

The Bug Out Bag Guide

Essential Survival Skills & Tactics



Learn how to survive & thrive - no matter what

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5 Basic Survival Skills You Need When Bugging Out

by Chris Ruiz

As we mentioned in our [How to Make a Bug Out Plan](#) post, the more skills you have, the more self-reliant you are and the higher your chances for survival become. Here we are going to discuss some basic survival skills and teach you how to best utilize them to protect yourself and your loved ones when disaster strikes.



Basic Survival Skills

When you are out on your own without the support net of a healthy society, these are the traits and basic survival skills you need to master in order to succeed.

1. Positive Mental Attitude

This is actually more important than any of the other basic survival skills because when you are relying on your ability to wring survival from your surroundings, once you give up hope you are done. There are many amazing stories of people who have survived avalanches, fires, floods, and being isolated for extended periods and making it through thanks to an undying will to survive. They are ordinary people

who would simply not quit. Keeping a positive mental attitude will give you the strength to never give up on yourself no matter the circumstances.

Some ways to instill this mentality are:

- Set goals for yourself - These may be daily or even hourly goals such as making it to the next hilltop or obtaining a meal from your surroundings. Make sure they are achievable and objective based. Every goal you accomplish will be a psychological boost for you and will build confidence in your basic survival skills.
- Focus on what you can change - If a major disaster has struck, focusing on the unfairness of the resulting situation or the loss that has occurred will not help you. However, focusing on building a shelter or staying dry will help immensely. Concentrating your efforts to make your situation better will help you both in the long and short term. Ignore the big picture and focus on improving your immediate situation.
- Keep hydrated and nourished - This will give you the energy to persevere in the face of adversity. A steady water and food supply are extremely important. You will not be looking to feast daily but meeting your basic calorie and hydration needs will be enough to keep you going. 2400-3600 Calories per day is a good amount to aim for. Additionally, if this requirement is squared away it will allow you to focus more on recovery efforts or finding help.
- Be outwardly positive - Positivity creates more positivity. Showing fellow survivors that you are with that you have a positive mental attitude will prevent the group being dragged down under the weight of the disaster. Be the seed that grows into higher morale for your team.

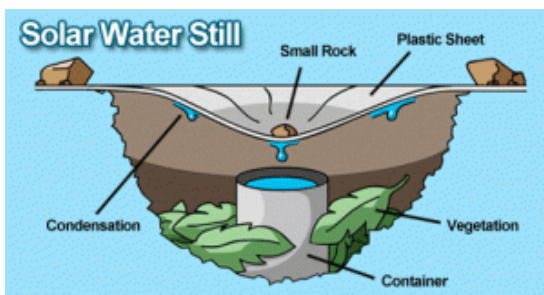
2. Water

Beyond your own internal fortitude, water is the most important resource you require. Finding it and knowing how to make it fit for consumption are two of the most important basic survival skills you can learn.

- Know how to look for signs of water. This may be looking where plants are growing, where terrain slopes or contours into a natural water trap, or observing animal movements to see where they are finding their water supply.
- If you are able to map a route as a part of your [Bug Out Plan](#), identifying likely sources for water along the way will be a massive boon.
- Understand how to treat water to make it fit for consumption. Drinking contaminated water can be deadly.
- Filtration - this consists of passing water through very fine membranes to

remove particles and some pathogens. Some viruses may still make it through even the finest filters available.

- Purification - treating water with either chemicals such as iodine or UV light sources. This neutralizes all pathogens but does not eliminate particles.
- Boiling - This is a type of purification as it kills all pathogens but does not remove particles. Water should be kept at a rolling boil for at least 1 minute to sterilize it.
- Because of the separate benefits of both filtration and purification it is recommended that you use both methods to be 100% sure of water safety. The most basic way to do this is to pour water through a cloth and then boil it. However a more effective approach is to pass it through a filter device such as the [MSR MiniWorks EX Microfilter](#) and then purify it using [tablets](#) or a [SteriPen](#). These items should be considered mandatory requirements for any list of [Bug Out Bag Essentials](#).
- Be able to exploit rainfall if possible. This may include catching it in a poncho or container if available.
- Utilize a Solar Still - [This can be purchased here](#) or fashioned out of your survival gear. A Solar Still uses the sun's heat to evaporate liquid and then recapture it as clean water.
- Understand how much water you need - A person can survive 72 hours without water. It is however recommended that someone who is active consumes 75% of their weight in ounces daily. So if you weigh 150 lbs then you should be drinking about 113 ounces (3.31 liters) of water per day.



A Home Made Solar Still

3. Food

- Hiking with your Bug Out Bag loaded with [essential survival gear](#) will cause you to burn 400-500 calories in an hour. To keep your body working as an efficient machine it is important to keep it fueled up.
- First off, ration what food you have with you. You are concentrating on survival, not feasting. Eat small portions when you are hungry but do not over do it.

- Supplement your rations with foraged sustenance from your surroundings. This means you will need to learn what edible plants are around and how to harvest them. Also learn where these plants grow. Does a particular berry grow around water holes? Does a high calorie plant prefer the shade? Learn these aspects to understand where to look for sustenance. Some plants are only edible after cooking or boiling, learn what you need to do with your local flora to make it palatable. Additionally, learn what is hazardous or poisonous to eat to avoid making yourself sick!
- Understand what types of animals inhabit your area. This includes possible predators to avoid and prey to seek out. Learn what environments these animals inhabit. Is there a particular fish that likes eddies and whirlpools? Target these spots to find them. Does an animal in your area like to eat a particular plant? Placing snares in the vicinity of these plants would be ideal. If you do not know how to operate a firearm, a sling shot may be a good option for you. There are many options for sling shots, [you can purchase one here](#) or [learn how to make one here](#). Also learn how to prepare these animals for cooking. This includes skinning and butchering animals and filleting fish.

4. Shelter

A well prepared person will have a means of sheltering themselves from the elements as a part of their [Bug Out Contents List](#). However, a TOTALLY prepared person will also have learned survival shelter building as one of their basic survival skills. A survival shelter does not need to be complicated or fancy but it should keep rain/snow out, keep heat inside, and be easily cobbled together from local materials.

- A survival shelter can be built from most anything - debris from collapsed buildings, trees and leaves, animal hides, or a tarp or poncho
- Consider bringing [paracord](#) and a [saw](#) or [hatchet](#) when building your [Bug Out Bag Contents List](#) as these can be your best friends when building a shelter. With these items you can make a survival shelter out of just about anything in very little time.
- If you do not have paracord, zip ties, duct tape, or another binding material, primitive rope can be improvised from strips of tree bark, small green saplings or branches, and vines.
- A basic survival shelter could consist of building a frame from long rigid materials such as tree branches or 2x4's and laying a poncho or tarp over it.
- If you cannot use your poncho or tarp for this, layer brush on to the frame sloping away towards the ground to insulate for warmth and keep moisture out.

See the picture below for a general idea of this.

5. Fire

Fire can provide many things when in a survival situation and both building and maintaining one are essential basic survival skills. A fire will give a morale boost, provide heat and light, and enable you to purify water and cook food

- The basic requirements to build any fire are to give it air, fuel, and an ignition source.
- Air - A fire consumes air hungrily and it is important to build it in a way that allows air to flow into the combustion. Do not smother a fire by putting too much fuel onto it.
- Fuel - This is what actually burns in a fire and can be sourced from many places. If a branch or stick snaps cleanly it is dry and will burn well. If it bends and splinters it is still green and will smoke and smother a fire.
- Ignition Source - this can be a lighter, matches, or a fire starter that you bring with you. You should however learn more primitive means of fire starting as one of your basic survival skills in the event that these items cannot be sourced. See the video below for one simple method.
- A fire is build in successive layers of increasingly larger wood. You start with tinder, which is very small, dry, and catches easily. Examples of tinder are tree bark, dryer lint, coconut husk, and pine needles. From tinder you go up to kindling which is generally twigs up to the diameter of your little finger. Next is fuel wood which is in sizes up to your thumb. Continue to add more wood gradually until you have a fire large enough to ignite logs. These logs are what will produce the majority of your coals in a fire pit.
- The opposite technique is to build what is known as an "Upside Down Fire" This has large logs at the bottom and tapers to fuel wood, kindling, and then tinder at the top. An upside down fire allows you to build your cooking fire and then let it burn down without having to babysit it and can be great in makky outdoors situation. Check out my in-depth instructional guide to [learn how to build an Upside Down Fire here](#).
- Learn how to use a fire to cook food. Coals are a far better method of cooking food than a naked flame. Coals will produce a more even heat and allow you to control the rate at which your food cooks, rather than having some parts seared with the inside raw. A naked flame is however better at boiling water.
- The most commonly used types of fires are called a Teepee and a Log Cabin, which are pictured below.
- A Dakota Fire Pit is another type that is less widely used than these but more

efficient. See the image below for how a Dakota Fire Pit works.

Basic Survival Skills: Dakota Fire Pit



Conclusion

There is no doubt that learning basic survival skills will significantly increase your chances of success. Putting in some time now to teach yourself these basic survival skills will make you better prepared and help you provide for yourself and your family when disaster strikes. As with your bug out bag contents or [bug out plan](#), you should tailor your survival skill set to match your environment. To learn what you need to master in order to survive in a cold weather setting have a look at our article on [cold weather survival tips](#). We mentioned several survival tools in this article that partnered with your skills will make your struggle far less daunting including [paracord](#), a hatchet, saw, and fire starter. To see how these items will affect your overall survival kit and see what other items you can add to your Bug Out Bag list, check out our [Free Bug Out Bag Planning Tool](#). Remember, chance favors the well prepared.

The Bug Out Bag Guide Presents:

BASIC SURVIVAL SKILLS

POSITIVE MENTAL ATTITUDE

1. Set Goals
2. Focus on what you you can control
3. Keep hydrated and Nourished

WATER

1. Look for signs of water
2. Know how to purify and filter it
3. 4-6 liters/quarts per day minimum

FOOD

1. Ration what you have
2. Learn to obtain local plants & animals
3. Understand how to prepare foraged food

SHELTER

1. Learn to build shelters
2. Use the tools you have in your BOB
3. Supplement found materials with your gear

FIRE

1. Every fire needs air, fuel, and ignition
2. Learn to build a basic log cabin or teepee
3. Cook food on coals, boil water on flame

Learn To Build Shelter For Any Survival Situation

by Chris Ruiz



Summer's right around the corner, and for many people that means getting back to the great outdoors, whether it be for a day hike or a weekend camping trip. This summer, take advantage of your time outdoors to practice the invaluable skill of building survival shelter. That's right, you need to step out of your comfort zone, leave your four-person tent and goose-down sleeping bag, and try to construct adequate shelter with only the items that would be available to you in a disaster scenario.

It's the perfect time because if something does go wrong, you can always retreat back into your tent and try again the next night. The summer camping months provide the perfect opportunity to hone your survival shelter skills; however, keep in mind that when the need arises to bug out, you won't have the luxury of choosing what time of year it is. Practice building survival shelters year-round, especially if you live in a four-season climate where summer and winter present drastically different survival scenarios.

Why Learn to Build a Survival Shelter

Food, water, shelter - the essential elements of survival. Shelter can protect you

from the elements and wildlife, as well as keep you warm or dry; finding appropriate shelter can literally mean the difference between living and dying in a survival situation. No matter what your circumstances, you want to be sure you can prepare suitable survival shelter for you and your loved ones.



Your shelter doesn't have to be fancy - it just needs to keep you warm and dry.

Possible situations that may require impromptu or planned shelter include bugging out, [get-home scenarios](#), getting lost while hiking or exploring, tending to an injured person while hiking or exploring, or getting caught in a storm. Depending on your situation, your survival shelter needs may differ.

