

THE PATHFINDER SCHOOL &
BLIND HORSE KNIVES PRESENT

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SELF RELIANCE

illustrated

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Mission Statement

Self Reliance Illustrated, a collaboration between two grassroots companies (Blind Horse Knives LLC and The Pathfinder School LLC), will present a new and innovative approach to self-reliance, survival, and preparedness. Within these pages you will find detailed information on subjects that relate directly to your ability to survive. The collaboration of The Pathfinder School LLC and Blind Horse Knives LLC is one that is heavily focused on the development of the best tool options for any wilderness situation, as well as the dissemination of information and cross-cultural learning that will truly help us to maintain and pass on the tribal knowledge. What the Pathfinder System symbolizes is learning from everyone around you and valuing everyone's opinion. To that end you will see many articles by people you may have never seen or heard of that will pass on ideas that we believe are worth learning, so that all have the ability to teach and learn from one another.

We will be posting feedback in each issue from our subscribers, both good and bad, so that we may constantly improve on this magazine. In the end, this is not our magazine but your magazine and we want it to be worth your valuable time, energy and money.

Within this magazine, like any other, you will see advertisements from companies selling their wares. However, it is our decision that not just any company will be allowed to advertise with us just because they want to pay for advertising. All advertisers will have to be approved by our board before placing ads, and their goods will have to be something we consider worthwhile for purchase by our valued subscribers.

Lastly, we will not down grade any individual, business, or company within these pages. You will only see reviews for equipment that we trust and that you can trust your survivability to. It is our opinion that all publications are learning tools and that we should support those entities wishing to provide quality information on subjects of interest. It is our goal and mission to become the best source of learning and teaching possible, understanding that other publications dealing with the same subject matter are out there and are worthy of your attention as well.

Thank you,
Dave Canterbury
James Canterbury
Dan Coppins
L.T. Wright.

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From the Editors...

Not Just Another Magazine...

I had a conversation with Dave Canterbury about how cool it would be to have a magazine, one that would bring people together from the knife world and join them with the survival world. What a powerful media it would be. Little did I know how big it actually would become.

Several years ago LT and I talked about starting a knife magazine. After talking to Dave, it seemed that the time was right to do just that.

Our philosophy with the knife company is that it belongs to the people. They will influence the direction we go including design and function. I saw no reason to do the magazine any different. My challenge to you, the reader, is to get involved. What knowledge do you have that you can share with us or with others? This is intended to be a magazine devoted to the people who read it and those who advertise on the pages within it. We can all learn about the things written within the magazine, so let's read it, support those who advertise in it, and let's try to do what we read about and share the experience with someone. If you are not finding in the magazine what you would like to know about we encourage you to let us know so we might find someone who can write an article about that topic. Maybe that someone is you.

Self reliance can mean a lot of different things and cover a lot of different subjects. I for one will be one of the people out there doing the things I read about. What better things could a grandfather, father, mother, aunt, uncle, brother, sister, friend and no I did not forget grandma (I saved the best for last), pass down? Self reliance knowledge and information can be passed down like Grandmothers usually pass down things that taste good, recipes and such. All too fast the world is becoming a world of uncertainty and hatred. Where is the love people?!

Friendships are being created and bonds are being made because of the effort of the people both in the survival education community as well as the knife community. Something deeply rooted within these two groups of people shows me that they truly care about others and they are willing to help. Let's remember to take the focus off of ourselves and try to focus on helping others. Maybe, just maybe this effort will change the world.

May god bless you for your efforts.

Dan Coppins 054

Romans 10:9



About This Issue...

By Michael Henninger

Every issue at SRI I am asked why I picked certain articles for each edition. Once explained, everyone tends to agree with me. So this time I am going to include it for everyone.

As the winter months come to an end, and the snow melts, everyone starts to get a little cabin fever. Now is the time to consider expanding your skill set. We have included a number of articles that help you to think about self-reliance as an every day skill. You never know when a natural disaster will change your world; an accident will force you to assess your situation, or an opportunity to pass on your knowledge to another.

The survival mindset gets us prepared for the situation. We included articles on getting practice in an urban environment, as well as what you need to keep in your workplace to facilitate self-reliance.

This issue also has a great review from Woods Monkey's Associate Editor, Tim Stetzer, of

budget bush knives and some excellent DIY projects all keeping the bottom line in mind.

The highlight of issue #2 in the Food section you can learn how to make your own MRE's and we discuss the importance of understanding wild edibles and the harvest before attacking the plants in your local area.

On behalf of everyone at SRI, I thank you for your support and welcome each of you to contribute something, as this is your magazine.

Mike Henninger



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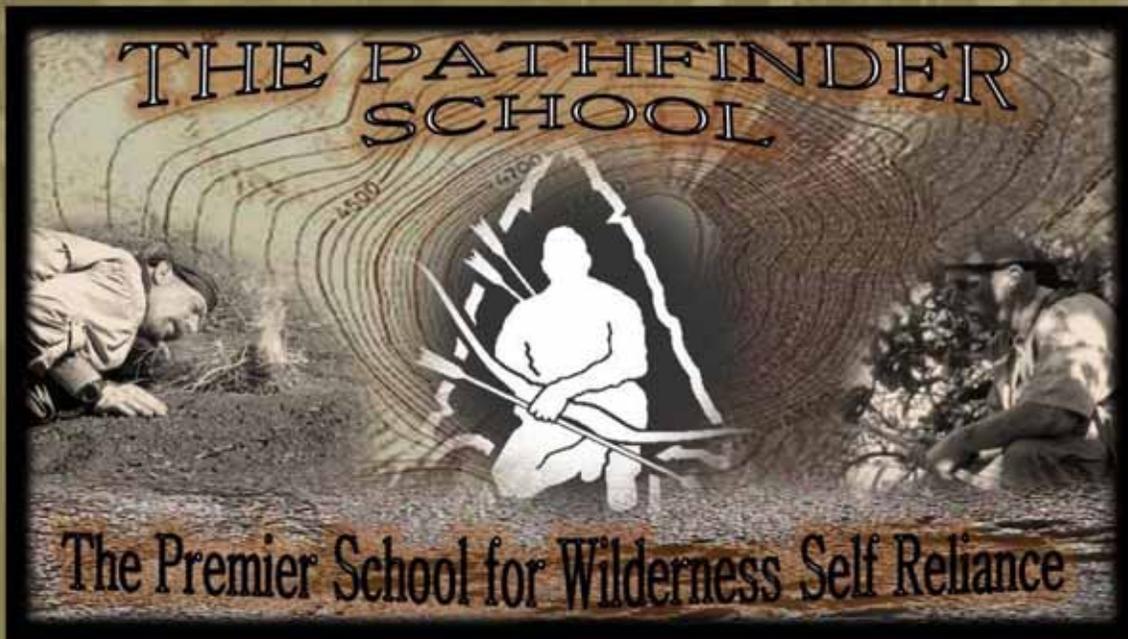
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Founded by Dave Canterbury, creator of The Pathfinder System, author of *Survivability For The Common Man*, and co-host of *Dual Survival* on the Discovery network, The Pathfinder School is the premier school for wilderness self reliance. The Pathfinder School offers 3 course levels: Pathfinder Basics, Pathfinder Advanced, and Pathfinder Advanced Scout; for information on our current class schedule and to see the latest Pathfinder School merchandise, please visit our website at www.thepathfinderschoolllc.com, email us at pathfinder@thepathfinderschoolllc.com, or contact us by phone at (317) 544-8886.

Dave Canterbury



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What's in my Pack? The Five C's of Survivability!

Photos by Iris Canterbury



Many people carry many different items in their packs on a daily basis depending on the situation, environment, and activities planned. I believe that this is called adapting to the situation, which is what self-reliance and survival are all about. With that being said, it has been my passion over these last years to research what base items are really needed. Through practical exercise, trial and error, I have found I can simply add or subtract a few essentials. These would be dependent mainly on a specialized task, environmental or seasonal change.

This thought process is exactly what led up to the development of what I call the 5 C's of

Survivability. I believe that certain items are a must for any emergency scenario and these items should be considered first for any Pack or B.O.B. (Bug Out Bag) you intend to use or create for daily use or even a Car/Truck type kit. The basis of the 5 C's are in my mind the items that take the most energy or specialized materials to create from natural materials in the wild should the need arise. So consider for a

Dave Canterbury is the owner of The Pathfinder School, LLC. and Co-Host of the television show Dual Survival, which airs on the Discovery Channel, he is an avid woodsman and Hunter, Military Veteran, and Survivalist working with hundreds of people each year to pass on the tribal knowledge. Dave is also one of the Co-Founders of Self Reliance Illustrated.



moment you are caught in the wild and need to survive for a 72 hour SAR (Search and Rescue) type scenario. What things do I absolutely have to have to make it through even if I am a bit uncomfortable or low on supplies? Well the main item for any situation like this would be a cutting tool of some sort. With the right cutting tool and a bit of skill I can create anything else I absolutely need like a Fire Set, Shelter, Container, and or Cordage, as these are the items that are of the most use to me in controlling my core temperature. CCT (Controlling Core Temperature) is the main necessity in any emergency situation and is the biggest killer of people lost or stranded due to Hyperthermia or Hypothermia. So the other items mentioned above like Fire, Shelter, Water collection and disinfection, and the ability to lash things like shelters or make improvised tools from cordage are essentials as well.

