difficult of the two methods. If there are any two things you need instruction on to learn, the bow drill and hand drill are it. These are very difficult skill sets to master and not one that should be depended on by the amateur. Bow drill is the easiest method to get a coal of the primitive friction fire techniques and should be the first fire skill a survivalist should master. The hand hold should be as hard and smooth as possible to reduce friction. Osage orange and hickory both work well in our area. The hole in the handhold should not be too deep otherwise it will reduce spindle spinning efficiency and cause excess wear on the cord. The spindle should be 7-14 inches long and thumb size or smaller. The larger the spindles width, the more surface area and the less it will dig into the fire board. I typically use a larger spindle as I've had much better luck with them and they tend to get fire much quicker than smaller diameter spindles. There is a happy medium in spindle size that can really only be learned through lots of practice. Make sure the top of the spindle is very pointed and the bottom is very blunted. It's very important to make sure the top part of the spindle that goes into the handhold is well pointed to increase efficiency and decrease friction. This is the one thing I see most people mess up the most. You can also add lubricant of any type to the handhold, grass clippings, grease, ear wax, etc.





Your fireboard should be 3/8-1/2" thick and it's usually better if the fireboard is made of slightly denser wood than the spindle. This prevents the spindle from quickly digging into the board creating extra friction. My favorite woods are cottonwood board and yucca spindle. Cedar board and sycamore spindle also works well. Wood choice is pivotal and should be the biggest consideration when choosing your fireboard/spindle. Check density by digging your thumbnail into the wood and seeing the indentation that it makes. If your nails sinks in deeply then the wood is too soft. If it hardly leaves a mark then it is too hard. Use your judgment and experiment. The bow should be armpit to palm in length and should have a descent bow to it. Green wood can be used but typically needs to be thicker than an already aged bow.

Cordage for the bow drill is its biggest weakness. This is always the first thing to break, stretch, or fail on you with this method. If primitive rope is used then the rope should be pinky sized in thickness or smaller depending on the quality of the cordage. The reason for thickness is because the abrasion on the rope can wear through quickly and cause it to break. Two good modern cordages that I carry are paracord and trot line. Both equally good. The best natural cordage is of course rawhide because of its strength and durability!

## Chapter 5

### **Food**

**For more info on plants check our Plant Uses section on the website! [www.SurvivalSchool.US](http://www.SurvivalSchool.US)**

#### **Top 5 Wild Edibles-**

**Cattails-** The cattail is referred to supermarket of the woods because of its wide range of uses year round. Most parts of this plant are edible at some point in the year and it yields high levels of starch that can be great for energy levels. The root tips can be peeled and pounded to separate out the starch in them. The lateral rhizomes can be sometimes munched on and you can suck out the starch. At the very base of every shoot is a corm that is packed with starch and carbohydrates and that can be sliced and cooked for a tasty edible. The corm can be prepared many different ways and is highly nutritious portion of the plant. The shoot above the corms is usually good for 6-10 inches and can be chopped and used in all types of cooking or just eaten raw. It can be dried and made a flour additive. The heads of the

cattail can be eaten when green and when the pollen heads come out then they can be shaken into a bag to provide a healthy flour additive. The plant also can be used for cordage purposes and medicinal uses. The mucilaginous substance in the plant can be used on burns and to sooth inflamed skin. The seed head fluff can be used on wounds to help control bleeding. This plant really has an un-believable amount of uses and should be something well learned by every survivalist. The reeds can be made into rope and they can be used to make mats and all kinds of bush craft accessories.



**Plantain-** I wanted to mention plantain here not because it is the most useful plant in the world but it is one of the most abundant. There are not too many places in the world you can't go and find some species of plantain growing. It is very nutritious and packed with vitamins and minerals. The seeds can be ground for flour additive and the leaves can be added to salads. It has also been used for topical ailments for thousands of years. It is very soothing to the skin and we use it in medicinal salves for many treatments.