For instance, in a get-home scenario you may only need short-term shelter for a few hours or a night, whereas when bugging out you may be indefinitely on your own. The need for building a lean-to can arise when you least expect it, so learn how to build a survival shelter in a number of different locales and with different resources.

Choosing the Best Location for Your Survival Shelter

Choosing the best location for building your survival shelter will be dependent on how long you intend to be using it - needs for short-term shelter will differ from those required for long-term shelter.



Take

advantage of the landscape when building a survival shelter.

When searching for immediate, short-term shelter, look for trees (especially fallen trees), rocky overhangs, and caves. Trees are an obvious source of shelter and have many useful parts for building shelter including the trunk - which can be used as a support, the branches - which can be used as framework, and foliage - which can be used as insulating material.

Rocky overhangs and caves make excellent areas to take cover but depending on your locale or the time of year, may not be an option. Don't panic, whether you're stranded in desert terrain or it's the middle of winter, you can still put together an effective survival shelter.

In desert terrain with little to no trees, consider using the slope of the land to seek protection and the steep side of a dune for shelter - keep in mind that the gradual side indicates the direction the prevailing wind is coming from and therefore the steep side will provide natural refuge.

If it's the middle of winter and all available building supplies are frozen or buried under snow, remember that snow will have the same insulating effect as a stick-built shelter. For more cold weather survival tips, [CLICK HERE](#). Additionally, always seek out shelter where the ground is dry. If it is raining, waterways may overflow their banks and ravines, and washes may form.

If you're in it for the long haul, you will need to consider substantially more factors than sheltering for the short-term. When searching for long-term shelter, look for areas in proximity to water and food sources as well as civilization (if applicable),

and for an area that provides adequate visibility for you to see what's happening around you and for others to see you. In some case, staying hidden may be more beneficial to your survival.

Types of Survival Shelters

Simple Frame and Tarp Method

If you happen to have the good fortune of having supplies with you (out backpacking or have bug-out gear) you may be in possession of a tarp that can be used in conjunction with a simple frame to create shelter for the night. To create a frame, lean poles against a lower branch or tree trunk in a manner that will fit under your tarp.

Make sure to remove any sharp edges from the wood or wrap leaves at the corners to ensure you don't puncture the tarp. If you happen to be lucky enough to have cordage with you, tie it at an angle between two trees and drape your tarp over top, placing rocks on the sides to hold the tarp in place.

In an emergency, you can forgo the frame and simply wrap yourself and your gear in a poncho and huddle amongst the crook of a tree or other sheltered spot until morning.



A tarp makes an excellent short-term shelter but you may need to upgrade eventually.

Simple Body Heat Shelter

This shelter is fairly straight forward and easy to build - it is useful for short-term or unexpected situations and can comfortably accommodate one, possibly two, people.

To build a simple body heat shelter, use debris from the ground such as dirt, leaves, and twigs, to create a mound and use larger sticks to frame it. Clear a hole just big enough to crawl into and cover the opening to block air flow and limit the open space. Your body heat will be trapped inside the shelter, keeping you warm throughout the night.

If you are seeking shelter in the winter and the ground is covered in snow, use the snow to build your mound. Even though the snow is cold, it will still serve the purpose of insulating you from the elements outside and trapping your body heat.



Sheltering

under the snow will insulate you from the cold and preserve your body heat.

Open Shelter or Lean-To

The benefits of an open shelter or lean-to are that it offers extra protection against the elements such as wind and rain, and can accommodate up to four people (for a typical lean-to, however they can be constructed as large as resources allow).



We built this lean-to using two tripods instead of trees for support. Zip ties made quick work of building the grid.

Depending on the supply of materials available, the construction can take anywhere from two to five hours. Start by looking for downed trees that have branches low enough to support the topmost point, known as the ridgepole. If you only locate one tree, use it as the ridgepole - lashing in place if necessary - but if you locate two downed trees near one another, lay a sturdy branch between them.

Gather approximately five to six poles to lean against the ridgepole at roughly a 45-60 degree angle, enough to create a comfortable space to fit your team and gear underneath. This will serve as your grid. To create the grid frame, attach 5 to 6 poles across the frame. Weave flexible boughs between poles at right angles and then use bark or leafy branches to thatch the roof, starting from the bottom and moving upwards.



Use the grid to weave foliage to create a weather barrier.

You can add additional walls for further protection using the same method. Should you be lucky enough to have a tarp or mylar survival blanket, you can hang it from the opening to act as a curtain.

A-Frame Shelter

The A-Frame shelter is constructed in much the same way as the lean-to, the only difference is that the ridgepole starts on the ground and extends up into tree, lashed at a height that allows enough space to sit underneath. In this way, two sides are constructed to create the A-frame shape, providing additional protection from weather or cold temperatures. For added warmth, locate your fire pit near the opening.



Square lashings are used throughout the A-frame shelter.



Side view of square lashing.

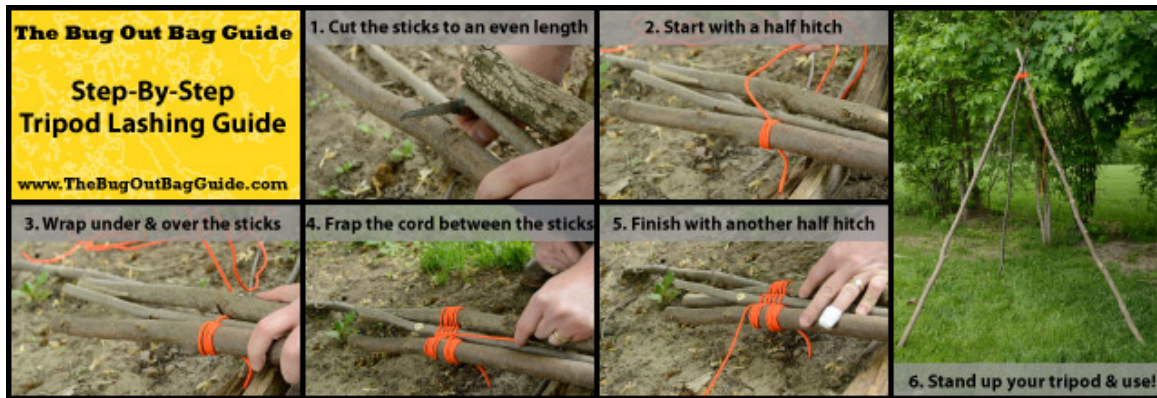
Teepee Variations

A teepee can stand alone or be built around the slender trunk of a tree. In some cases, it may be easier to use a slim tree as your center support, lashing poles around it to create a cone-shaped shelter, which will provide a sturdy frame, but also limit your interior space.

It's up to you whether you choose to completely enclose the exterior and create an opening in the top for **ventilation** or keep the top secure from rain and leave an

open doorway. Always make sure you account for ventilation, especially if you intend on building a small fire inside.

For stand alone teepees, start with three long straight poles and use a tripod lashing to join them. Try to locate a long pole with a Y-shaped joint at one end. This will provide the frame with stability as the next pole can rest within the Y-shape. To build the teepee, continually add pairs of similar sized poles and join them together at the top, leaving the base wide enough to curl up in and tall enough to sit comfortably.



This technique can be the framework for a teepee or provide ridgepole support for building a lean-to.

Once the frame is constructed, fill in the gaps using whatever materials are available to you including leafy branches, vines, mud and grass. Work your way up from the bottom - as you would with roofing tiles - so that the rain will drip down the overlapping layers instead of into your teepee.

Subterranean Survival Shelter



This

fallen tree can provide adequate shelter - just watch out for critters!

For short-term shelter, a subterranean survival shelter can simply be hollowed out of a mound of earth, creating a warm place to sleep. An optimal location is the root base of fallen trees, as the roots provide structure and prevent caving in.

For a longer-term shelter, substantial planning and effort will be required. A long-term subterranean survival shelter is something you would build in preparation for when SHTF, as opposed to building in the aftermath while bugging out. Those who choose to build a long-term subterranean survival shelter either build one on their property or an offsite location. Designs can range from [simple cellar-style rooms](#) to [complex homes](#) that are fully outfitted with a power supply, furnished with necessities and comfort items, and have functioning defense systems.

Long-Term Log Cabin

If a crisis or disaster situation truly descends into chaos and it's TEOTWAWKI (the end of the world as we know it), you may find yourself in the position where you need to build a solid and dependable home using only what the land provides. Obviously, this type of survival shelter requires a tremendous amount of time, resources and energy - therefore it'll save you time and aggravation to learn the basics beforehand.



If you are permanently relocating, a log cabin may be the way to go.

A long-term [log cabin](#) is built using a similar method as Lincoln Logs you may have played with as a child; the general idea is to lay a frame of logs that interlock at the corners to form a rectangle. Before beginning, you will need to clear the ground of grass, level it, and top it with a layer of gravel for drainage. Locate large rocks that can serve as stilts to keep your cabin off the ground and place them at all four corners as well as every three to four feet.

After the rocks are placed, locate the base layer of logs, the sill logs, which will need to be larger than those used for the walls - about 12 inches in diameter. Once the sill logs are in place, you can add floorboards or skip ahead to building up the walls.



This notching pattern will help shed water away from the joints.

For the walls, look for trees that are seven to ten inches in diameter and cut them to fit the dimensions of your floor plan. To prepare the logs for the walls, flatten the top and bottom so that they sit flush and notch the ends to interlock them and form a sturdy corner - additionally, cutting a notch in the top log only will avoid pooling water in the joints while in wetter climates.

Once you reach your desired wall height, begin using logs in diminishing lengths on either end to create the peak. Notch and lay two long logs perpendicular across the length of the cabin to act as supports for the roof. Depending on the items you have available in terms of tools and lumber, you can construct your roof with split logs, cut shingles, or sod.

Survival Supplies Beneficial to Have on Hand

Undoubtedly, you've included tools and materials in both your bug-out and get-home bags that will lend themselves to building shelter; however, it's important to consider what tools are must-haves if an unexpected need to shelter arises, such as during a hiking or backpacking expedition.

To ensure you have the proper tools, take inventory of the various tasks you will need to perform when building shelter such as cutting, de-branching, notching,

Learn How To Harvest Water From Natural Sources

by Chris Ruiz



Imagine, your mind a complete fog, your body unable to lift itself due to extreme dizziness, and nausea and cramping so bad you can barely move. This is what happens to your body after only three days without water - it's called dehydration. While symptoms and severity can vary, the chances of survival after three days without water are slim.

In civilized society, droughts are thought of more as an inconvenience than a threat; however, in a disaster scenario, the threat of a drought - especially in times of extreme heat - becomes much more real when clean drinking water is a scarce resource.

No matter how thorough your prepping, there is a limit to the amount of water you are able to store. In a long-term survival situation, sooner or later, you'll need to find a natural water source suitable for drinking. The good news is, even in the driest of times, there are always ways of harvesting water both above and below the ground.

In this article, we're going to take you through the various methods you can use to harvest water in the wild, teach you to identify and find signs of water, and show you ways to purify harvested water so it's suitable for drinking.

3 Key Methods for Harvesting Water



When the pipes run dry, will you be able to harvest water from natural sources?