Looking at the above list it is easy to understand what I call the 5 C's of Survivability.

- Cutting Tool
- Combustion Device
- Cover
- Container
- Cordage

With these 5 items you can effectively accomplish all your basic survival needs for a short period if they are the right combination of these items. That is what we will discuss first in this article.

The Cutting tool you carry should be able to complete any tasks needed to accomplish the other 4 items in the event of an equipment failure as a minimum, so this is what is needed from any tool you choose. A small pocket-style folding knife will be hard pressed to easily accomplish tasks like splitting large logs for fire wood fuel or felling 4" trees to build shelter. A tool for this task should be something that is not too large either as you may need delicate carving for Fire set making or food preparation. To that end I would recommend a 5-6" Blade on a Full tang knife or possibly a small hand axe if you have the skill set and practice to use it for delicate jobs as well. Many people today seem to carry MT's (Multi Tools) as a standard emergency tool and I love these items for an extra tool as they can definitely be useful for many things but they should never be your first or only choice in this



category as they are just not large enough or strong enough to be the one tool you trust your life to for the above listed tasks. I also recommend that your tool be made from High Carbon steel and not stainless or some other exotic metal because it needs to be as multi functional as the rest of your gear, and we will address this as we go. The spine of any knife chosen as your ET (Emergency Tool) should be a 90-degree flat ground and sharp angle on the spine so that it can be used for striking a Ferro rod. This saves you from using the blade for this function thereby conserving your resources and not dulling the blade unnecessarily. The reason for the High Carbon steel



blade is for use as a Steel for sparking Flint or other hard rock material for use in fire starting as well if other methods fail or get damaged. Remember that any items used for the kit must be multi- purpose so that you eliminate unneeded weight and can accomplish more with less, this is a basic concept to conserve resources like the calories in energy spent to carry the kit or the hydration lost from heavy loads and sweating.

Combustion devices should be capable of the most bang for the buck as well and should offer options for things like dry tinder storage if possible as well. The most important thing needed from an emergency combustion device is SURE FIRE! When I say sure fire I am not necessarily speaking of things

like lighters which may or may not produce sure flame in wet environments or after you have been turned over in your canoe. I am really talking about combinations like the Ultimate Survival Technologies Strike Force and Wet Fire cubes. This is a self sustained kit that will work wet or dry and produces a sure flame for several minutes to aid in the ignition of marginal tinder sources like semi green vegetation or damp shavings and barks. The great thing about this implement to me is that it has a very large Ferro Rod built in to it for thousands of potential strikes as well as its own striker of tungsten carbide and a dry storage area in the back of the ABS case for storing tinder after the Wet Fire has been

(Continued on page 89)

Getting Your Family Involved

By Craig Caudill



The Author's wife and daughter collecting pine pitch and bark.

It is no secret that practicing self-reliance, bushcraft, survival and other outdoor pursuits is a ton of fun. One thing that becomes painfully obvious when a large group of these like-minded folks get together is that it is heavily weighted toward the male gender of our wonderful species of critter. This is an unfortunate outcome of these sorts of activities. Some might say that these skills are for men only and that women are not needed, nor are they suitable for such activity. A quick and easy look at the history of Native Americans as well as other aboriginal cultures throughout the world will quickly tell us that females played a huge role in utilizing, on a daily basis, these types of skills. So the question is, how do we get more females involved, and perhaps more importantly, how do we

go about getting our whole family involved in these activities with us? This must happen with the knowledge that we are all part of a more modern, rather than primitive society. The answers to the issues are simple and easy to overcome. The goal is to start them young and transition all new persons into such activity gradually. Quite honestly these are

Craig Caudill is the Director of Nature Reliance School located in Central Kentucky. Craig has spent a lifetime playing, studying, and living in the woods of Kentucky. He teaches various bushcraft and nature awareness skills through his school to individuals and small groups, in private and agency/governmental sponsored events. Craig makes his living as a full-time martial arts/defensive tactics instructor at his school Bluegrass Budokai, also in Central Kentucky. You can reach Craig at 859-771-8313 or via email at info@naturereliance.org.

methods to getting anyone that is new to bush craft into our mix not just females and our families.



The Author's daughter and son in debris hut before completion.

Starting Them Young

One of the most tried and true methods is to start the little ones young in outdoor pursuits. What we mean by starting them young is to simply take them with you. They don't necessarily have to be a productive part of the goings-on to learn a great deal. How young is too young? We would humbly submit that there is no age that is too young to start taking them outdoors. I am sure we all have seen drawings of native cultures and women of those cultures out doing some sort of work with infants strapped to their backs and/or chest. If you start your children young in the outdoors the things they do then will simply become a natural part of their life. With that mindset extended, when they are not in the outdoors they will often feel as if they are missing something. Please keep in mind that little ones are not miniature adults and don't have the same interests that we may have.

We remember well, one of the first trips that we took our daughter on after she was walking and out of the child backpack carrier. The super outdoorsman in me (I say that with a lot of sarcasm) had a very nice plan to take a hike through some hardwoods, and eat a small lunch at a wildlife clearing that contained a small pond. We were sure to get there and see all kinds of wildlife. My little girl (who is now not little anymore) had other plans. We parked the truck and within a few steps she found an anthill that she was mesmerized with

watching the ants go to and from the hill. So rather than moving far ahead we entertained her interests right there and put our adult interests to the side for the day. I tell you that story to encourage you to remember that your interests for the day should not outweigh your ultimate goal of getting your kids into the woods.

Another way that is a useful tool for getting the little ones out and about in the outdoors is for them to have their own backpack, possible bag, haversack, etc. This lets them be more like mommy and daddy and they will feel as if they are doing something really big and important, because quite honestly they are. We made a couple of small possible bags for our children and told them they could carry anything they wanted in them. What started out as carriers for Barbie dolls, rocks, leaves, and sometimes deer scat has now turned into their adult sized carriers, which include flint and steel kits, camo netting, water purification straws, etc.

There are two activities that seem to go very well for younger children and that is to play hide-and-seek and to play with fire, hopefully not engaging in both at the same time. Children love hide-and-seek, and you can keep them safe from getting lost by walking along a trail and explaining to them that they must stay close to the trail. We use to tell our kids when they were little they had to be close enough to hit us with an acorn as we walked by them while they were hiding. This helps the kids to learn camouflaging, moving through the woods quietly, and even what an acorn is and how to find them. Regarding fire, kids are not supposed to play with fire right? Bull hockey! Your kids are going to play with fire whether you are with them or not. We personally believe it is built into our genetic makeup



The Author assisting daughter in bow drill practice.

to want to play or utilize fire (and with water for that matter). Rather than have them do it behind your back, find a safe place to practice and let them build some fire. This may include matches and lighters early on, but you can easily transition into flint and steel, bow drill, hand drill, etc., as they get older.

Now with all that said, teaching these skills is another animal all together and one that is best left for other articles. Suffice it to say that any skills you may want to teach whether it be bush craft or otherwise, to kids or adults, you should always give them a little **PCP** along with it. What I mean is **Praise-Correction-Praise**. Let them know by praising them, then correcting them, and then praising them again. For example if you are teaching fire building and someone is getting a tinder bundle going good, but can't seem to get a good fire lay, then help them like this: "You have done a great job getting the tinder bundle going (**PRAISE**), you sort of just threw the sticks on rather than placing them so the fire could get enough oxygen (**CORRECTION**), now let's do it again. As well as you are doing, I am sure you can get it the next time (**PRAISE**)."

Transitions

To begin with I want to make sure that I do not offend those of the female gender if you are reading this article. I am so glad you are involved, but the numbers of bush crafting women in this modern society of ours are very few and risk diminishing even further. So we are mostly speaking to men here

trying to get their wives, girlfriends, daughters etc. into these activities. If you are a female and are already doing these things, then simply insert male, for female here and get that man out of the house!

We have already discussed some instances of transitioning, but it is a worthy topic of detailing here, because it bears out well when you are encouraging someone who has

and on it goes. That is what I mean by transitioning. To help the beginner you need to make every single one of those transitions as positive an experience as you can. Eventually those newbie's will be skilled trekkers and bush crafters.

We would like to recommend a couple of topics for you that most adults and, our experience has shown, females



The Author and his wife studying medicinal plants together.

not grown up like we just described. This may include your girlfriend or wife, who has never done such things. Please, please, please do not expect a new person to the outdoors to want to jump in feet first and go on a weekend survival trek with you. Finding someone who would actually jump into something that fast is rare, nearly impossible. It might be an easier transition if you simply go to a park, then perhaps a day hike into woods, then maybe a camping trip where you take everything but the kitchen sink,

in particular have shown to be of interest. The first of which is edible and medicinal plants. This topic appeals to most everyone, regardless of their previous woods experience. It also blends well with those that enjoy flowers, gardening and other such nature related activity. The other obvious choice is any sort of self-sufficiency type activity. The important point is how you refer to it. Whether you call it emergency/family preparedness, survival, bush craft, etc, the wording and other ways you

present it to the person new to the outdoors will play a large part in whether or not they want to continue such activity.