**Oaks-** Oaks were a staple food of many North American Indians because of its great abundance and high calorie content. It has many healthy fats and oils in the nut meat and is also high in protein. The only downside to acorns is their seasonality because they fall quickly before winter and are either quickly consumed or rot. So you must be quick on the draw when collecting them for long term use. Par boil the acorns in several changes of water until it turns clear. This removes any tannic acids in the nut meat and makes them acceptable to eat. Otherwise most acorns will make you sick. The tannic acids have many medicinal uses including: astringent for stopping blood flow, cleaning agent, helps diarrhea, and much more. The oak tree can also be used for cordage and makes an excellent tie for primitive cooking uses.

**Dandelion-** This plant is literally one of the most nutritious plants you can eat in the world. It has a tremendous amount of vitamins and minerals. The plant is slightly bitter tasting but honestly the most powerfully nutritional plants always are. Stalking wolf lived to the age of 97 and he lived in the wilderness his entire life and never used a modern doctor for any ailment. He said that main thing he contributes to his outstanding health was the fact that he drank dandelion tea, tonics, and used it for all sorts of uses. The wonderful thing about this plant for the beginner is that everyone knows it and it is literally everywhere. The root can be dried and made into a coffee substitute and the leaves/flower can be eaten raw or cooked in stews.

**Nettles-** This is a very useful plant that is abundant in most places and has a tremendous amount of vitamins. Probably one of the healthiest plants you could consume. The one downside to this plant is that it has little hairs all over it that are literally injectors of formic acid. Formic acid will cause itching and may cause a rash with excessive exposure. But the acid is easily eliminated by heat. You can boil the leaves or singe them over the fire to remove the hairs. Some species such as wood nettle can be eaten without preparation by folding the top of the leaf over on itself and eating quickly. But if you have time it is better to prepare it. These plants should be handled with gloves if possible but the stings are mild and as long as you don't get it on you excessively it is just fine. The stalk is also great cordage that can be used for a multitude of uses!



#### **Top 4 Medicinal Plants-**

**Yarrow-** This plant is one of the single most powerful medicinal plants in North America. It can be found all over the country and usually in great abundance. I have literally used this plant for dozens of different ailments. It is phenomenal at stopping bleeding because of the active compounds that act as coagulants on the blood. The plant is also a topical pain reliever with strong numbing abilities. The root and flowers have the greatest concentrations and it can be used to completely numb tooth aches if taken in a tea or applied as a poultice. It has a dozen different anti-inflammatory agents that do dozens of things like relieve poison ivy itch, reduce swelling, anti-microbial, and much more! In my opinion, this is the single most important medicinal plant you can learn in North America for survival purposes and it is highly under rated for the amount of uses it has in most plant field guides. I add this to salves and my perfect wilderness salve is the single best remedy I have ever used for getting rid of poison ivy because the yarrow plant numbs the itch and treats the inflammation at the source. Check the website blog for exact ingredients on preparing this wonderful medicinal product!





**Willow-** This is another very medicinal plant that can be used for a variety of uses from medicine to cordage. The inner bark contains the same stuff they make aspirin out of and it's very effective at ridding you of headaches. Remove the outer bark from the inner bark and either make a tea with the inner bark or you can simply chew it. The salicylic acid in the plant is highly anti-inflammatory and is used for a variety of uses. The outer bark also contains tannic acids which can be used to relieve diarrhea which is a very common problem in the wilderness when consuming a lot of edible plants. The tannic acid will cleanse your system and it acts as a drying agent to dry out excess water in your bowels and restore normal functions. Willow bark can also be powdered and used in bleeding wounds to stop bleeding and inflammation. Tannic acid is an astringent which causes the blood vessels to constrict which will help stop bleeding. The inner bark is also a good cordage source and is highly abundant around many water sources. This is convenient because it can be used for fishing line in a primitive survival situation.



**Pines-** This tree has a tremendous amount of resources to include edible, medicinal, and utilitarian. I'll begin with the edible uses which include: the inner cambium bark is edible and can be ground into flour or removed in strips and fried, the root tips of certain pines are edible, the pollen heads can be collected in spring as a flour additive, the young male cones can be eaten, and much more! The pine needles have tons of vitamin C and can be made into a tea that helps cure colds. The sap can be chewed for mouth infections or it can be heated to use over wounds as survival super glue. The sap is phenomenal at fixing cuts because of its anti-bacterial properties and it also acts to pull wounds together because when it dries it contracts.