Solar Still

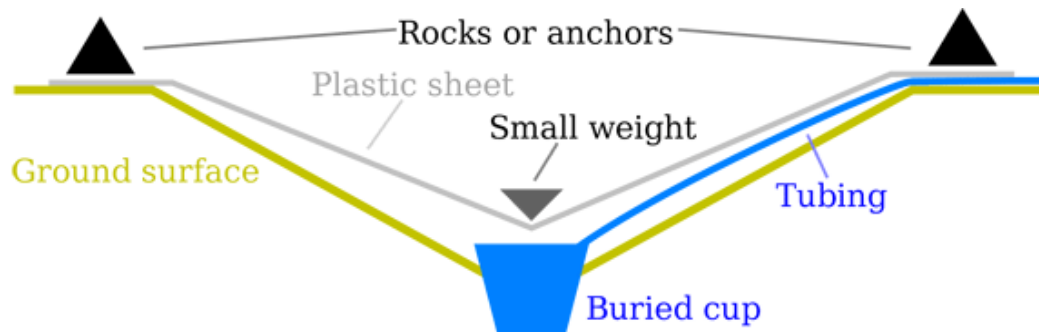
A great way to extract water straight from the ground is by using a solar still. To build one, you will need the following:

- Collection bucket (this can be any type of wide-brimmed container to collect the water; basically, anything water-tight. In a pinch, even a plastic bag will work, as long as it can be secured so it will not tip and spill the water)
- Large sheet of plastic
- Rocks
- Long straw (optional)

Once you've collected your items, choose a sunny spot and dig a wide hole; at the base of the hole, dig a fitted spot large enough for your collection bucket to rest in. If there is any leafy, green vegetation around, place it in the hole around the opening of the bucket; this will enhance your water collection rate by drawing moisture from the plants as well as the air.

Next, lay the sheet of plastic over the top of the hole and use your rocks to secure it firmly in place. Place a small stone in the center of the plastic to create a low-

joint point, just above the top of the bucket to allow condensation to collect and drip into the bucket. Even in the desert, a solar still can collect up to a quart of water per day. To access the water without disturbing your still, use a long straw or piece of tubing.



Solar Still Design. Make sure the plastic sheet overlaps the edge of the hole enough to lay the rocks.

Rainwater

Although water falling from the sky may seem like a lottery win to someone suffering from dehydration, be aware that rainwater is not technically safe for drinking due to pollutants in the air (such as arsenic) that make their way into the rainwater. There are ways to purify this polluted water to make it safe for drinking; several strategies are discussed later in this article.

If you are in the wilderness, collecting rainwater is as simple as setting up as many containers as you can. Be sure to place your containers in unobscured locations in order to obtain rainwater directly from the sky, and not water that has dripped off plants.



Water dripping off plants can contain debris and pollutants, so collect rain away from foliage.

Harvesting rainwater from your home is accomplished by setting up rain barrels below your roof gutters to catch the runoff. However, be aware that in addition to pollutants, water from roofs will also typically have bugs and bird feces and not be particularly suitable for consumption.

There are some barrels available with built-in filtration systems that will remove solid waste; allowing the rain to rinse the roof for about 10 minutes before connecting your barrel will also help decrease the amount of debris and contamination.

Plant Sources

If there are green plants, there is [water to be harvested](#). There are several ways to extract water from plants, just be sure to choose the non-poisonous ones!

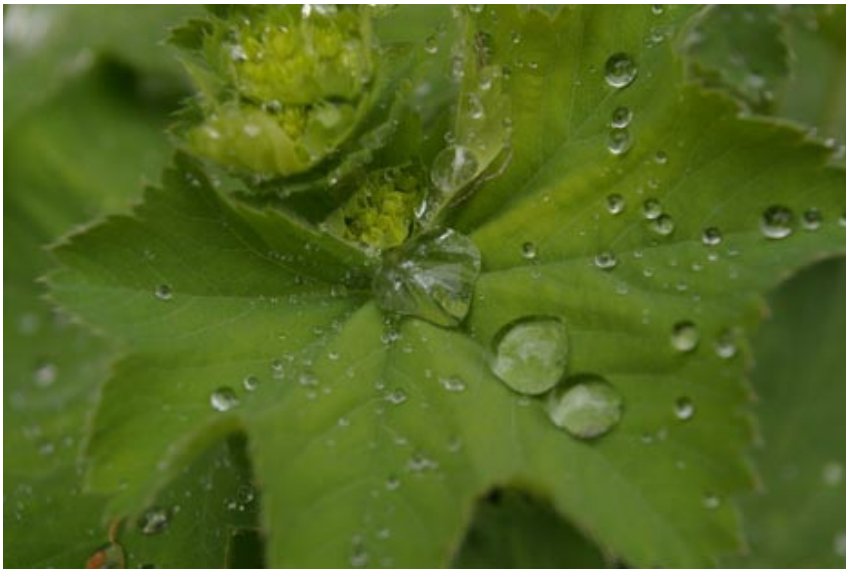
Transpiration Bag

Plants take up water in the process of photosynthesis and during transpiration, water is one of the by-products released into the air. To capture this water, place a clear plastic bag over the end of a leafy branch and secure it with a cord. Within a few hours, several ounces of water will be available.

Before consuming water from natural sources, we recommend purifying it for safety.

Directly Off the Leaves

Plants have many adaptations for surviving a drought. In desperate times, plants that have leaves with a natural cup shape can be a source of water. The leaves specifically grow in that shape to funnel rainwater towards the trunk and act like a natural scoop. Look for plants with leaves growing directly from the base of the stem or trees that have clusters of leaves growing out of the trunk. The Traveler's Tree can hold several pints of water this way.



Plants are good at storing water to survive a drought. A refreshing drink may be waiting in the leaves.

Tapping Into the Trunk

In a tree trunk, xylem transport water from the roots to the leaves in a vertical fashion; this water can be collected similar to how sap is collected from maple trees. To do this, you will need a strong, tubular stick about the diameter of your thumb (alternatively, a hollowed out length of bamboo works as well) or a drip stick; a means of cutting a notch and hammering in the drip stick; and a collection reservoir.



Sap is simply sugar water and it can save your life.

Sharpen the tube at one end and gently tap it into the trunk at a 70 degree angle - you do not need to drive it in more than a few inches - and set up a collection reservoir below to catch the dripping water. Your collection reservoir can be a plastic bag, large leaf, or, ideally, a bucket. Collection will take a while, but the water collected is safe to drink.

From the Roots

While the roots of plants do contain water, it is quite a laborious task to extract it. To harvest water from plant roots, start by cutting a large root and stripping the bark. Then, use rocks to mash the root into a pulp, this will produce droplets of water and the root pulp can be pressed into a collection container for consumption. If you happen to be bugging-out in Australia, blood woods, water trees, and desert oaks are known for a high yield of root water.



The inside of a barrel cactus can also be mashed and drained to yield water.

Bamboo Plants

Bamboo plants serve as a great source for water as they store it in the cavities between their joints. When looking for bamboo plants, look for those that are most yellow as these typically have more water. Once you've found a piece of bamboo, tap and listen for a low thud, indicating it is not hollow, then locate a section with

water, cut a notch just above the lower joint, and collect the water that runs out. While this water is safe to drink directly, we recommend purifying in order to protect against disease.

Vines

While vines can be a source of water, caution must be taken in choosing which to use as those with milky sap tend to be poisonous. If there is no milky substance in the vine you chose, proceed by cutting a deep notch in the top of the vine. Then, cut off the tip of the vine to allow water to flow and continue to work your way up the vine, cutting sections and collecting water until no more water flows. It's important to notch the topmost part of the plant first, otherwise it will respond by drawing all the water in the vine back towards the base of the plant.

Surviving A Drought By Extracting Water From the Air

It is possible to extract water from the air, and *World War: Water*, a must-have survival resource, will teach you how. [Click here](#) to order your copy!

Searching for Water - 4 Key Signs You Must Look For



Surviving a drought involves knowing how water behaves in nature.

Growing Vegetation

Even if the landscape you are looking out at seems barren and devoid of water, take a closer look for small trees, bushes, or clusters of tall grass. If this vegetation

is growing in a line, there is likely to be an underground stream sustaining it. To confirm, dig a small hole at the base of a group of plants.

Following Insects and Birds

Following insects and birds can lead you directly to water. Bees in particular need fresh water to survive and will typically build their hive no more than a few miles from a fresh water supply; should you find a hive, immediately start looking for other signs of water.



Signs of life can lead you to water if you know how to read them.

Mosquitos, as pesky as they might be, are good to follow as they breed in pools of standing water. The mason fly can lead you to underground springs as it uses mud to build and therefore seeks out moist soil for this purpose.

Another reliable water indicator is wild pigeons; after feeding on grain all day, they seek out water at dusk. Pigeons that are flying low and swift are typically headed towards a watering hole, while flying from tree to tree is a sign they are returning from the water hole. The added weight of water in their stomach slows them down and causes them to use more caution to avoid predators. Carefully observing the activities of wildlife is key for finding signs of water.

Following Animal Tracks

Grazing animals need to drink in the morning and the evening to digest their diet of grass. If you come across a hoof print, look downhill to locate where their water source might be. You may be lucky enough to find more tracks to follow, but also

look for snapped twigs, scat, scraped bark, and other signs of larger animals.

Often the path to the water hole is heavily trodden and clear of obstacles; the careful eye can pick up signs of wear on the ground indicating the trail.



Mark any animals signs you find and carefully scan the area for more.

Terrain Indicators

The ground itself can serve as an excellent roadmap in locating water. Water obeys gravity, flowing downward, and therefore your best chance of finding water is to seek low ground. Walking parallel to a mountain gives you a good chance of finding an outlet of fresh water, or at least a dry stream bed.

While a dry stream bed itself is of no use to someone who's parched, there may be water accessible beneath the surface. The ideal stream bed to investigate will have dark green vegetation along it, but any vegetation is still a good sign. Examine the stream bed for dark patches of earth or dampness, the outer side of a bend, or natural depressions in the dirt - these are ideal places to dig.



A stream like this may not look like it has much water but with a little digging, it can be your key to surviving a drought.

Underground water can be harvested by [digging a seep](#) - a hole two to three feet in diameter and at least one foot deep. After digging your seep, groundwater should slowly start to seep into the hole, and by lining the bottom with rocks, you will prevent much of the sediment from stirring up.

Fresh groundwater is considered safe to drink but we always recommend sterilization as it's better to be safe than sorry; additionally, leaving your hole unattended may invite wildlife to share in your water supply so purification is a must.

Essential Water Purification Techniques

If you've been able to harvest enough water to drink using your drought survival skills, there's still the problem of purifying to ensure it's safe to drink. The following are our suggestions for the best water purification techniques when surviving a drought:

Filtration

To filter water, pour it through a bandanna to get rid of any sediment. You can layer charcoal, sand, and dried grass in a sock or another piece of fabric, then pour murky water through it and collect what seeps through in a container; you may need to repeat this a few times to achieve clear water. It's important to remember that this water will have sediment removed, but not microscopic contaminants such as bacteria and viruses.

Gypsy Filter

If you happen to come across a pool of water but have no means of purifying it, dig a hole deeper than the pool about one foot away from its edge; this will cause water to flow in. The initial water will be muddy and should be discarded, but eventually, after being drawn through the layers of sediment between the pool and your hole, the water will be filtered.

DIY Charcoal Straw Filter

To build a charcoal straw filter, first find a hollow reed or other tube. Then, stuff in some dry grass followed by a layer of crushed charcoal and top it off with more dried grass to hold the charcoal in place. Pack it firmly, but not so tight that air can't be pulled through, and then, using it as a straw, draw water up through the filtering layers.

Steripen

A Steripen uses UV light to sterilize water. Before treating, water should be filtered and clear. Once your water has been filtered, turn on the steripen and stir in your water until the indicator light turns green. The UV light targets the DNA of microorganisms, rendering them unable to reproduce and thus unable to infect you. A steripen is 99.9% effective at destroying pathogens.

LifeStraw

When it comes to surviving a drought, a LifeStraw not only filters water, but also removes 95% of the bacteria as well. They are easy to use, very portable, and allow you to drink directly from the water source without having to pre-filter or sterilize. Each straw filters up to 1,000 liters of water.