In the large scheme of things, it is very important from our perspective that your family and/or other group have sufficient skills in these areas. If there is an EOTWAWKI (End Of The World As We Know It) event, it would be of exceptional value to have all members of your family/group unit functioning as a team rather than separate entities. That does not mean that all members have equal amount of skill in every given area, but simply that each person has at least a sampling of knowledge in all areas, and more intensive study and understanding of a particular area. For example, my wife has a vast amount of edible and medicinal plants, my son is a fire making machine, my daughter



The Author's wife with cattails gathered for making bedding mats later in season.

has a very keen sense of seeing things rather than just looking, and I enjoy investing time and energy into tracking, trapping, hunting etc. Each works with one another to be somewhat proficient in all areas of bush crafting. If there **never** happens

to be an EOTWAWKI event, well, there is absolutely nothing wrong with being more self-sufficient. It provides great ownership of one's life, as well as many, many opportunities to enjoy time with your family.



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Q: What kind of Tents do you recommend? – Sara, NC

A: It depends on what you are doing & personal preference. Minimalist, if they use anything, will use a tarp. I like having an enclosed place to crawl into at night. If I am going distance backpacking, I want a double wall (one is a mesh), free standing, 3-season tent, something a bit roomy and ultra-light weight (< 4lbs). Even if I am by myself, I will use a 3-person tent as I like space (>36 sq ft).

If I am mountaineering, in high altitude, cold, snowy conditions, I want a lightweight (<11 lbs), free standing, 4-season tent. It is best to maximize body heat in an enclosed environment and more room is not necessarily preferable.

If I am at a campground, rendezvous or anywhere I don't have to carry the tent on my back for more than a couple hundred yards, I'll break out, what I affectionately call, 'the condo'. It is a freestanding, double wall, 3-season, standing room, multi-chamber tent with 100 sq ft and weights nearly 20 lbs!

Some of the best tent makers out there include: Bibler, Black Diamond, Exped, GoLite, Hennessy, Hilleberg, Integral Designs, Kelty, Marmot, MontBell, Mountain Hardwear, MSR, Sierra Designs and The North Face.

Q: What kind of women only adventures are out there? - Vickie, MO

Do you have a question for Payge? Send it to payge@turnthepayge.com

Payge McMahon is an adventure athlete, world traveler, writer, fitness coach and popular web personality with sponsors and fans worldwide. She is the 'country girl-next door' from Pennsylvania, with five older brothers and only a few generations removed from being Amish! You can follow her adventures at www.turnthepayge.com



Jewelweed

A: You can be sure women need our 'space.' It is nice to break free from boyfriends, husbands, families and daily stresses to reconnect with our sisters on a non-testosterone filled adventure. Forget the spa! We want to play and whitewater raft the Colorado, go backpacking in the Adirondacks, cycling in Costa Rica, mountain climbing in Nepal, deep sea fishing in the Outer Banks and hunting in Alaska etc.

Here is a list of some of the websites to check out for your women-only adventures:

- <http://www.adventureassociates.net>
- <http://www.outwardbound.org>
- <http://www.adventurewomen.com>
- <http://www.grownupcamps.com>
- <http://www.rangelandhuntingadventures.com>
- <http://www.equinoxexpeditions.com>
- <http://www.blackfeather.com>
- <http://www.arkansasrivertours.com>

Q: How can you treat an allergic reaction out in the wilderness?

A: Assuming you forgot your first aid kit, dealing with an allergic reaction in the wilderness is tricky. Symptoms of an allergy tend to vary, but



Wild Onion & Garlic

some common symptoms include watery eyes, difficulty breathing and itchy eyes. Knowing and identifying a few medicinal plants will be essential in treating your allergic reaction. Below are some recommendations from wilderness expert, Chris Morasky, Director of Pathways School in British Columbia.

Jewelweed (*Impatiens capensis*) is an excellent treatment for poison ivy and poison oak. Its leaves and juices also work against nettle stings, fungal dermatitis and burns; apply the whole crushed plant to the affected area. It grows in North American and mostly in moist woods. Many times can be found near poison ivy. You can identify it by looking for a plant with paired, elliptical, jagged leaves accompanied by an orange trumpet shaped flower with red dots. The leaves are waterproof and thus beaded drops of water will appear on its leaves in mist or rain giving it a jeweled look. Hence the name.

Wild onion and garlic (*Allium* spp.) bulbs can be crushed and the juice applied to stings. The juice is also an effective insect repellent. Widely found throughout North America.

Another treatment for stings is made from the leaves and/or flowers of wild rose (*Rosa* spp.). Chew the plant and apply to the sting. Rose is very astringent. It is found mostly in meadows and grows best in sunlight as is identifiable by its pink/purple flower and 5-7 small, compound and alternate toothed leaflets.

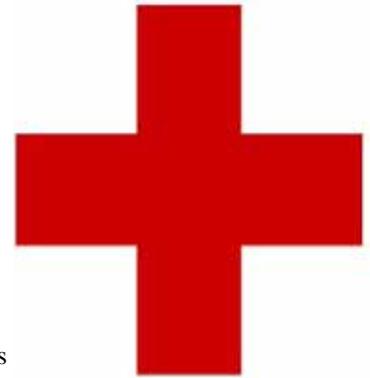
Mud and clay are quite helpful in soothing affected areas and draw out toxins as they dry.

Q: What is in your first aid kit? Chris, IL

A: I customize my first aid kit before each trip. You want to consider environment, weather conditions, altitude, activity and how many people.

If you are in a group of people and getting separated is a possibility, then everyone should have their own first aid kit.

- Band-aids
- Mole Skin
- Gauze
- Medical tape
- Small sewing kit
- Tweezers
- Alcohol swabs
- Super glue
- Ace bandage
- T a m p o n s
- Water purification pills
- Emergency space blanket
- Granola Bar
- Electrolytes powder packets
- Whistle
- Mirror
- Lighter
- Advil – anti-inflammatory
- Imodium & Maalox – stomach
- Benadryl – antihistamine
- Cipro – antibiotic
- Diamox – anti-altitude sickness medicine
- Melatonin – natural sleep aid (* I also bring Ambien)
- Smooth Move Tea or Pills – digestive aid
- Calamine lotion
- Altabax Ointment*



**Most people will carry Neosporin or other type of antibiotic ointment. For those of us who are severely allergic to neomycin or backtracking, common ingredients in the aforementioned, Altabax is a great, yet expensive, option*

Remember, if you require an epi-pen or are on prescription medicine; carry them on you at all times. Safety First!



Wild Rose

Tips from the “Bowguy”

By Jamie Burleigh



Soon you will be called upon by all of your friends and family to build them a bow. You can do it, remember it's only wood.

There is an absolute ton of good information that can be had by way of the Internet or by newsstand if one really wants to make a “bow and arrow” of their own. To be perfectly honest with you I had little patience when I got the urge to cut down the nearest branch and string it up to make my first “self made bow”. So I took a little trip to the field behind the house and began my search for the closest donor tree or branch!

I remember the cool looking bows that the natives were shooting at the great white hunters as they tried to escape the arrows raining down upon them in the old Tarzan movies!

My obsession with bows and archery grew stronger with every passing year. Trial and error were the “twin brothers” who held my hand throughout my bow building adventures. The information that I gathered and some serious time spent in the woods just observing, helped me make up my mind that anyone could make a bow and arrow.

To make such a weapon is in fact very easy. The tricky part is reading what the woods or environment is telling you, as THIS is the key to making a working bow and arrow. Yes, I just told

Jamie Burleigh lives in Michigan, practices and uses primitive arts, survival skills, hunts, fishes, and tracks all the creatures who cross his path while still trying to identify his place in the wild.



Some of the most challenging bow staves can be the most rewarding!

you in the last sentence that you would be guided by not only the stick that you are carving on, but also the woods it came from!

Do not discredit me yet, or think I can also talk with the animals. With the right guidance you should have no problem making a fine bow.... no need for special moisture meters, calipers, special cutting ramps or sleds on a wood planer. You won't even need to cross reference different tree identification guides for your area or learn the proper Latin name of the specimen you will probably end up breaking anyway.

This all can be done at a later date, but for now it is you, your cutting tool, and a piece of wood. You are probably as anxious as I was to just get out there and cut a branch, string it up and shoot something that resembled an arrow from it!

Here is a pretty good list of “tips” and



Do not pull your bow back one inch past the mark at which it does not look like the bow that you want to build. GO SLOW. YOU CAN NOT PUT WOOD BACK ON TO THE STAVE!



Just starting out, I would suggest using saplings or staves that are very close to a finished bow in size and length. This will equate to faster drying times, less wood removal and less calories spent making the bow itself.