**Jewelweed-** This plant is most commonly known for its ability to soothe and heal poison ivy rashes. It can be made into a tea or the leaves can be wiped over rashes. It is typically found in moist woods in the same areas that the ivy is found. A powerful salve can be made from this plant to apply over the rash and will



help significantly with the itching. Birch bark tea and tannic acid from different hardwood trees can also be used to sooth the rash.

### **Top 5 Deadly Plants-**

**Water Hemlock- (Parsley Family)** This plant should be known above all other plants in North America because it is absolutely deadly. Just a single bite of this plant could cause a horrible death. Do not touch or handle this plant at all because the toxins can be absorbed through the skin. One of my friends who is a survival expert handled this plant and then touched his mouth and had to be rushed to the hospital because his pulse shot up to 190 and his blood pressure went through the roof. This plant is part of the parsley family and can easily be identified if you know what to look for. Check field guides for exact description!



**Poison Hemlock-( Parsley Family)** This is the brother of water hemlock and is almost as deadly. The symptoms and the toxin are slightly different but the results are the same. This plant will kill you. Make sure that you can easily identify plants in the parsley family so that you know what patterns to look for! Do not touch or handle this plant at all for any reason. Do not confuse the hemlock plants for angelica. They look extremely similar!



**Monkshood- (Buttercup family)** This plant is extremely toxic and should not be touched or handled at all. This plant is related to the most poisonous plant in the world. Touching the plant can cause severe reactions if enough toxins are absorbed through the skin. Monkshood is a perennial plant, it grows to about four or five feet high and the course textured leaves don't grow outward very much from the stem of the plant but hug rather closely to it. Monkshood is a tall plant that grows from three to five feet tall. The foliage upon it is profoundly divided, normally into five parts and each of those parts is then divided again into three parts. The blossoms color can actually vary quite a lot from yellow, pink, white, bright violet to a deep luscious blue depending on the exact genus. This plant is not widespread though.



**Death Camas- (Lily Family)** It grows up to 70 cm tall with long, basal, grass-like leaves. The bulbs are oval and look like onions but do not smell like onions. The flowers are cream colored or white and grow in pointed clusters, flowering between April and July. Death camas occurs in some parts of western North America and can be easily confused with edible onions of genus [Allium](#). They tend to grow in dry meadows and on dry hillsides as well as sagebrush slopes and forests. Notice it has six petals which are indicative of the lily family, and most lilies should be steered clear from.



**Poison Ivy-** A well-known poisonous North American plant that is well known for its production of [urushiol](#), a clear liquid compound found within the [sap](#) of the plant that causes an itching [rash](#) in most people who touch it.<sup>1</sup> This plant is highly abundant in the areas it grows for the most part and should not be handled. It can cause severe rash in some people and others are immune to it. About 2 in 10 people are usually immune. If you are exposed and realize it, then quickly wash the exposed area with soap and water. If caught early enough then it can usually be prevented. One of the best remedies is jewelweed, birch tea, tannic acid solutions, or the best method I have found is our perfect wilderness salve listed on the website blog and YouTube channel.



## Survival Trapping-

**Paiute Deadfall/** The Paiute deadfall is the go to trap that you begin with in a survival or primitive living situation because of its simplicity and effectiveness! Dozens can be constructed in a short amount of time and animals as large as opossums can be taken effectively with it. The trigger is sensitive and it only takes a little cordage to construct completely primitively. It helps to tie the bait to the trigger for smaller animals because it forces them to pull the trigger in order to get the bait.



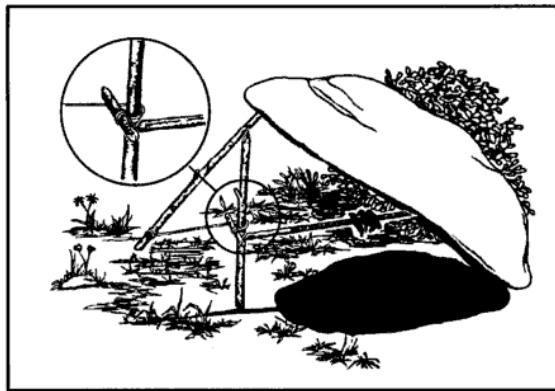
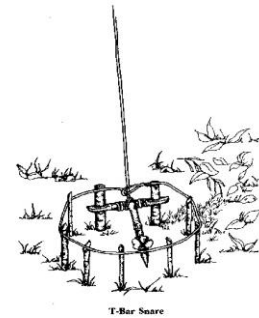


Figure 8-13. Paiute deadfall.