Boiling

To **boil your water**, first remove any sediment and bring your water to a rolling boil for one minute (three minutes at altitudes above 5,000 ft.); this will kill any pathogenic bacteria and viruses. Allow the water to cool and transfer any water for storage to a clean container that can be tightly sealed.

UV Purification

UV purification can be accomplished using clear [plastic PET bottles](#) or glass containers. First, filter your water to get rid of sediment, then fill the bottles and

seal tightly using a lid or improvised material. Second, lay the bottles out in the sun for six hours (or two days if the weather is overcast) to allow the UV rays from the sun to kill any bacteria. The water can continue to be stored or consumed straight from the bottle.



If nothing else is available, you can use the sun to purify your water.

Unscented Chlorine Bleach

Unscented chlorine bleach can be used to disinfect water using the following ratios:

Add the bleach to the water and allow to sit for 30 minutes. There will be a slight chlorine odor, and if there isn't, repeat the dosage. Allowing the water to stand for a few hours in a clean container will reduce the taste and smell of chlorine.

Purification Tablets

Purification tablets are similar to using chlorine but easier to carry with you; one tablet treats two quarts of water. To use, simply drop a tablet into your water and allow to sit for 30 minutes.

Perfecting Your Drought Survival Skills

Now that you know the basics of harvesting, finding, and purifying water to survive a drought, it's time to take your knowledge to the next level. In order to be fully versed in drought survival skills, there are two resources you need to be familiar with. The first is [The Bug Out Bag Guide's Survival Skills article](#), which builds on

the information in this article to provide a holistic guide to surviving in the wild.

The second, a resource no prudent prepper should be without, is *World War: Water*, a fascinating read that discusses the oncoming drought our world is facing and presents novel harvesting methods to ensure you don't run out of water. [Click here](#) to get your very own copy!

Conclusion

The devastating effects of dehydration are something no one wants to be faced with; it is essential for your survival that you learn water-harvesting techniques to sustain yourself during a drought. Remember - the human body can only survive for three days without water, and what a grueling three days they are!

To build your water-harvesting knowledge, consider researching local plant life in your area to find out which types are likely to be the best sources for water. Also, remember to ensure your bug-out-bag is stocked with plenty of supplies that will allow you to purify any found water. While you may (literally) be so thirsty you could die, safety first; always protect yourself from illness and never consume water without first treating it.

6 Ways To Make Fire Without Matches

by Chris Ruiz



In a survival situation being able to start a fire can mean the difference between life and death. Hopefully your bug out bag has a fire starting kit that will enable you to start a fire quickly and reliably. But what if this gets wet, lost, or used up? Then you will need some primitive fire skills to build your fire. Primitive fire making is a [bushcraft discipline](#) that uses simple tools and natural materials to create fire. Having this in your bushcraft tool kit is an integral aspect of wilderness survival.

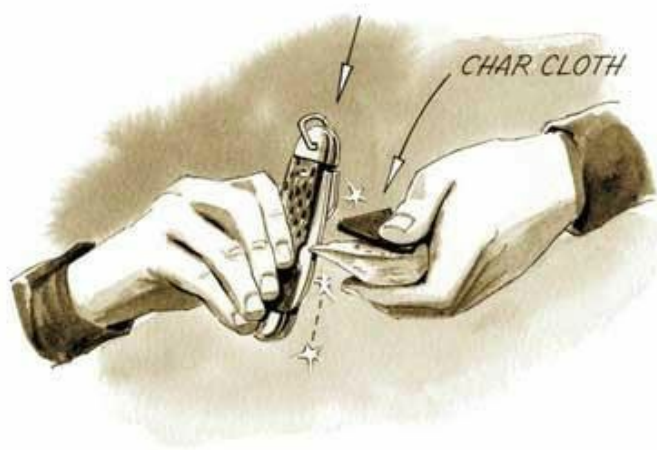
By being able to make fires quickly and effectively in any weather conditions, you will be better prepared for emergency situations. In this article I am going to show you how to start a fire using primitive skills as well as compare and contrast the various methods to help you decide which one is best for you to learn first.

Primitive Fire Making Techniques

Flint and Steel

This is the easiest of all bushcraft fire starting methods. All that is required is a flint and a piece of carbon steel (such as your [survival knife](#)). Flint and carbon steel should be a part of every wilderness survival kit as it will allow for easy primitive fire starting in virtually any conditions:

1. The friction formed by striking the steel against the flint will form sparks.
2. You want to strike the steel against the flint with a loose wrist. It may take a bit of practice to get the technique down.
3. Have tinder ready to ignite as the sparks start to fly from the flint.
4. Gently blow on the sparks that land in the tinder or [char cloth](#) until it ignites.
5. Make sure you have your kindling nearby and ready to add to the tinder once it catches.



This method of bushcraft fire starting is relatively [easy to execute](#). It requires the least amount of physical strength and energy to perform and can be done with only two items. However, you may find yourself in a situation without carbon steel or a flint available, which is why it's important to know as many primitive fire making techniques as possible. This will better perfect your wilderness survival skills, preparing you for all situations.

Fire Plough

This is the simplest form of primitive fire making using only natural materials. It is essentially an optimized way to "rub two sticks together" with the base board being one and the plow stick being the other.

Start by procuring a **flat piece of hardwood** at least a couple of inches thick to use as your baseboard.

1. On the flat side, cut a straight line down the center using your survival knife.
2. Hollow out this line to create a shallow, thin groove, about ¼-inch wide.
3. Find a **softwood stick**, at least 1-inch thick. Use your bushcraft knife to carve the end of the stick to a rounded point, with the tip being small enough to fit into the groove on your board.
4. To cause enough friction to generate sufficient heat to ignite a fire, we will now rub the two crafted parts together.
5. Applying continuous force, rub the stick through the groove in the wood, starting at one end and going toward the other.
6. This will require a bit of strength in order to create the friction necessary to form a spark.
7. As the stick rubs against the baseboard, wood will slowly shave off.
8. The friction you are causing will create heat and tiny embers, which will ignite the wood shavings.
9. Have your kindling ready and, as before, gently blow on the sparks within the tinder to ignite a flame.

The fire plough method of primitive fire making is [simplistic in design](#), allowing it the versatility to be applied in virtually any location. It's an ideal wilderness survival tactic due to sheer simplicity.

Nonetheless, it does require quite a bit of physical force and energy to create the spark, someone who is weakened by starvation or exposure may have difficulty getting the fire plough to work. As with all primitive fire starting methods it is essential to practice in order to perfect the technique.

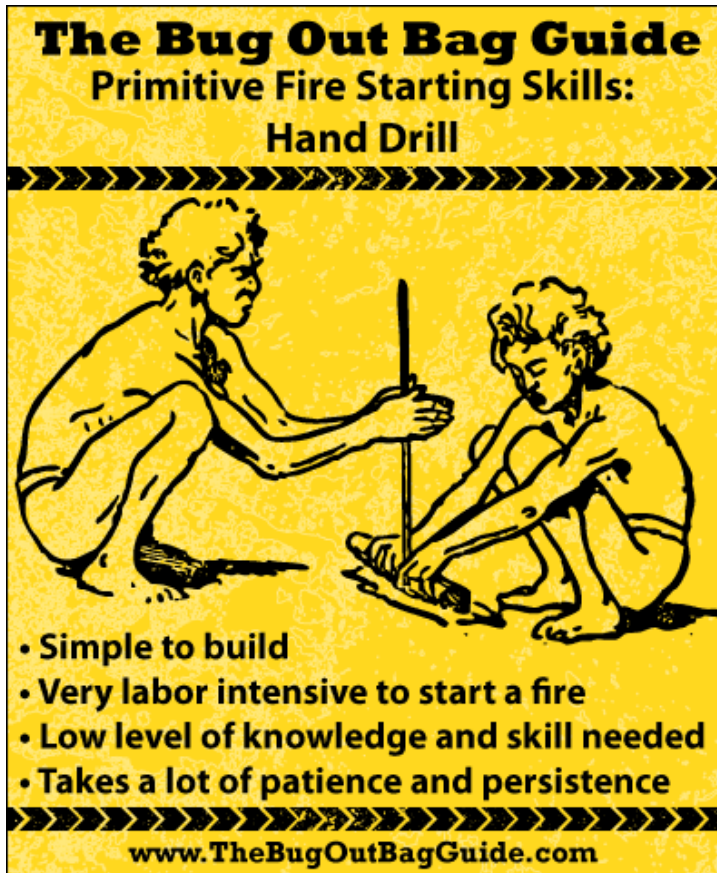
Hand Drill

A hand drill is a bushcraft technique that is simpler to build than the bow drill, but it will require greater energy, patience, and skill to implement. All that is required is a drill and a fireboard. The stick being used for the drill is spun between two hands (instead of using a bow to spin the drill) to generate enough friction to create embers.

1. In the same way as the bow drill's drill was constructed, find a softwood stick and carve one side to a rounded point.
2. Cut a small hole in the softwood fireboard, about an inch from the edge of the board.
3. Cut a v-shaped notch connecting the hole and the edge of the board, with the point of the v connecting with the hole.
4. Fill the v-shaped notch with tinder. Position the point of the drill into the hole

on the fireboard.

5. Place both palms flat on either side of the drill. Press your hands in firmly, and rub them back and forth. Apply downward pressure as you spin the drill for added friction.
6. Continue to spin the drill in the fireboard until smoke and embers form.
7. As with the bow drill once the embers start to make the tinder smolder gently blow to develop a flame.



This method is easy to construct in a pinch, making it a valuable bushcraft skill. Be sure to practice often because it can be **difficult to implement**. Persistence and endurance are required to make it work.

Bow Drill


This method is more complicated to build than either of the previously mentioned methods. However once a bow drill is built it requires less exertion to create a usable ember. Lets take a look at how to build a bow drill fire starter:

1. Start by finding a piece of hardwood, rock, or bone that contains a divot or shallow depression. This will serve as the socket that the drill rests in.
2. Next, find straight stick that will serve as your drill. The drill will need to be a

piece of hardwood about $\frac{3}{4}$ -inch thick. One end should be blunt and the other end will be chiseled to a rounded point.

3. Make a flat piece of softwood, at least 1-inch thick, to use as a fireboard. Cut a tiny hole into the board, about one inch from the side, barely big enough for the tip of the drill to rest in.
4. Cut a triangular notch connecting the hole to the side of the board, with the point of the triangle connecting to the hole in the board.
5. Find a bendable, green stick to craft into a bow.
6. Tightly tie a piece of sinew or [paracord](#) to the bent ends of the bow.
7. Place your tinder into the triangular notch in the fireboard in step 4. This is where the sparks will form.
8. Place your foot firmly on the fireboard to hold it in place. Loop the bowstring around the drill and place the point of the drill into the hole in the fireboard. Grab your socket from step 1, and place the depression in the socket on top of the drill to hold it firmly in place.
9. Pull the bow back and forth rapidly. As you do so, this will drive the drill into the wood, creating friction.
10. As the embers begin dropping into your tinder nest, gently blow until it ignites.