“suggestions” that I have stumbled upon in my bow-making journey. There will be some I am leaving out, as there are SO many different scenarios we could go through with different bow woods and design issues. I believe that this small list will help you achieve the ultimate goal in sending skyward, a speeding arrow.

For what purpose will you use this bow? Will it be a hunting bow? A short brush bow? A small game bow? A simple gift to give away to a friend to introduce them to archery? Or an experimental bow to “test” an unknown piece of wood or branch?

Try to begin with a “vision” of what you want to build. You may totally change your idea or concept that you originally started with when you find the donor wood for your bow.

You can cut bow wood ANY time of the year! Fall and winter are best, but not a rule! The



Using the same tool you can remove a little, or a lot. It just takes a little practice and patience!



To find center you can measure it or simply take a piece of cordage and span it the full length of the bow, then by folding that piece of cordage in half and laying it back down on the bow you will easily find true center of the stave. When this mark is found, I place my hand around the centerline and make marks for where I want to the handle section to be.

bark removal will be easier if you cut your bow wood during the Spring or Summer months, because there is more moisture. Trees grow year round, that is why they have early and late growth rings...if the tree did not have these it would be dead!

If you take your wood in the Fall or Winter, the bark will be harder to remove as the sap is now flowing back into the roots for winter and the wood will have less moisture content.

Do not take the first good-looking piece of wood you find! Just mark it with a bandanna or something and look around... if you found this one, you will find more.

When you cut your bow wood cut it a little longer than you are tall.

Look a little “deeper” into woodlots for your donor tree, sapling or branch. Straighter trees tend to grow from thicker woods as they try and reach for the life giving sun in the overhanging canopy.

Do not worry too much about the “pin knots” in smaller saplings or branches, as they are not fully-grown and you can usually just leave them proud on the back, belly or side of your bow. No tree is



Here is my simple mark on one limb tip, very close to the other limbs side. Some people use mathematical formulas and precise measurements when bowmaking, I do not as what I have found that each piece of wood acts and reacts differently, even if they are from the same stave. Some wood will be stronger, some wood will be weaker, that is why I teach in more of a “general” fashion. All wood staves will react differently with every sliver of wood removed from the bow.



For fast and simple measurements I like to use my hand for a reference. Here I am going to place a mark, one hand width below each limb tip. This measurement will give you the proper measurements on where to start removing wood to properly make the profile of the tips thinner.

“perfect”; you just need to realize what to do when you run into them during the process.

Before cutting down your tree or sapling, be sure to look over the South side of the tree. In the Northern hemisphere the South side of trees and shrubs are prone to have more branches or pin knots on that side.

Also remember that if the South side of the tree is getting more light, that is the side of the tree you want to really examine well, as this side of the tree’s growth rings will be the thickest or most dense. This property makes the bow very strong, and usually this is the side of the bow that you will want to make the “back” of the bow stave.

Try to avoid trees or branches that are exposed to prevailing forces of nature, like wind, rain, beating snow and harsh weather. These specimens usually are more twisted and have more compression qualities than tension properties caused by the conditions it grew under.

When you bring your bow wood home, if you remove the bark right away, try to keep it out of direct sunlight and wind. If you leave the bark on, it will be harder to remove the longer you let it sit or cure.

If you decide to make a bow right away with a branch or sapling and do not have any fat or grease to seal it naturally, keep the bark on. Make a fire over soft or sandy ground, after you have made a hot bed of coals, sharpen one end of the bow wood and push it just under the coals into the ground. Do this long enough to heat the wood, but do not let it get to hot to touch. If it is too hot to touch, take it out of the coals and place the other end under the coals to heat it up in the same fashion, then alternate.

Do this until the sharpened end naturally splits then pull it away from the fire. Then proceed to

remove the bark completely from the bow. Now with both ends dark and cracked, and drier than the mid section, wave the mid section of the bow over the bed of coals without scorching. Do this until there is no more moisture sweating from the branch or sapling.

Use fat, rendered animal fat, lard, or oils to protect and seal your bows.

Use the fats from beginning to end in your bow making! As you remove the bark, seal it with heavy fats. It will slow down the moisture loss and prevent checking and cracking in fresh bow woods. It also helps protect the bow when you work it in the different stages of wood removal and prevents excess moisture from entering the fresh wood wounds.

Fat is also a wonderful protective sealant when it is “boned” or burnished into the finished bow. I recommend burnishing the COMPLETE bow.

Listen to what the bow is telling you when you are cutting or scraping into it. If the tool is chattering or wanting to drag uneasy, work at it from another angle or side, go with the flow of the wood.

Every action you make to the bow will have an equal and opposite reaction. This is the rule of nature. Do not try to force the bow to bend or pull in a direction it doesn't want to be worked in. You will have trouble if you try to force heat, induce reflex, or flip the tips, re-curving a bow that has no “natural” re-curve in it.

Surely it can be done, but the bow will fight you all the way, either by lifting splinters, breaking down internally, or flat out breaking on you. Let the wood be what IT wants to be. You will be happier in the end.

Slowly reach the intended draw length when tillering or removing wood during the bow making process. Pull the bow ¼ draw 50 times, then ½ draw 50 times, then ¾ draw 50 times, then full draw 50 times.

Then leave the bow strung at the brace height that it will be at when at rest for 6-8 hours. Then un-string and let sit for the same amount of time. This process will give the bow wood “memory” of what it should do when stressed to the limits that it will be under in normal conditions.

Do not over draw the bow past its worked into or set draw length!



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A photograph of a blue SUV parked in a wooded area. The SUV is covered with a blue tarp. In the foreground, there are logs and a large, dark-colored knife with a wooden handle. The text "BHK" is written in a large, stylized, black font with a white outline. Below it, "Outdoor Adventure Gear" is written in a smaller, cursive font. At the bottom, the website "WWW.BHKOUTDOORS.COM" is written in a bold, white, sans-serif font.

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The Air Rifle

Fit for all ages...

By Joshua Dick



Kunitomo Air Rifle from 1820's.

Do you remember those golden adventures you had in the back yard with nothing more than a stick and your imagination? Then came the day when you received your first real gun. Whether it be the ever popular "Red Ryder" or the "Crossman" or whatever brand you had, the experience was still the same. The raising of the barrel, aligning the sights, the steady inhale and tightening of the trigger finger and then the exhale and steady squeeze... Pop! Your first shot and the ting of the tin can sitting in the backyard. The joy of the adventures living in your mind.

The air rifle probably hasn't entered your mind since you were young, but the advancements and quality of these age old weapons would blow your mind. There are four different common designs of the air rifle. There is the spring-piston type, the gas spring type, the pneumatic style and the co2 powered all of which are handy in the right situation. The spring-piston type has a maximum firing force of 1200fps for .177 cal rounds 800 to 900 fps being the ideal speed for such a projectile. The spring - piston type has a higher recoil forward and back which can be hard on your opticals. "Opticals!? What opticals?" you may say.

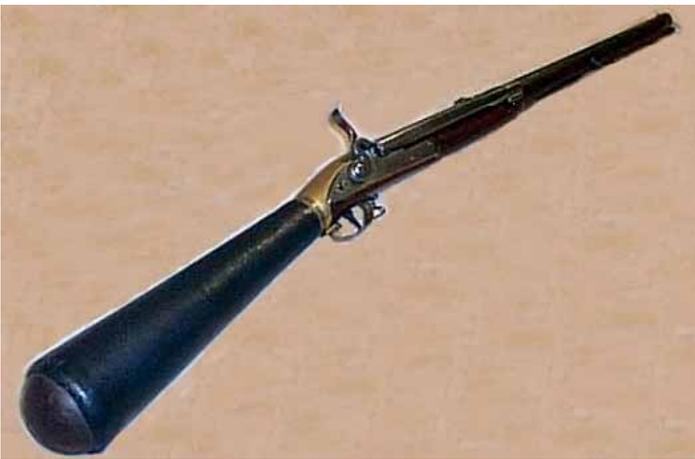
Yes many newer air rifles have a scope mounted to aid in sighting for kills on game anywhere from squirrel up to ram and deer, but be sure you choose a scope that supports such use. The amount of vibration caused by spring-piston type can be hard to adjust to but with a little adjustment in grip you can learn to overcome this obstacle. Some of the high-end models last for long periods with the

right care and maintenance which is minimal. The gas spring type consists of similar actions as the spring-piston type except that in addition to the loading of spring tension there is also a compression of gases to help expel that all important shot. The benefits of the gas spring type are the lower recoil, the higher precision with which each rifle is manufactured and the faster lock time (the time between trigger pull and the discharge) which results in a higher accuracy which is what you need when hunting with an average stock air rifle. The pneumatic style is capable of 30MPa and come in different designs. The multi pump, the single pump and precharge pump. The single pump isn't used much so we won't spend much time here. The multi pump type can reach speeds of 1000fps after 2 to 10 pumps. The precharge pump is a multi shot design which only requires a single pump. It has low recoil and is mostly used by professional marksmen. The multi pump design being one of the best to use. The co2 style air rifle is not one of the most used types because of the lower pressure, the temperature influx's on the propellant chamber, and the cost of purchasing propellant and ammunition just isn't



Different styles of pellets used for hunting.