**Figure 4 Deadfall-** This trap trigger is better for larger animals and can be used in conjunction with heavier deadfalls than the Paiute. This trap is much more difficult to carve than most people think and therefore I use the split stick method which simplifies the process and makes the carving less precise.

**T-Bar Snare-** This is one of the most effective snares because it forces the animals head into the snare which is essential in any type of primitive snare. Primitive snares have one major weakness which is that the snare is made of cord instead of wire. If not caught around the neck and strangled then the animal is likely to chew through the cordage and get away. So it is pivotal to make sure the trap is setup correctly to funnel the animal's head.

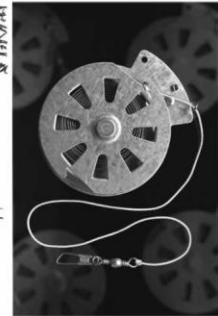


**Conibear Trap-** The conibear trap is my favorite modern trap to carry because it is lethal, simple, lightweight, and very durable. They can be bought for 5-10\$/piece and will last for decades if properly cared for. This trap is very easy to setup and can be easily carried in a bug out bag or small backpack. The best two sizes are the 120 and 220, because they are lightweight enough to be thrown in a backpack and can take almost any small game. Enough can't be said about them. Make sure you dye them with either commercial products or walnut hulls. A piece of cordage can be used to set them. They will take animals up to beaver or coyote in size. They can even be used to catch fish. A must have for everyone that wants to be truly prepared!



## Survival Fishing-

**Yo Yo Trap-** This is the single best modern trap that can be carried with in a backpack that is light, affordable, and very simple to setup. These little traps can be purchased for a few dollars and only weigh a few ounces. Our YouTube channel has several examples of how to set these up. They can be hung from limbs over the water, from a jug or any other way you can get them into the water and retrieve them. This is a must have for every bug out bag!



**Fishing Kit-** Your fishing kit is one of the most important parts of your survival kit and should include several sizes of hooks, an assortment of lines, and some trot line as well. With these items you can catch fish anywhere in the world without a rod and reel. Remember that small hooks can catch large fish but large hooks can't catch small fish. Small fish are always easier to procure and should be the main priority. Bait can be procured from your surrounding area. After you catch a fish check the contents of the stomach to see what the preferred bait is for that type of fish. Remember that fish are most easily caught early in the morning, right before dark, and right before a storm blows in.

## Primitive Weapons

**Throwing Stick-** In a completely primitive survival situation where you have few tools then this should be one of the first primitive tools you construct and it is best to carry two. The throwing stick is used for a plethora of things from batoning to taking small game. It can be used to take animals all the way up to small deer, depending on your ability with it. The premise behind the weapon is to stalk within throwing distance of your quarry and strike the animal in the head to stun them. Then you take the second throwing stick you constructed and whack the animal over the head in order to finish it off. It can be highly effective if properly deployed. But this skill takes a lot of practice and traps should also be used in a primitive survival situation to insure you procure enough food. Check out our YouTube video from Tom Brown 3, on how to throw these weapons with deadly efficiency!



**Primitive Spear-** A simple primitive spear is always one of the first tools I make because you never know when a target of opportunity is going to present itself. It's a very simple yet effective tool. I like to make a spear that is slightly taller than I am. You don't want to hike with a short spear as you will be more likely to injure yourself. Spears make great walking sticks, but always remember they are a weapon too! I typically make a 4 point fish gig on one end and pointed hardened tip at the other. The fish gig will be good for spearing stuff in the water and the pointed end will be best for dispatching land animals.



**Conclusion:**

This certainly isn't a completely comprehensive guide, but this will give you enough skills to get through in a wilderness survival scenario. For training and to learn these skills with the best instructors in the country, please check out our website. To get more free info check out our website, Facebook page, and YouTube channel. We are constantly adding new content for free! Video, manuals, plant database, and much more!

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