The Bug Out Bag Guide
Primitive Fire Starting Skills:
Bow Drill



• Medium level of exertion to start a fire
• Basic bushcraft knowledge to build
• More efficient than hand drill
• Takes time to find materials & build

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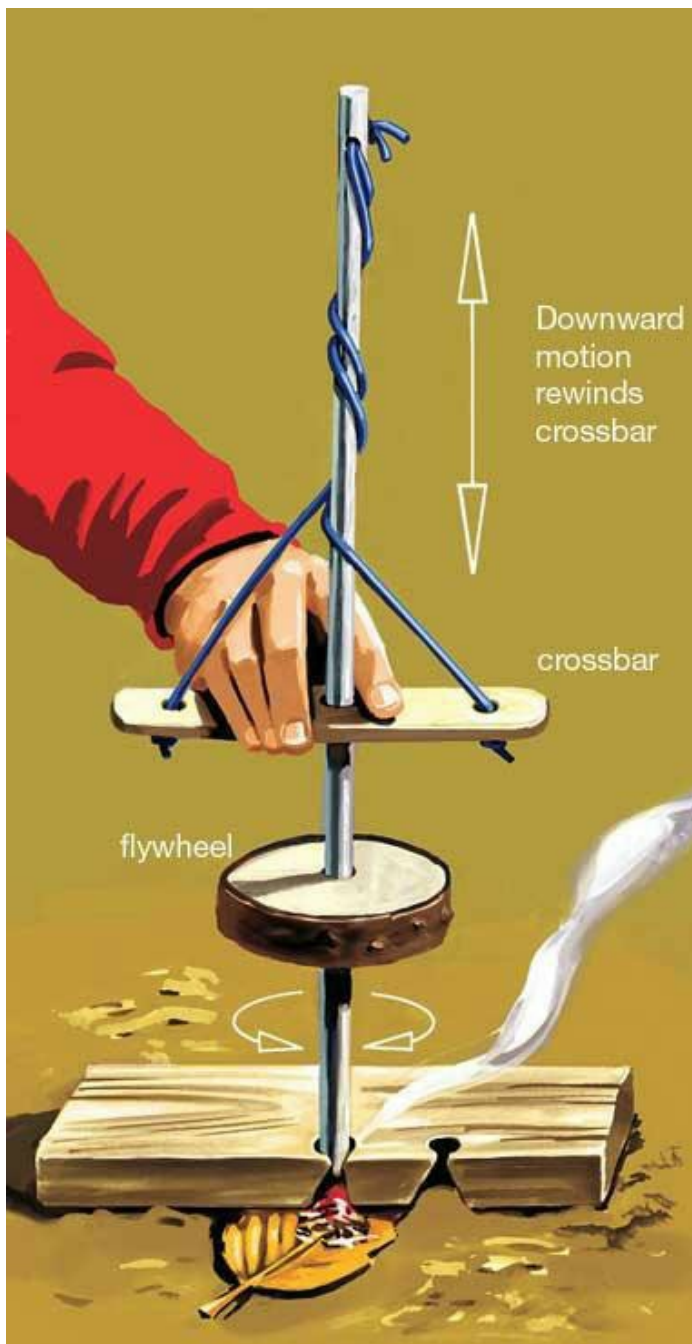
Although a bow drill is [more difficult to build](#) than a fire plough it should create fire

faster and with less effort. If you are able to make your tools you can use them multiple times, making your investment pay off again and again.

Pump Fire Drill

The pump fire drill is the most difficult to construct of all the primitive fire starting tools. This is due to its more mechanically complicated nature. This is compensated however by requiring nearly no effort to generate embers and a fire once the pump fire drill is constructed. Lets take a look at how to build one:

1. Find a round piece of hardwood and cut a small hole in the center. Using sinew, cordage, or paracord attach a sharp rock or arrow to the end of a hardwood stick.
2. Drill a hole through a rock at the same width of the stick, and push the stick through the hole, with the arrow resting about one to two inches below the rock. The rock should fit snugly, without moving.
3. Find a slightly curved piece of hardwood and drill a hole through the center, the same width as the stick.
4. Insert the curved piece of wood onto the stick, an inch above the rock, so the bow in the wood is facing upward. It should fit loosely so the device will easily rotate inside of it.
5. Etch two notches on the ends of each side of the bowed wood so that a string can be tied around easily. Tie a piece of sinew, cordage, or paracord to connect the edge of each side of the bowed wood to the tip of the stick, in the direction away from the arrow.
6. Grab the bow wood as a handle. Press the arrow to the hole in the firewood and spin the device to wind it up.
7. Allow the device to unwind itself. As the arrow is driven into the fireboard, embers will form.



This bushcraft fire starting technique requires almost no effort to create a fire and is great for people of smaller stature and strength. However, the pump fire drill itself will take some time to build so it should be practiced or built ahead of time and then brought out when needed.

Fire Piston

The fire piston is a primitive fire starting technique that is a bit more complicated to make, requiring the use of hardware to build. The fire piston uses the pressure created by quickly ramming the piston down a chamber to generate enough heat and pressure to ignite a piece of charcloth or other tinder.

1. You will need a piece of copper or strong plastic pipe about 10 centimeters long. Sand the ends so they are smooth.
2. Plug one end using a brass end cap, piece of metal, or wood. Glue the cap on so it fits snug.
3. Take a 10-millimeter thick wooden piston and cut it so that it is a couple of centimeters longer than the tube.
4. Insert the piston into a power drill. Run a file on the end of the piston, a couple of millimeters from the end and run the drill until the file carves a smooth indented line around the piston.
5. Insert a 10-millimeter rubber ring around the ring in the piston. Drill a 5-millimeter hole into the end of the piston on the side with the rubber ring.
6. Apply a thin layer of glue to the end of the piston to clog the pores of the wood. Drill a 10-millimeter hole into a cylindrical wooden knob and glue the bare end of the piston into the knob.
7. Fill the hole at the end of the piston with charcloth.
8. Lubricate the rubber ring and insert the piston into the copper tube. Forcefully push the piston into the tube quickly, pulling it back out immediately.
9. Do this repeatedly until the charcloth ignites, then transfer the ignited charcloth to your tinder.

While the fire piston method does require some effort to build, creating a fire with it is incredibly easy. Although it can't be built out in the woods with simple tools it is still useful to learn. Once a fire piston is built it's a light weight and compact addition to any fire starting kit.

Bonus Method: The EverStryke Fire Starter

So this is not a primitive fire making method but it is something worth mentioning. The EverStryke Match integrates a magnesium fire starter with a wick that is soaked in lighter fluid. The lighter fluid is stored in a flask that is integrated into the tool itself.

It is lightweight, good for up to 15,000 strikes, and when lit, burns at over 600 degrees Fahrenheit, more than enough to light damp tinder on fire.

Best of all, the EverStryke is extremely inexpensive. Deals can be found online where you only pay for shipping and handling, essentially getting the EverStryke for free. [Here is one of these deals if you are interested .](#)

What is the best primitive fire making method?

In an ideal world we could just go out and master all of these 6 techniques and be ready to build a fire no matter the circumstances. However not everybody has time to master all these [survival skills](#). What I suggest is picking one, or 2 at most and practicing it until you can create a fire using it in your sleep. Picking which method to learn comes down to several factors including:

- What resources are available
- How much time you have
- How much energy you want to expend

Feel free to try out all 6 methods to find which is the best for you. Once you have that figured out practice, practice, practice. The time invested improving your primitive fire starting skills will pay huge dividends if you ever need to start a fire without matches. Always remember, Chance Favors The Well Prepared.

What Is Bushcraft: Survival Skills, Tools, & How To Learn

by Chris Ruiz



The old saying goes "The more skills you have the less gear you need". This is a great mindset to have and it provides a clear path on the journey to preparedness. Today I am going to share with you a set of skills and tools that all add up to the overall field known as "Bushcraft". If you are an old hand at wilderness survival or are just asking, "**What is Bushcraft?**" this article will show you what skills to learn and tools to use when growing your bushcraft knowledge and survival abilities.

What Is Bushcraft?

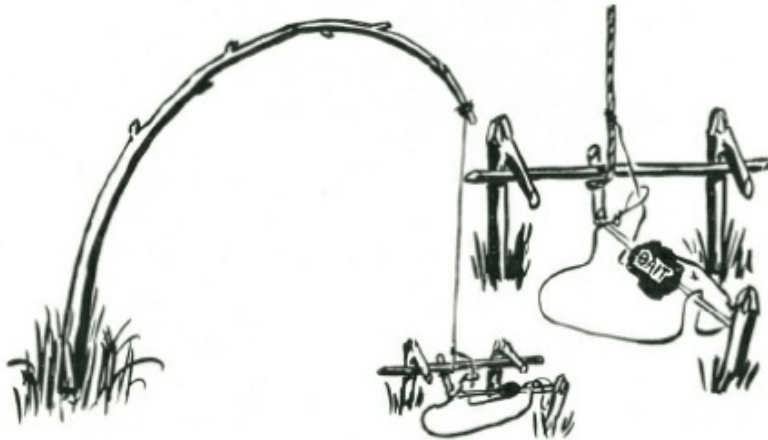
Bushcraft is the art of using the resources provided by our natural environment to survive and thrive in the great outdoors. It combines the knowledge of how to best use the plants and animals at your disposal with some basic bushcraft tools to make outdoor living easier and more efficient. In learning bushcraft skills we benefit in many ways including:

1. Increasing our ability to adapt to new challenges

2. Becoming more self sufficient
3. Growing our confidence
4. Increasing our survival skills
5. Becoming better prepared to face unforeseen problems

Bushcraft is not just one thing to learn. It is a group of related skills that help you survive and adapt to overcome obstacles. Although traditional bushcraft is focused on wilderness survival, its mindset of using the world around you can easily be applied to an urban or suburban setting.

Bushcraft Snare: Toggle and Bait Stick Release



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Image Credit: Bushcraft by Richard Graves

Learning bushcraft survival skills will go a long way in making you better prepared the next time a disaster strikes. Many of the skills and projects within the field of bushcraft can be directly applied to survival situations and are immensely useful to learn.

What Are Bushcraft Skills?

Bushcraft encompasses several primitive skills to shape the world around you and meet your survival needs. In this article I am going to focus on the fundamental bushcraft skills that are most related to survival:

- Food Foraging
- Trapping and Hunting Game
- Water Gathering and Purification
- Shelter Building
- Fire Building

Now we have discussed many aspects of these skills in other articles ([such as this](#)

one) but remember, bushcraft teaches you how to do all these things with just a basic tool and the knowledge in your head. Each of these bushcraft skills have many smaller subsets of tasks and abilities that make them up. Let's take a look at what you need to learn to become proficient at these fundamental bushcraft survival skills.

Food Foraging

- Knowledge of local plants
- Camp cooking
- Avoidance of toxic plants
- How to efficiently harvest

Trapping and Hunting

- Tracking and stalking game
- Reading animal signs
- Building snares
- Using lures
- Hiding human scent
- Tying knots
- Making cordage
- Cleaning and cooking game

Water Gathering and Purification

- Foraging for water
- Making a water filter
- Purifying water
- Fire building (for boiling)
- Container making (for carrying water)

Shelter Building

- Felling trees
- Batoning branches
- Harvesting other materials
- Thatching or weaving grass or bark
- Knot tying
- Making cordage
- Natural insulation and waterproofing

Fire Building

- Collecting wood
- Gathering tinder
- Batoning branches
- Building a [bow drill](#), [fire plough](#) or other device
- Building a fire pit
- Types of fires and their uses

How Long Does It Take To Learn Bushcraft Skills?

As you can see there is a lot to learn! While becoming a bushcraft master can take several years or longer the good news is that there are many small skills that can be quickly learned to get you started. Additionally, some of the more basic skills like [making cordage](#) and [batoning branches](#) have many uses and can be applied to more than one discipline.

Bushcraft Skill: Making Rope & Cordage



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Image Credit: Bushcraft by Richard Graves

If you are just starting out

If you are starting with no base of bushcraft knowledge it is best to begin with one of the easier skills to learn. Many of these can be learned in a matter of hours and be further developed whenever you have the time to practice. Some basic bushcraft skills to start out with are:

- Batoning wood
- Carving simple tools
- Lashing basic camp structures such as a tripod
- Knot tying

- Basic fire starting

If you have a basic knowledge already

With some basic bushcraft knowledge under your belt you can start to learn some of the more intermediate skills such as:

- Foraging for food
- Primitive fire building (no matches or lighter)
- Shelter building
- Basic snares and trapping
- Water purification

For the pros

If you have a working knowledge of survival or outdoor living you can start to take on some of the more advanced bushcraft projects and skills such as:

- Making rope and cordage
- Advanced structure building (camp oven, beds, thatching)
- Advanced foraging and trapping
- Land navigation
- Tracking

What Are Bushcraft Tools?