Joshua Dick grew up in a small town in central Illinois. He began to show interest in the outdoors and survival at an early age. He is an avid outdoorsman, paddler, hunter and student of the art of survival. He dedicates everything he does to his son Alexander and his family.



One of the oldest known air rifles in existence.

economical for the common sportsman.

There are many reasons for deciding to use an air rifle instead of conventional firearms. The air rifle is lighter and quieter which can give you the chance for a second or even third shot. It's easy to care for and you never have to worry about wet powder or misfires (which I have never seen or heard of in thirty years). All of these reasons make it a great weapon choice for canoe camping trips or winter trips where you have to worry about moisture. The sporting aspect of using an air rifle instead of a standard firearm can be compared to that of archery where your stealth and shot placement are critical in taking game.

You may say that's all good if you want to hunt small game, but I want to bring in the trophy deer and ram as well as comparable sized game. Well with the properly placed shot at the right range you can take down larger game easier than some of the smaller game like rabbits, turkey and squirrel. There are places on the internet with field use and specifics of caliber and distance as well as the fps needed to deliver a critical hit. Here is the one I use. "www.beemans.net" which is the best I have found.

There are many different calibers of ammunition you can use for your new adventures. Calibers being .177 or 4.5mm, .20 or 5mm, .22 or 5.5-5.6mm and .25 or 6.35mm. There are two different types of ammunition which are used for hunting. The BB and the pellet (which have many different designs). The BB's come in different gauges but the weight is usually constant within a couple of tenths. The pellets come in different calibers as well as alloy and weight. The types being pointed, hollow, domed and wad cutters as well as combinations of each with steel, copper, zinc and lead alloys used for pellets and BB's.

The economical values of using an air rifle instead of a common firearm are on totally different ends of the spectrum. You can purchase an excellent air rifle at your local store for \$35 to \$125 or could be purchased for upwards of \$500 for some of you die hard "air" heads. The ammunitions are a minimal cost of around \$10 for 500 rounds which will last a long time for any level of marksman.

The laws for use of air rifles have changed over the years so you may want to check on your local laws. Most state that individuals must be thirteen years of age to use an air rifle. Some require you possess a FOID card to use rifles above a certain caliber and muzzle velocity. So before your venture remember to check all state laws that apply and make sure you comply.

So next time the warmth of the sun and the breeze make you yearn for the adventures of your youth. Go to your closet. Drag out that old faithful "Red Ryder" rifle or go buy a new one and head to the woods and stalk your next bit of meat. Create new memories and recall the old with the only toy you will ever need. 



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The Semi-Pyramidal Shelter

By Matthias Bart



Just enough space to sleep.

When it comes to survival, or self-reliance, most of us know the famous rule of three: three minutes without air, three hours without protection from the elements, three days without water and finally three weeks without food. Not respecting this rule may throw you in more than serious issues and by that, I mean a probable death. This article focuses on one of these rules: three hours without protection from the elements. Shelters being one way to get out of what the weather may be throwing at you, I am going to talk about one very

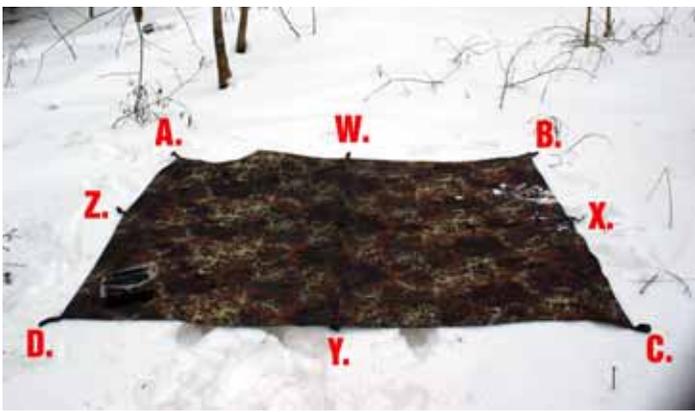
specific tarp shelter.

In bushcraft, there are various ways to setup a tarp to make a shelter. Some of them are made with a specific purpose or terrain in mind; some others are excellent all around quick shelters. I think it is reasonable to file the semi-pyramidal shelter under that last category.

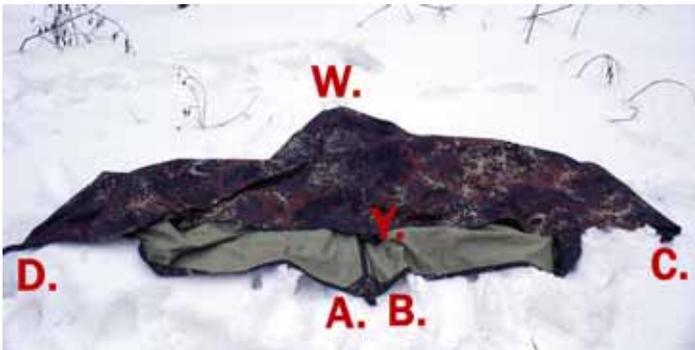
In the wilderness, wind and dampness can be serious issues just like heat and cold. Sometimes, rain can interrupt a hike and leave the ground totally damp, the snow coat can be too thick to dig it to the soil, and the wind may freeze you to the bones and steal the heat of your fire away from you as well.

I have tried loads of tarp setups over the years, but one of them has always allowed me to

Matthias Bart is a lawyer trainee from Switzerland. He has spend most of his free time in the woods since the age of 8, trying to discover, learn and train in both survival and primitive skills as well as other bushcraft skills. You can follow Matthias on YouTube with his channel PinewoodCH which is linked with a survival project of the same name.



Above: Picture 1 - Tarp is laid flat.
 Below: Picture 2 - Stake loop W to the ground.



Picture 3 - Loops A and B are brought to the front and

solve the issues mentioned above and has become one of my favourite shelters: The Semi-Pyramidal Shelter.

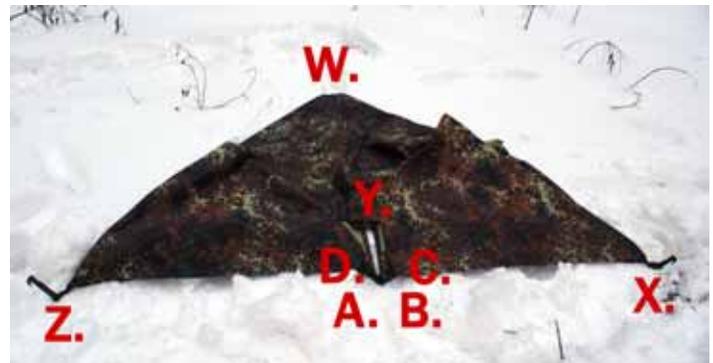
This setup has several key features that make it an excellent quick shelter for mountaineering, trekking, general bushcrafting and, of course, survival. Depending on the size of the tarp, it may not be the most roomy for sleeping (I do usually use a two-by-three meter tarpaulin) but it excels in quick protection from the elements.

The benefits are that it offers an outstanding protection from the wind, provides protection from the ground, conserves a lot of heat from the fire in front of it; it is also quick and easy to setup, very



Above: Picture 4 - Attach corners C and D to the same stake as A and B.

Below: Picture 5 - Pull and stake loops X and Z to the ground.



Picture 6 - Tightening loop Y using a ridgeline.

flexible and you can close it totally.

Of course, if you want a 360° panorama on your surrounding, this is not the shelter to build. You will not feel as connected to nature as with an A-frame setup high over your head, but as us bushcrafters like to say: “knowledge doesn’t weigh



Above: Picture 7 - The central pole method.
Below: Picture 8 - The two-pole technique.



anything” and knowing several tarp setups adds to your personal outdoor flexibility and capacity of adaptation.

Setting up the semi-pyramidal shelter

The way I am going to describe here is not the only one but probably the easiest to show and explain. All steps are described with the viewer standing in front of the shelter, looking at its opening.

For an easy comprehension, I have labelled the four corner loops A, B, C, D and the four mid-length loops W, X, Y, Z.



Above: Some useful accessories.



For this setup you will need:

- A tarp. Its minimal size should be two-by-three meters. It’s possible to build a shelter with a



smaller tarp but it might end up being much too small.

- At least four tent pegs. Add one if you want to use a central pole for the opening and one more if you want to attach a guyline to the central loop of the tarp for extra tension.

- A length of ridgeline, I use six meters eight millimetres, 300 kilos tensile strength cord. This item is optional but useful to get a pole-free entrance.

- One or two guylines, optional of course, but useful for holding the front pole straight, attaching the top of the shelter to a tree and attaching the central loop to a ridgeline and a stake for more tension on the tarp.

Step by step

- Lay your tarp flat on the ground, wide side in front of you. (pict. 1)

- Stake the loop W. to the ground. This will be the back anchor point of your semi-pyramidal shelter. (pict. 2)
- Bring the two back corner loops A. and B. under the tarp and to the front. Add tension, stake them



- to the ground in line with the back stake (pict. 3)
- On that second stake, attach corners C. and D. (pict. 4)
- Pull and tighten loop X. and stake it to the ground. Repeat this step with loop Z. You should now have a nice triangle. (pict. 5)
- Now its time to erect the shelter using loop Y. Here, one cannot count the possibilities. You can tighten the loop Y. using one wooden stick and a length of guyline or a trekking pole, use two poles on the outside of the shelter, tighten a rope between two trees. Possibilities are almost endless. (pict. 6, 7, 8)

If you are in a hurry, the central pole may be the only solution you will have but it is far less comfortable than a pole free opening. The most comfortable setup is achieved by using two poles tied together and fastened to loop Y. This setup allows you to tighten perfectly your tarp shelter and leave the entrance totally free which excels when you intend to build a fire.

The last thing you'll have to build is a

reflector for the fire and as it takes about five minutes to build that one, you will have plenty of time left.

There is no such thing as the ultimate shelter. Sharing techniques and learning from each other is the best way to know what shelter to build in which environment. But this shelter regroups several key features that make it an excellent option to know be it to set it up on the beach or in the mountains in conjunction with your trekking poles.

Now, get out and enjoy the Great Outdoors!

Matthias BART



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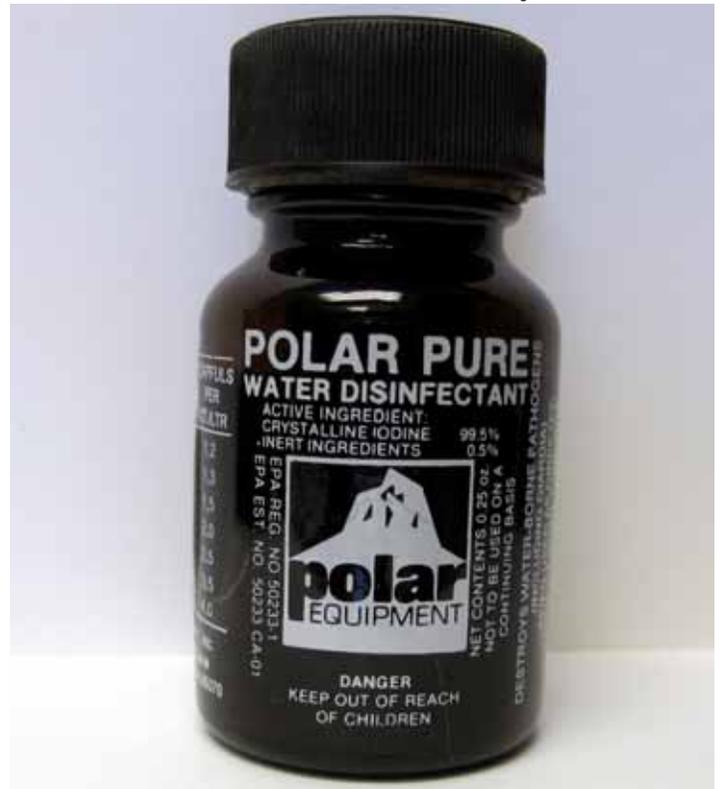


Popular Chemical Water Treatments

By Joe Flowers



The Potable Aqua and Potable Aqua Plus jars are shown here. Notice the rust after a few years of storage. Shelf life is advised at one year.



The Polar Pure Water disinfectant is a handy item to have for its grab and go factor. With an indefinite shelf life and ability to treat large amounts of water, this is a great item to have on hand for emergencies.

Water can arguably be the most important survival tool, other than using your head. A good percentage of the human body is made up of water, and no matter how much of a well rounded outdoorsman, indoorsman, or sportsman you may be, you are going to have to have it at some point, within about three days. Thus is the sacred art of homeostasis, or roughly speaking, the process of keeping bodily functions balanced. Of course, one cannot drink foul water, so it must be treated. Boiling water is a sure way to get rid of pathogens. The process takes time and is hard to do while on the move, and there are a host of different situations, be it snow, torrential rain, park regulations, and low humidity, where a fire can be unwanted and even downright dangerous. Even soldiers, hunters, and

Joe Flowers lives in the mountains of North Carolina. Following his love for animals and the outdoors, Joe got a B.S. in Zoology from NC State with a minor and concentration in Entomology. In pursuit of his passions such as reptiles, amphibians, machetes, and bugs, Joe has traveled from the deserts of Utah all the way down to Peru in search of bushcraft skills, friendly people, and not so friendly creepy crawlies. Joe also writes professionally for many outdoor and nature magazines, designs and consults for knife companies, and makes videos on the side for fun. Joe also works at a non-profit center when he isn't writing, where he teaches survival classes, fitness, and coordinating youth activities for his community. He also has an affinity for Godzilla movies.

“stealth campers” can attest to the disadvantages of an open flame when trying to pass unnoticed. Chemical water treatments are fantastic in these situations. While I’m sure other readers enjoy a rolling boil on an open fire as much as I do, read on and add these viable options to your woods walking toolbox of knowledge. You might even add some of these to your kits too.

Chemical treatments of water have advantages over other methods, but the features that make them attractive are time and compactness. Many of these chemical treatments require a period of time to work through and kill all the contaminants, yet that time can be while the individual is moving on the trail, not in front of a water source pumping water rigorously. The tablet treatments will stuff easily into the side of a canteen pouch or small kit, and do not take up the same amount of space as most filters. They are limited to the amounts of tablets you have, and the taste can be kinda funky some times, but you can adjust to it easily.



The Chlorine Dioxide tablet by Potable Aqua is a fantastic kill all tablet. They come packaged in foil packets for easy storage inside a pack. Note that they do take up to four hours to treat water.

Iodine is one of the most common chemicals in water treatment. Many different militaries around the world issue out Iodine tablets for their performance in controlling pathogens. Iodine works because it attacks the cell membrane of any bacteria inside the water. You can't live without your skin right? The same goes for cells and their membranes.

Portable Aqua Water Purification Tablets

Perhaps the most popular and widely available items on the market are the Portable Aqua brand Iodine tablets. These small tablets come in small .21 oz jars with fifty tablets. The tablets are made of TGHP (Tetraglycine Hydroperiodide), and when submersed in water, a chemical reaction takes place that releases the TGHP molecule. The tablets have a buffer as well, so the treated water has a 5.5PH, instead of becoming very basic or very acidic. Among the people who are anti-iodine, there are complaints of the taste that these tablets produce. Portable Aqua Plus is a product that neutralizes the funky taste, and is sold commonly in packages with the Portable Aqua Water Purification tablets. A little secret for the fellow bush student, vitamin C neutralizes the taste in the same way. All that is needed is a sliver from a vitamin C pill.

TIPS

The required time to kill about 32-ounces of water is thirty minutes, give or take depending on temperature. Make sure that you let a little bit of the treated water dribble out to treat the water that is around the lid as well. You can contract nastys that way, I've had friends who have contracted Giardia just from drinking water, on top of a beer can that was cooling in a stream. Keeping the bottle open for long amounts of time is not recommended either, as the tablets can react to the humidity in the air. The shelf life of an unopened container is around four years, danger, but the company recommends that the bottles be disposed of after about a year. I don't use fifty tablets of this stuff a year, so mine are a little (very) old. Personally, I've used the tablet themselves that are over two years without any problem, but that is my own observations. You can go on their website, under the FAQs, and find out when the manufacture date is on the side of your bottle. I dug one out that is over seven years old! It has a rusted top due to the iodine oxidation. Be sure not to store the bottles next to important metal material either as the fumes can oxidize items in the near vicinity. I store the Potable Aqua bottles in a plastic jar out of the sunlight, and that helps.

Polar Pure Water Disinfectant

Another type of iodine treatment system is the Polar Pure Water disinfectant jar. It is extremely



This is the same manufacturer as the Potable Aqua Iodine tablets, only in military issue form. It has the same expirations numbers used to determine how the age of a Potable Aqua jar.

easy to use, and comes in various sized bottles. There are iodine crystals at the bottom of the amber glass bottle, and water is added to make a solution. A special pouring spout keeps the crystals from running out when pouring. This solution is ready to go when you go out into the woods, and the solution is poured into the cap. The amount of capfuls is determined by your container size. In 68°F water, it only takes twenty minutes, but most of the time many outdoorsmen are in cooler temperatures. The company recommends putting the water in sunlight, adding hot water, or just waiting longer for the reaction to take place. I have found that a 30 minute wait time has kept me from seeing any intestinal aberrations, but you may find your experience different. Even though the jar is more bulky than the tablets, the shelf life is fantastic and indefinite as long as you can see the iodine crystals at the bottom of the solution. I also like this treatment for its “grab and go” factor, and normally throw it in my car camping bag if I’m not sure on the water source. It has been a savior many times over, and can treat large amounts of water.



With any chemically treated water, make sure to get the threads of your container as well. I tip mine upside down after a little while to leak some of the treated water through the threads.