At its most basic level bushcraft is the art of going out into the woods and surviving with nothing more than the clothes on your back and an edged tool. Nearly every skill and most bushcraft projects use a bushcraft tool to make your labor easier.



A solid bushcraft

toolkit will make most projects easier and faster

Bushcraft Knife

A fixed blade knife is the most common bushcraft tool. Finding the best bushcraft knife ([Check out my guide for picking the best fixed blade knife here](#)) for your kit will make many camp tasks easier and faster. Bushcraft knives are best suited for light and medium duty tasks:

- Batoning branches smaller than your wrist
- Carving or whittling wood
- Skinning game
- Making snares and traps
- Preparing food

Here are my favorite knives for bushcraft:

Tomahawk or Hatchet

As I discussed in my article "How To Choose The Best Tomahawk" ([check it out here](#)), a small axe is a highly versatile bushcraft tool. Generally the design of a bushcraft axe makes it best suited for heavier duty tasks:

- Chopping wood
- Felling trees
- Splitting logs
- Butchering large game
- Digging
- Hammering stakes or posts

Here are some of my favorite bushcraft axes and tomahawks:

Machete

Functionally a machete is a hybrid between a large knife and small axe. It can be used for many of the tasks I mentioned above. The long, heavy blade of a machete is best used for medium to heavy cutting jobs:

- Clearing Brush
- Batoning large branches
- Chopping wood
- Digging

Saw

The saw is a more specialized bushcraft tool as it is only used for cutting branches. It is however highly efficient at this task. This advantage should be considered if you are planning on working on any bushcraft projects that will require you to cut lots of wood such as building a:

- Platform
- Hut
- Camp table or chair
- Bush ladder

Bushcraft Backpack

Lastly we have the pack that you carry all your bushcraft tools and other gear in. As highlighted in my article on how to choose a backpack ([read it here](#)), make sure you pick a comfortable bag that matches your body type and that you can comfortably carry. It is also important that your bushcraft backpack is waterproof and has multiple compartments rather than one large sack. This makes it far easier to efficiently organize and then find your gear when you want to use it!

OK but what is the BEST bushcraft tool?

Any of the bushcraft tools mentioned above can be used for nearly every bushcraft project or task. Remember that one of the core ideas of bushcraft is to be adaptable in approaching problems. The best bushcraft tool is really whatever you have with you! Nearly every bushcraft project can be made easier by using a knife, hatchet, or saw at some point so either choose your favorite or bring more than one.



The best tool is the one in your hand

Think about what you are going to try and accomplish as well as what the trees and other resources are in the area you will be working. Will you be doing lots of heavy chopping? Make sure to bring an axe! Will you be doing detailed carving for snares and traps? Having the best bushcraft knife will be an essential tool.

If you have time to plan your bushcraft project out it never hurts to carry all the items you think you will need. It is better to have a piece of equipment with you than wish you had brought it along!

What beginner bushcraft projects I can try?

As you can see from the bushcraft skills list above there is a huge range of tasks to learn and try. Starting off with some simple bushcraft projects is a great way to get your feet wet and start learning some useful new skills! Lets take a look at a beginner bushcraft project from each of the 5 skills we talked about earlier.

Food Foraging Bushcraft Project:

Go out in the woods and try to **forage one edible plant**. Make sure you read up on

what local plants are edible and palatable and then give it a try!

Trapping and Hunting Bushcraft Project

Find and **identify one set of animal tracks**. Again, read up on animals in your area and where they tend to travel. Focus on common animals to increase your chances of success.

Water Gathering and Purification Bushcraft Project

Learn and **practice one water purification method**. This can be boiling, building a solar still, filtering, or any other. The important thing is that you actually practice doing it. Note for this beginner bushcraft project I suggest practicing with bottled water just to be safe.

Shelter Building Bushcraft Project

Build a basic shelter such as a debris hut. This is an extremely useful bushcraft survival skill and can save your life if you are ever caught outside overnight. Pour a bottle of water on the completed shelter to judge whether or not it would keep you dry. Extra bonus points if you actually sleep in your shelter to test it out.

Fire Building

Build a small fire. This encompasses many important fire building skills including gathering wood, finding and preparing tinder, and actually building your fire. If you already know how to build a basic fire try building an upside down fire ([how to article here](#)).

Good luck!

Good luck with your bushcraft projects! If you choose to do any or all of these you will be well on your way to growing your bushcraft survival skills and making yourself more prepared. Get out there and take action!

More Bushcraft Resources

As you can see bushcraft is a huge field with many skills and activities to learn. I have provided a basic overview to answer the question of "What is Bushcraft?" but there are lots of great resources out there to help you explore further.

Bushcraft Books

Bushcraft Community and Instructional Sites

- [Bushcraft UK](#) - A supportive, helpful forum. You do not need to live in the UK to join.
- [Ray Mears' Blog](#) - One of the big personalities in the bushcraft realm. Really knows his stuff.
- [Dryad Bushcraft](#) - Lots of FAQ and How To Articles about skills and techniques.
- [Bushcraft And Survival Skills Blog](#) - How to articles and gear reviews

Conclusion: What is Bushcraft?

Bushcraft is a diverse and extremely useful skill set to add to your survival arsenal. This guide should help get you started but there is no teacher better than experience. I challenge you to go out into the world and practice your bushcraft skills. You will make yourself more confident, adaptable, and better prepared for whatever fate throws your way. Always remember, *Chance Favors The Well Prepared*.

Bushcraft Skills: Foraging for food

by Chris Ruiz



Feeding yourself off the land can be a challenge even in favorable conditions and is one of the most important bushcraft skills to learn. It takes a good knowledge of local plants and animals as well as the ability to actually catch or gather them to make a meal. The field of bushcraft has lots of ways to make this easier. For more basic information on getting started with Bushcraft, [check out our article HERE](#).

Bushcraft Skills: Foraging for edible plants

Being able to forage for your dinner requires an in depth knowledge of the plants in your area. You need to know not only what you CAN eat but also what you CAN'T eat.

The Bug Out Bag Guide

Foraging Tips & Tricks

Tip #1

**Get to know the plants in your local environment, both what you CAN & CAN'T eat. Knowledge is KEY!
When in doubt, DON'T eat it!**

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What to look for

- **Roots and tubers:** Roots and tubers are found in the soil underneath the vine or stalk of a plant. They are very nutritious but usually require cooking or boiling. Potatoes, yams, and onions are all either roots or tubers.
- **Grasses:** The young whitish tips of many grasses are edible and often palatable. They can be eaten raw
- **Seeds & Nuts:** The seeds and nuts of many plants are edible and provide a good source of nutrition. If you taste a seed or nut and it has a bitter or acidic quality it is probably not safe to eat. Frequently seeds and nuts can be made safe to eat by soaking them for 12 hours in water or boiling.
- **Fruit & Berries:** We are used to seeing fruit in our supermarkets on a regular basis but it is important to note that the apples, pears, and bananas we consume are the product of thousands of years of cultivation by farmers. Many berries and fruits found in the wild can be harmful if eaten. Generally any fruit that is red in color should be avoided. Unless you are sure a fruit or berry is safe to eat these are best avoided.
- **Leaves:** The leaves of many plants are edible both raw and after boiling. Some palatable ones to seek out are watercress and nettles (be careful when picking nettles as they can sting), both of which often grow near freshwater streams. Beware leaves that have a strong bitter taste.

The Bug Out Bag Guide

Foraging Tips & Tricks

What To Look For:

- **Roots & Tubers**
- **Grasses**
- **Seeds & Nuts**
- **Fruit & Berries**
- **Edible Leaves**

What To Avoid:

- **Bad Smelling Plants**
- **Anything That Tastes Like Almond**
- **Acidic Or Bitter Tasting Plants**
- **Plants That Are Red In Color**
- **Fungus & Mushrooms**

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Things to avoid:

An important part of bushcraft foraging is knowing what to avoid. Remember that there are exceptions to every rule so it is best to educate yourself about your local plants as much as possible. Here are some general guidelines to follow.

Bad smelling plants - If a plant, or fruit has an off putting smell it is probably not ideal to eat. Our sense of smell has evolved over thousands of years to warn us against dangerous foods. Avoid anything that smells distasteful.

Taste of almond - This is usually an indication of the presence of prussic acid which is toxic to humans. It can sometimes be removed by boiling the plant. If you can no longer taste the almond bitterness after boiling or soaking it is probably safe. Be sure to safely discard the water you boiled the plant in.

Acidity or Bitterness - Any plant that tasted extremely bitter or "hot" should be avoided. This is a typical sign that it will make you sick or worse.

The Color Red - Seeing red leaves or fruit is a likely sign that a plant is dangerous to us. There are some exceptions of course (strawberries, apples) but unless you

KNOW a red plant or fruit is safe avoid it at all costs.

Fungus - There are some mushrooms out there that are edible and even tasty. However these can be hard to differentiate between their lookalike toxic cousins. Again, unless you are SURE a mushroom is edible it is best to not eat them at all.



But what if?

If you are uncertain if something is edible or not and out of options the general approach is to taste a small bite of it WITHOUT swallowing it. If it tastes OK (no bitterness or strong acidity) then swallow a small sample and wait 1 hour. If not unpleasant reaction occurs it is safe to eat more. Again, this approach is a last resort. You are better off to keep on searching if you have any doubt in your mind.

Also remember that cooking or boiling can reduce or remove bitter tastes and in some cases toxins as well. Again, it is essential to gain knowledge over your local plants to be able to use this option.



Bushcraft Skills:

Trapping and Hunting Game

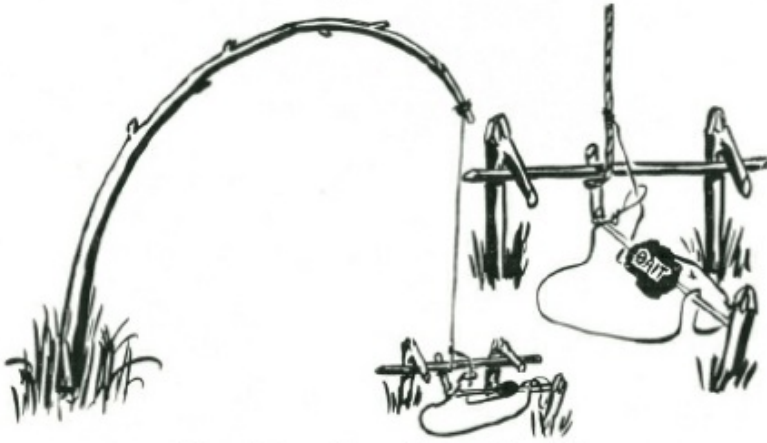
Foraging Plants vs. Animals

When every calorie counts, there's no question: Eating animals is the most efficient path to survival. Plants can offer additional nutrients, flavor, and supporting calories, but generally won't contain enough calories to sustain you on their own. Most leafy plants will only offer 30-50 calories per ounce of weight. Contrast this with the 200 calories available from a small freshwater fish and 500 calories provided by a single fat squirrel. The numbers grow exponentially for larger game. Nuts, to be fair, do offer a respectable caloric payoff in the neighborhood of 150-200 calories per ounce. Most acorns will need a lot of preparation, but walnuts, beechnuts, and butternuts can be eaten fresh or kept for a few days after being dried in the sun.