What iodine kills

Iodine effectively kills most of the Shigellas, Salmonella, Escherichia Coli, hepatitis, Giardia (the big one that leaves you on the toilet), many of the

bad guys that create dysentery, and a host of other common organisms. Giardia is the main enemy, as it has been spread through many water systems by way of livestock waste. One pathogen that iodine has not proven to be 100% effective against is Cryptosporidia, a hardy parasite that gives off many of the same symptoms as Giardia. It has a thick walled phase in its lifecycle that gives Iodine a hard time. What kind of chemical treatment works against Crypto? Chlorine Dioxide is one of the chemicals that can kill everything Iodine can, and Crypto as well.



From left to right, Chlorine Dioxide Tablet, Polar Pure capful, and the Potable Aqua iodine tablet.

Chlorine Dioxide Tablets

Portable Aqua also has a Chlorine Dioxide tablet commercially available, usually coming in individual packs of thirty. These little foil sealed packets are easy to use, and one tablet treats a liter. This stuff uses a gas that oxidates, goes through a cell wall, and reacts to the amino acids inside the cell. This is not to be confused with Chlorine like bleach, which uses a different mode (chlorination) to kill pathogens. As long as the foil remains intact, the tablets can last for four years. The only catch that the Chlorine Dioxide tablets have is the treatment time, which is four hours. That long of a wait can be cantankerous while backpacking, but may be worth it if you are treating for a large campsite.

(Continued on page 89)

The Type 87 Canteen:

Military Surplus Fit For Woods Bumming

By Tim Stetzer

Water carriers are abundant and cheap these days. It's really up to you what you want to use to lug your precious lifesaving liquid around when you hit the woods. It could be something as simple as a disposable plastic water bottle and a handmade paracord carrier. If you want to get a bit fancier there are any number of water bottles available in both plastic and stainless steel, like those from Nalgene or Guyot, and there's the ever popular U.S. pattern military canteen either in surplus form or one of the new versions from Nalgene as well. Costs on the bottles and carriers can vary but it isn't hard to spend fifty or sixty dollars depending on the bottle and carrier selected. If you have a pack, you have more options for carrying water. Many packs have hydration bladders these days or at the very least have bottle carriers built in. Sometimes though, it's nice to be able to travel light and it'd be great to just grab your water bottle and go.

With the go light and easy theory in mind, all I wanted was a canteen with a carry strap, nothing fancier. I'd seen some modifications done to U.S. GI canteen carriers but I really just wanted something I could buy, grab, and go; not something I had to modify or tinker with to make work. Somewhere along the way I stumbled across the Chinese Type 87 military issue canteen that came complete with a web harness and shoulder strap. It appeared to be exactly what I was after. It was a retro looking surplus canteen of aluminum construction with a green enamel finish. The Type 87 was a military issue product, not a cheap commercial knock off of some sort, and it's supposedly the same style the NVA used during Vietnam as well. The fact that it had a shoulder strap was what really drew me to it, but I



Canteen has a canvas carrier and adjustable canvas shoulder strap making it easy to grab and pack in the field.

liked the overall style of it as well. It was a roundish shape that looked like it'd be comfortable to carry and it certainly looked pretty sturdy. Naturally, by the time I finally decided to order a couple, I couldn't find them anymore. Well, leave it to Ebay to have all of the oddball stuff you can't find anywhere else. I happened to find a seller direct from China who had the canteens for sale new. The listing was interesting as it stressed the canteens military usage and durability. I knew they had looked sturdy from the pictures that I'd already seen but the seller really went out of his way to show you just how sturdy they

Tim Stetzer was born and raised in Western Pennsylvania, an avid camper since the age of 12. Tim has served in the US Army, the Air Force Reserves and is now a Police Detective and enjoys shooting, knife collecting and hiking. Tim has been writing professionally since 2006 and helped found the online outdoor magazine, Woodsmoney.com in 2008. Tim is currently Associate Editor of Woodsmoney.com



The Canteen has a very tough green enamel finish that blends in well with woods bumming gear. The cap is a brown Bakelite material and is attached to the canteen with a lanyard strap.



The Type 87's strap gives plenty of adjustment so that you can carry the canteen in a comfortable position near the belt line.



The Canteen's cross body strap allows it to be swung to the rear and out the way when you're working, or moving in the woods.

are. He took a hammer to the canteen to show how much abuse it could take and how tough the enamel finish was. Even with the sides smashed in the enamel held up and the canteen functioned normally. He roughed up the canteen body and mouth pretty good and did a decent job of documenting it with lots of photos. It was a lot more abuse than you could expect subjecting your canteen to banging about on your body while out woods bumming. It's unlikely it would get that beat up even if it took a good fall on some rocks while climbing. I was sold anyway, so I ordered a pair of them for about \$15 each.

When I got the canteens I have to say they exceeded my expectations. Like many ComBlock and ChiCom military products these things are built like tanks! They use very heavy aluminum walls; have a sturdy brown Bakelite type screw on cap with a retention strap, and are finished in a very thick enamel coating. The enamel is an attractive deep



The Type 87 holds 1 quart of water, the same as a U.S. GI canteen. They compare favorably in size, although the Type 87 is more rounded and has smoother contours.

green color that goes well with your woods gear. It isn't a flat olive drab like most U.S. military gear, but rather a slightly brighter, glossy green. The web harness and shoulder strap are adjustable and made of sturdy canvas. There was more than enough length to comfortably adjust the canteen to carry just at, or slightly above waist level. The cap and threads mated up well and were easy to screw on and off with no leaks of any sort. There's an inner gasket to help seal the cap when closed and it seemed to work just fine. While I didn't malletize my canteen like the Ebay seller did, I can believe the pictures shown after really examining the build quality of the Type 87.

The canteen weighs 11.7 ounces empty with the strap and carries one quart of water, the same as a U.S. military canteen. I've used my Type 87 canteen now for a couple of day hiking trips and on an overnight camping trip as well. I like the ruggedness of it, and especially the convenience of the shoulder strap. For times when you don't plan on carrying a

pack, but still want some water along, this has turned out to be a great option. I'll likely stick to my hydration bladder for backpacking and longer hikes where I am using a pack anyway, but for hunting, general woods bumming, and short hikes the Chinese Type 87 canteen works out really well.

The Type 87 military canteen makes for a great piece of field kit. Its super sturdy, fairly affordable, comes with a great carry strap, and has cool retro styling to it. If you like the idea of a standalone water carrier with a shoulder strap this one is definitely worth a look. At the time of this writing I see a couple sources for them on Ebay and they're also available from Omaha's Surplus for \$14.95 if you'd prefer to order from a stateside company (they didn't have them when I was looking for these!). Compared to many other aluminum and steel water bottles of similar ruggedness that's a pretty good deal.

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Fire Kit

By Steve Voss

Quick, sure, reliable fire starters are the subject of this article. The concept behind your “first fire” is one that you need NOW and most likely need badly!

The fire kit described is packed with a number of “sure thing” ignition sources. Some are old, like matches and other are new, like a high-tech ferocious rod; but all have a high degree of success in producing ignition. The kit was designed to be compact and reliable.

Because the emphasis is on successful ignition I’ve left out any number of primitive bushcraft methods to start a fire. No fire piston, fire plough, flint and steel, bow-drill methods are included. These are all time honored ways to start a fire given the right materials, enough time and the proper skills and practice.

In a self-reliance situation maintaining a fire may be complex and difficult task—getting it started in the first place shouldn’t make that task harder to accomplish.

Fire! Stolen from the lightning of Zeus by the titan Prometheus, fire has been man’s companion for thousands of years. Mythology aside, fire arises from and is sustained by the “fire triangle”—fuel, heat and oxygen. Remove any side of this triangle and fire isn’t possible. If you apply enough heat virtually any material will burn—wood, aluminum, even the steel in your knife blade will be consumed in the presence of enough heat. Heat in the form of an externally applied source or self-sustaining is the hardest leg of the triangle to procure, produce and maintain. Interestingly enough oxygen does not burn; oxygen is merely an oxidant or catalyst that allows the interaction of heat and fuel to take place fast enough for fire to be produced and maintained.

Rooted in mythology and explained by science, fire is still largely an art to produce. In this article, let’s take a look at some of the craftsman’s tools and techniques that produce this important self-reliance element.

As I write this the outside temperature stands at two degrees Fahrenheit and the wind chill is in negative numbers; on a day like today the ability to start a fire rates high on the three-hour scale in the Rule of threes. In fact I am going to argue that the

Steve Voss is an avid outdoorsman with over 50 years of adventures and first-liar doesn’t stand a chance tall tales. In addition to fieldcraft, Steve has been known to enjoy hiking, canoeing and hunting the occasional tree-rat. When he isn’t in the woods, Steve can be found riding his mountain bike, working on his gear or discussing the injustice of too little time in the field. The best compliment he ever received was on a portage trail in Canada when a loaded down party commented, “You boys sure do travel light!”



Kit ready to go in the jacket pocket.

ability to start your first fire enters into the three-minute scale—wind, cold and frostbite will rapidly erode your ability to use tools as the weather elements sap the dexterity and fine motor skills from your hands and fingers. If you want to test this, plunge your hands into a bucket of ice and water for five minutes and then try to strike a match, flick your lighter or strike your ferro rod; you will be amazed at the loss of function.