Finding Food

Food sources are all around us; no less so when we're in the backwoods. Regardless of your geographic location, you can rest assured there are plenty of indigenous wild edibles. One of your regular bushcraft projects should be to practice identifying and gathering some of these food items. When moving in the woods, look constantly for [animal sign](#). Scat, tracks, and eaten plants or nutshells are all indicators of recent animal activity. Gather convenient plants while you're moving on other tasks; don't devote valuable time to seeking out these lower calorie foods.

Bushcraft Snare: Toggle and Bait Stick Release



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Image Credit: Bushcraft by Richard Graves

Traps and Snares:

If you're in a situation that calls for feeding yourself, you're likely to have a lot of work to do to stay alive. Moving toward safety, tending a fire ([learn how to make a self feeding fire HERE!](#)), securing water, and treating injuries take time and calories. Don't waste either of those precious commodities on actively hunting for one animal at a time. Use snares and traps to multiply yourself. Snares will require wire or [cordage](#). Keeping a few good sections of thin wire in your bushcraft backpack or survival kit is a good idea, and can be one of the more valuable bushcraft tools in a survival scenario.

When placing trap and snare sets, designs are limited only by your imagination. A few of the most common sets are:

1. Figure-4 deadfall (video below)
2. Basic peg trigger for spring-tree snare (picture above)
3. [Fish funnel](#)
4. Squirrel pole (video also below)

When setting traps, the key is to placing the trigger or snare loop where an animal is likely to hit it. Game trails, particularly those that lead to water or dens, are excellent locations. Place snares [directly in the trail](#) with the snare loop a couple inches off the ground at the height of a likely target animal's head. Traps with baited triggers, like the Figure-4 Deadfall (see the video below), should have some tasty bait rubbed on the bait stick. Food wrappers or mashed up fish or frog parts work well for this.

Be sure to check your sets regularly. Remember, you're not the only predator in the

forest. A handy rabbit in a snare would make quite a good meal for a scavenging coyote.

Cleaning and Cooking Game

Once your carefully set traps have secured some food, don't ruin the payoff with poor processing. It's important to cleanly skin and gut game to adequately cook and minimize spoiling of the meat. Squirrels and rabbits are easily skinned with just a few knife strokes. Fish can generally be filleted and de-scaled in about the time it takes to peel an apple.

Cooking is a pretty simple affair. Roasting meat on a spit is simple and gets the job done. Fish is generally best grilled on a flat rock facing a fire. If you luck into enough meat to last for longer than one or two meals, consider smoking and drying the meat on a tipi-shaped rack made of green wood and covered with bark. If you want to hone your primitive fire making skills, [you can check out our How-To article HERE.](#)

Bushcraft Tools for Wild Edibles:

An ounce of prevention is worth a pound of cure. When you're going into the wilderness, make sure an EPIRB is in your bushcraft backpack. From there, a quality knife, plenty of snare wire, a primary and backup fire starter, and a small fabric bag for holding foraged food are all near-necessities.



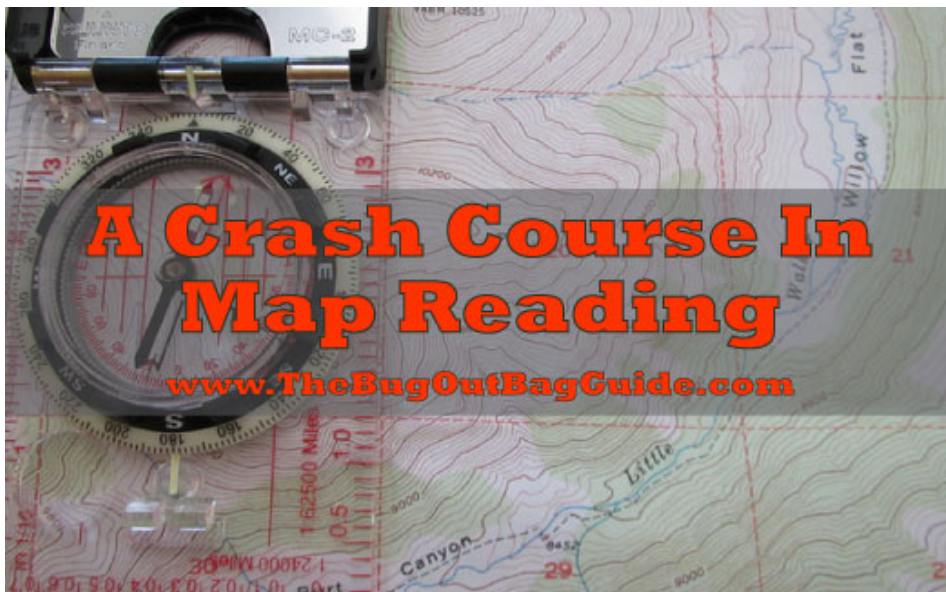
One of my

favorite Bushcraft Tools, the Gerber LMF II

Conclusion

Learn These Map Reading Skills To Never Get Lost Again

by Roman



If you're navigating through unfamiliar terrain, a map is as valuable as gold dust. You may have planned your routes by them and will be relying on them throughout the course of your expedition or bug out. However, a map is next to worthless if you don't know how to decipher it. Map reading and land navigation is are **vital skills** that can be applied to many survival situations. This article will outline the basics to help you sharpen up your map reading skills.

Map Reading Skills: Using A Map's Scale

First, your map should be at a scale which is useful. For instance, having a small-scale, detailed map will be of no use to you if you simply plan to drive through an area. In the same way, if you are on foot, then having a less detailed map can be next to useless. It is also important to understand the scale bar. This bar will show

the size at which a kilometer or mile is shown on the map and is usually expressed as a ratio. For instance, 1:50,000 means that each measure on the map is 50,000 times smaller than the true distance. This will allow you to use the map to determine distances for land navigation.


The Bug Out Bag Guide
How To Read A Map: Understanding Scale

The Scale on a map shows you two things:

1. The ratio at which the map is drawn expressed in inches : miles or centimeters : kilometers
2. Gives a visual guide for manually measuring distances as you calculate your route


Ratio of inches to miles

1 inch = 1 mile (1: 62,500)



0 1 2 3 4 5

1 centimeter = 1 kilometer (1: 100,000)



0 1 2 3 4 5 6 7

Visual Guide for measuring distance

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Map Reading Skills: Reading Contour Lines

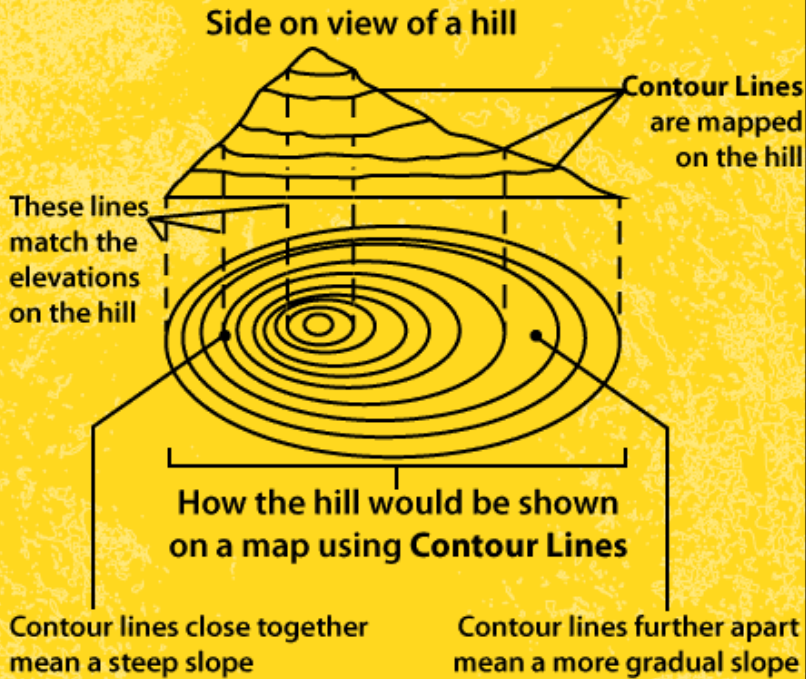
A thorough understanding of reading contour lines is an extremely useful tool to add to your arsenal of map reading skills. Because a map is 2D, different heights of terrain must be indicated using contour lines. These show the altitudes of the land and are recorded at regular intervals - usually 50ft (15m). Each point on a contour line's ring is hypothetically at the same height, which is indicated with a number (in feet or meters). This tells you **how high** above sea level the terrain is. In general, contour lines which are closer together indicate a steeper gradient. However, it's important to bear in mind the scale of your map so that you don't over or underestimate the gradient.

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How To Read A Map: Contour Lines

Contour Lines on a map show you:

1. Elevation altitude: every point on a contour line should be the same height
2. Steepness of hills and valleys: closer lines indicate a steeper slope



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Map Reading Skills: Reading A Map's Key

The key will explain what the symbols used on the map refer to. These will represent a range of manmade and natural structures, types of land (woodland, swaps or beaches, for example), rivers and water. There are some features which are not depicted to scale. For instance, roads, paths and waterways will often have a standard width which may not represent their exact measurements.

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How To Read A Map: Map Symbols

Most maps have a Key that will show you what the Map's Symbols mean. Here are some common symbols and their meanings:

 Campfire	 Picnic area	Road —————
 Campground	 Ranger station	River —————
 Drinking water	 RV campground	Trail - - - - -
 First aid	 Restrooms	Train Track —————
 Food service	 Shelter	
 4-wheel-drive road	 Showers	
 Gas station	 Store	
 Hospital	 Telephone	
 Information	 Trailhead	
 Lodging		

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Map Reading Skills: Understanding Map Grids

Maps will have horizontal and vertical grid lines which divide the map into squares. This division is either based on longitude and latitude or may be individual to the particular mapping authority. Grids will allow you to more quickly determine distances, since they are usually at a comprehensive scale (for example, the distance from left to right is often 1 kilometer).

Map Reading Skills: Orientating Your Map

Important to remember is that the grids on a map do not necessarily indicate north and south, though they may provide a rough indication of this. You will need to also be aware that your **compass** does not point to true north, but to magnetic north. Most maps will also indicate magnetic north. The deviations between these can help you map-read your way across a landscape, as can taking note of your surroundings in relation to features on the map.

Map Reading Skills: Conclusion

Hopefully our crash course has helped you sharpen up your map reading skills. If you ever have to execute your [bug out plan](#) or evacuate unexpectedly knowing how to use a map and compass will greatly increase your chances to make it to your rally point or bug out location. As with any [basic survival skill](#) it is important to practice using your map reading and land navigation skills to find your way. Master these and you will never be lost.

Author Bio

Roman is a former EMT living in NYC and co-founder of [Ready To Go Survival](#). When he's not working on the next big thing for preppers; he likes to go camping, shoot stuff at the range, archery, and ride his bicycle excruciating distances.

How To Predict The Weather In The Wilderness

by Chris Ruiz



Typically we count on weather services and electronic devices to know what to expect from the sky. We may alter travel plans, make a quick trip to the store, or simply pack an umbrella in reaction to an impending storm. However, these services will likely come to a halt if disaster strikes and alternative means of monitoring weather conditions will be necessary. For those that opt to head for the hills, it will become vastly more important to know how to predict the weather in the wilderness.

Nature itself provides many clues as to what is in store. The clouds, plants, animals, insects, and the moon have been used for centuries to predict precipitation, droughts, and floods. Farmers, fishermen, sailors, and others who spend long periods of time outdoors, and whose livelihood depends heavily on the weather patterns, have devised ways to foresee the weather in order to prepare themselves.

Having the skills to read the warning signs that nature provides has short-term and long-term benefits that can greatly increase your chances of survival in a bug-out scenario. Whether a major storm is brewing and you need to prepare to [build a shelter](#) in for the day or if the likelihood of flooding doubles and you need to reconsider your location for the season, learning how to predict the weather using nature is a valuable survival skill.

Observing The Sky To Predict The Weather

The most intuitive way to predict the weather is to look to the sky. The clouds, wind direction, air pressure, and even the moon are directly related to incoming weather. Paying close attention to the changes in the sky and knowing how to interpret what you see gives you advance warning of what is to come and enables you to prepare.



A red rising sun

warns of rain to come.

There is an old saying, "Red sky at night a sailor's delight. Red sky morn, sailors take warn." At sunset, the red sky is caused by sun rays passing through dust particles which accumulate at the forefront of a high pressure system. However, in the morning a red sky occurs when a low pressure system carrying moisture is on the way. Therefore, a brilliant red sunset usually precedes a clear day but a red sunrise is a warning that a storm is coming.



A red sky as the sun sets in the west is a sign of clear skies.

Another colorful way to predict the weather is the formation of rainbows. In the northern hemisphere, a morning rainbow in the east indicates rain is on the way, as weather generally moves east to west.

Reading Clouds

Cloud identification is a science in itself but there are some simple indicators that can prove very useful, especially when trying to predict the weather in the wilderness.



When you see cumulus clouds, it's a good day for traveling, foraging, and other outdoor activities.

White, fluffy clouds sitting high in the sky are non-threatening as they pass overhead. When the cloud cover is low and dark, a storm is building and appropriate measures should be taken to prepare your camp. [Gathering extra firewood](#) and storing it in a protected location will ensure that you have dry fuel to burn during and after the storm.



Low, dark cloud cover is a sure sign that a storm is building. Make sure your shelter is ready to withstand rain and wind.

To give yourself more time to [prepare](#), there are two easily identified types of clouds that form prior to storm clouds: mare's tails and mackerel skies. Mare's tails are wispy cirrus clouds that are somewhat hazy and undefined, as the tail of a galloping mare. The same conditions that cause them to form also cause airplane trails to linger in the sky.



Cirrus clouds

precede incoming frontal systems and indicate changing weather. *Image credit k4dordy on flickr.*

Mackerel skies are **altocumulus clouds** and are also a sign of rising moisture levels. Independently, these each warn of rain coming within a few days, but seen together, rain will typically fall within 24 hours.



Mackerel skies are

named for their resemblance to the scales of a mackerel fish.

While clouds are often thought of as bringers of rain, they also act as a layer of insulation. On an overcast night, the radiant heat from the earth is trapped by the cloud layer, leading to a higher temperature in the morning. When the sky is clear at night, the radiant heat escapes and the morning will be cooler as a result.

Detecting Air Pressure

Though air pressure is less noticeable than cloud cover, it is a very dependable indicator of incoming weather conditions. Low atmospheric pressure leads to cloud formation and precipitation. High pressure systems are associated with rising air and clear dry skies.

One way to detect the current air pressure conditions is to observe the smoke from a campfire. If the smoke is rising steadily in vertical column, the air pressure is high but if it is sinking and swirling, the air pressure is low and precipitation may soon follow.



Studying how to predict the weather turns your campfire into a barometer.

What The Wind Tells About The Weather

Wind is named for the direction it comes from, so an easterly wind blows from east to west. A gentle prevailing wind or light, variable winds are signs of clear weather. Strong winds occur when two fronts with different temperatures meet, and usually mean that a storm is forming.

An awareness of the surrounding climates will also help you read the wind. For instance, if a desert lies to the east of your location, wind coming from the east will typically carry dry, warm desert air. Mountains also play a role in that air flowing over a mountain will usually release precipitation as it rises along the side facing the wind and will move down the opposite side with dry air.

“Circle Around The Moon, Rain Or Snow Soon.”

People have long looked to the moon to provide insight into atmospheric conditions. As the old saying states, when the moon has a hazy ring around it, precipitation is on its way. The ring is caused by the presence of dust particles building up in the atmosphere. It means that a low pressure system is on its way, bringing rain or snow with it. As it passes through, the low pressure system will push the particles along.



You can see how the moonlight reflects on the particles in the air, forming a hazy ring.

When the moon appears clearly defined and bright, it is due to an absence of particles and moisture. This is characteristic of a high pressure system and the next day has a high chance of being dry. In the short-term, this is a simple and effective way to predict the weather.



When the outline of the moon is clearly defined, fair weather can be expected.

For long-term or seasonal weather predictions, the phases of the [moon](#) can reveal clues. When two full moons occur in the same month, there is a higher chance of flooding. It is also said that when the tips of a crescent moon point upward and the moon looks like a bowl that can hold water, a dry spell is coming. When the new moon looks like a frown, or a bowl that water would spill out of, a wet spell is predicted.



This bowl-shaped moon is often associated with a period of dry weather.

Weather Signs In Nature

The natural world is built to survive and living things will make adjustments in order to maintain life and produce offspring. Sometimes the changes are so subtle they can hardly be detected but there are some common plant and animal behaviors that reveal clues about the weather. When bugging out, you can use these clues to increase your own chances of survival.

How To Predict The Weather Using Plants

Upon waking, take a close look at the ground. Morning dew on the plants, while itself is wet, can actually be a sign of a dry day to come. A lack of morning dew can occur when dry winds have been pushed through ahead of a storm system bringing rain close behind. Of course, if it rained the night before, this will be more difficult to observe and you will need to look for additional signs in order to predict the weather.



A dewy morning

can mean that a dry day is in store.

The phrase "it smells like rain" has some truth to it. The moist air of a low pressure system brings out the scents of plants, as they release their waste under this condition, so the air will smell more pungent just before a rain. Swamps will also release gases during a low pressure system, making for a telltale sign that a storm is moving in.

Visual signs that it is time to prepare for wet weather are readily apparent in trees. The leaves of deciduous trees will curl upward in anticipation of a rainstorm. Pine cones will open their scales in dry air but close them in high humidity.



The increase in humidity prior to a storm causes deciduous leaves to curl upward.



It looks like a dry sunny day for this pine tree.

Plants also have the ability to foresee more long-term conditions and will adjust their growth accordingly. Crops, such as onions and corn, will grow thicker husks when a harsher winter is predicted in order to provide more protection to their seeds. Similarly, evergreens will produce larger, more robust pine cones, and acorns will form thicker shells- all to provide the seeds with a better chance of surviving extreme winter conditions. If you notice these signs, be prepared for a cold, long winter.



A thicker husk provides the seeds with better insulation against extreme temperatures.

How To Predict The Weather Using Animals

The combination of heightened senses and well-developed instincts makes animals highly adept at sensing bad weather conditions. Be on the lookout for changes in feeding patterns, behavior, and sound level that may indicate rain is on the way.

Here are some specific examples of animal behavior that can be used to predict when a storm is coming:

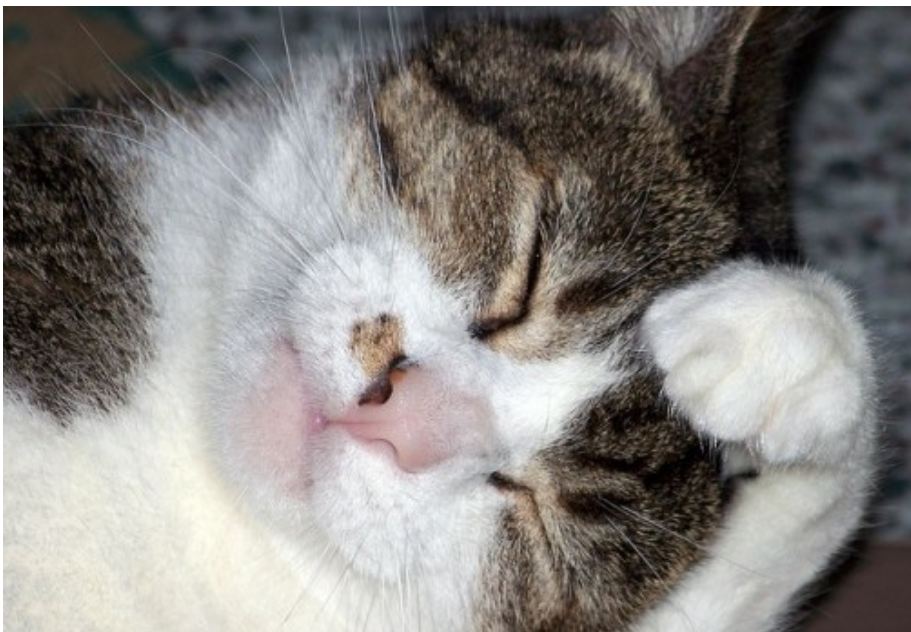
- Fish will feed voraciously at the surface prior to a storm so that they can ride it out in deeper water where food is scarce, so an excellent day of fishing usually means you should seek shelter and be prepared to cook the day's catch in the rain.



- Turtles begin to seek higher ground 1-2 days before a large rainstorm, so you may see them on roads or other areas above normal water levels.
- If birds are flying high, the weather will likely be clear for a few days. Birds will fly lower in dropping pressure systems because the change in pressure hurts their ears. They will also exhibit frenzied feeding. Squabbles at the bird feeder can mean that a storm is coming and birds are stocking up in preparation of riding out the storm in their nest.



- Along coastlines, seagulls will take shelter before a storm and birds in general become very quiet.
- Squirrels, similar to birds, will aggressively stock up on food prior to a pending storm.
- Cats' ears are very sensitive and they do not tend to wash them but a change in pressure may cause your cat to rub at its ears, indicating a drop in pressure and a storm on the way.



- Horses and cows are known to exhibit similar ear sensitivity behaviors when the pressure changes.
- Herd animals, such as cattle, will group tightly together, usually facing the same direction, when a storm is approaching. They also tend to head for high ground.

In addition to predicting major storms, animals can also sense long-term threats in the weather pattern. This information is highly valuable when preparing your bug out camp to withstand low temperatures and difficult conditions. A harsh winter means that food will be scarce and opportunities for **foraging and hunting** will be limited.

Depending on the amount of snow cover, it may be challenging to gather firewood. Keeping a fire going will be vital and your bug out party will need as many **warm layers** as you are able to find or make. All of these preparations take time, so the sooner you know, the better.

In general, if you notice extra thick coats of fur on domestic animals or local wildlife, expect dropping temperatures. Conversely, when their fur comes off in tufts, warmer temperatures are right around the corner.

If birds begin migrating earlier than usual, it is a sign of harsh winter to come. The brown section in the middle of a woolly bear's body is also used to **predict** how harsh the upcoming winter will be; the thinner the brown stripe, the harsher the winter is expected to be. While there is not much research to back it up, a 70-80% success rate is pretty good for an old wives tale!



The Isabella Tiger

Moth caterpillar, often referred to as the "woolly bear," is an age-old predictor of winter conditions. The one on the **left** (*photo credit Sheila Sund on flickr*) is thought to indicate a short winter, while the one on the **right** (*photo credit USFWS on flickr*) shows a harsh winter is in store.

Farmers have even used cow fertility rates to predict whether there will be a drought the following year- a drop in fertility occurs in anticipation of a future water shortage.



Do cows know

how to predict the weather?! Many animals will make similar adjustments in breeding in response to foreseen conditions.

Resources On How To Predict The Weather

To further explore the topic of how to predict the weather using nature, check out these excellent resources on clouds, weather, navigating, and storms.

Conclusion

Plants and animals have been “bugging out” and surviving in nature since the beginning of time. There is much to gain by observing their weather predicting skills and honing our own. When living in the natural world, a simple thunderstorm can be catastrophic if you are not prepared for it. Anticipating a harsh winter can help you ration supplies and apply your energy effectively so you have adequate food and fuel stored. Knowing how to predict the weather will help you to make wise decisions in favor of your survival.