It isn’t sexy but in cold weather my two most important fire items are a candle stub and a Zippo lighter—two very “low speed” but reliable items. Yes there are arguments against a Zippo lighter—but mine is thirty-plus years old and with fuel and flint it strikes every time; I’m talking about a quick, sure fire in a hurry. The candle stub lets me transfer the flame to another reliable and slower burning fuel source—wax. A few years ago I broke through the ice crossing a shallow creek and got wet to the knees; not life threatening but cold. A handful of dry grass and some Sycamore branches provided tinder and fuel for a quick fire. My lighter lit the candle, the candle lit the tinder and in short order the tree branches were burning hotly. I dried my pants,



Contents ready to pack.

brewed a cup of coffee and went on my way vowing to be more careful on thin ice.

With the “quick and dirty” out of the way let’s take a look at one of my fire kits. This one is packed in a small dry box (bright yellow so it’s hard to lose). The contents of the kit give me five sources of ignition—match, butane lighter, ferro rod, magnesium/fero rod and Spark-Lite striker. Also packed in the kit are several sources of tinder—something to catch and grow the ignition source into a steady flame. The tinder includes Vaseline-soaked cotton balls, commercial Tinder-Tabs and a small roll of all-natural jute twine.

The dry box keeps the kit altogether and organized; it has a built in lanyard attachment point and a short length of Paracord serves as a lanyard or belt tie-in—come to think of it the Paracord would also serve as a string on a bow-drill set.

Looking at the ignition sources, first don’t be quick to dismiss or deride a good match; in this case a commercial waterproof, strike-on-box match. It

wasn’t more than a century ago that the match was “modern” and prized above all other fire starting devices. The butane lighter is a more storable form of my tried-and-true Zippo; a bit cranky and stubborn in cold weather unless you carry it close to your body. The ferro rod and magnesium/fero rods are just high-tech versions of flint and steel—I keep the strikers with both; in fact the hacksaw striker will work with a bit of “found” flint or chert to throw sparks. The final ignition source is a Spark-Lite striker; small, compact and functional with only one hand available this is really a redundant Zippo striker minus the volatile Zippo lighter fluid. I suppose I could squeeze in a Fresnel lens or small magnifying glass but my personal experience is when I really need a fire the sun isn’t shining!

The final items in the kit are a couple of forms of quick, reliable tinder. The commercial Tinder Tabs will work even after having been dunked in water as will the Vaseline-soaked cotton balls. You may need to shake them off, squeeze them dry but they do work after a wetting. The jute twine



Packed up and ready to close up.

serves as an alternative to natural tinder once you unwind it and rough it up; it also works well with a bit of charcloth. (There is no charcloth in this fire kit but it can be improvised in the field with very little effort.)

Once you have flame, you need fuel. Remember to start small, use the finest, driest materials you can find and give the flame room to breathe—don't forget air (oxygen) is a critical element here. The subject of fuel for the fire and types of fire lays is a subject in and of itself. It is also highly dependent on where you are/what you have on hand—soft pine in the north or dried buffalo chips in the southwest and all in between may serve as fuel

to maintain your precious flame.

When you start a fire you establish a link back through the ages with earliest man; a link that is shrouded in myth and legend. You also have an obligation—make sure you control your fire, don't let it burn out of control or unattended. If you are on public land (recreational) please use established fire rings/pits where they exist. If you are building a fire on "native" soil be sure to create your fire with an eye towards "leave no trace". By doing so you maintain the wilderness experience for the next guy and you have an opportunity to practice your stealth—remember the best fieldcraft is never seen.



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The Bamboo Fire Saw

By Ken Seals III



When we first think of friction fires, we all get visions of hand drills and bow drills.... and its only natural since these are the most often spoken of, and taught methods of primitive fire starting. I am going to tell you about a method I use from time to time that can be done with one hand and the "tree" you use for it can be used for many other items with little to no work. I am of course talking about the bamboo fire saw method of fire starting.

It's a little known fact that bamboo grows all

Ken Seal was born in Sumter, South Carolina and has lived in Florence, South Carolina all of his forty-two years. He served in the US Army with the 72nd FA Brigade in Germany, is an avid outdoorsman, a leader in the Pathfinder Youth Organization, and an all around knife fanatic who also enjoys making knives from time to time.

over the US. Some stories have it being brought over by Chinese workers when they were building the train system across America. I tend to believe this, since that is where most of the outcrops that I find reside. People also dig up the shoots, and plant the trees in spots that get a lot of noise, or wind traffic, as a barrier against them. Little did they know that in a couple of years time the small patch they planted would be taking over the entire yard. Bamboo, and River cane are of the same family and very similar in makeup and design, but river cane is a smaller and thinner variety. True bamboo can be anywhere from one-and-one-half inch around, to five inches and as tall as fifty feet. With some varieties the wall thickness will be as much as three-quarters of an inch.



For the fire saw we are going to harvest a piece that is about two feet long, three inches around, and one-quarter inch thick works best to get fast results. You will want to use a piece that has fallen over, is dead, or has been cut for a while. As with all friction fires, the drier the material, the more likely you are to get a coal. Split the bamboo in half long ways. Take one piece and cut a thin notch in it about one-sixteenth to one-eighth of an inch wide, and one inch long going the direction of the circumference. (See picture 2) You will of course need a bird's nest material, but unlike most friction methods where you transfer the coal to the nest, here the nest will be used to catch the coal. You can use just twine, or even a natural nest you have made or collected...but I prefer to just use the bamboo to make the nest. The outer skin can be scraped with the sharp spine of a knife (see picture 2a) and in short time you will have a good bit of nest, already fluffed and ready. Take



the nest and put it on the backside of the notch you just made, and hold it in place with your thumbs, or first fingers (picture 3). Place one end of the un-notched piece in the ground...the other end goes in your chest, just under your sternum. You can use a shirt, or bandana wadded up to make it a little more comfortable, or if you are a big fellow, you can wedge it into your hip. Place the notch on the edge of the bamboo, (picture 4a) with the back of the notch facing you, and the bird's nest against the notch, with light pressure holding it in place. With a slight downward pressure, and a steady rhythm, start pushing and pulling, or sawing the piece you have in the ground. In a few seconds you should smell the tell tale smell of burnt wood, and see a little smoke...as soon as the smoke rises, increase pressure, and speed. I generally count to ten when I see the edge of the bamboo turn black, and the smoke is rising steadily. Slowly remove the sawing





4b

piece and turn it over being careful not to drop the nest that should contain your coal. Take your time, and as with any other method, let the coal grow. Holding your hand under the nest, tap the bamboo with your knife, or other object, sometimes I use the other piece, and the coal should fall out into the nest. (Picture 4b) With long gentle breaths you should be able to blow the coal into a flame.

Now I know what you're thinking. I said this could be done with one hand, and you're reading back over what you have just read, and you don't see how it can be done. Here is the trick. If you are injured, or like a good friend of mine, have only one arm, there is an alternate method that can be applied. This method is also great to use with children, because two people can work the saw at once, making it a fun challenge for the kids. Prepare the bamboo as you did before, but when you split it into two pieces, we are going to shorten on piece by cutting off the nodes on each end (see picture 5). The nodes are the sections inside divided by a thin, but dense membrane. Now split the pieces you just cut, so that you have one long piece, one short section



5



6

with the membrane on each end, and four split pieces (picture 6). Make your notch in the short piece, and place your bird's nest against the notch. Place the section on the ground notch facing up...you may have to place a rock, or other item under the nest to make sure it stays close to the notch so it can catch the coal. Using the four sections you split off, drive one into the ground on each side and each end of the notched piece (picture 7). Now take the longer

(Continued on page 90)



7

Snakes on a Vein

Contemporary tips for surviving a snake bite in the wilderness.

By Dave Lohman

As you may already know, one of the most important things you can do prior to setting foot into any section of wilderness is to let others know exactly where you plan to travel, how long it should take and who is going with you. This information, when given to park rangers and any other local search and rescue operatives can prove to be doubly valuable in the event of an emergency such as a bite from a venomous snake. You'll want as fast of an extraction as possible by emergency services following a bad run in with the legless lizard if you plan to be away from civilization for a spell.

As a boy, growing up on the water I have seen and captured more than my share of copperheads and cottonmouths but always did my best to avoid contact with the dangerous end. These days the majority of my spring and summer outings consist of deep woods hikes, the occasional bear sighting and skirting around a rattlesnake or two, and considering the fact that the rattler is so much more venomous than a copperhead or a water moccasin, I seem to be spending more time going around the little fellows than I did in my youth so I'd like to share a few tips to help you avoid being attacked by these pesky little rascals as well.

Avoid walking through tall grass unless you are wearing thick leather "snake-proof" boots.

If you must climb over a log or rock, check the opposite side visually as well as with a walking stick or similar long item.

Keep your hands and feet out of crevices that you can't see into.

Pry up rocks and potential firewood at your campsite with a stick to check underneath before attempting to move them with your hands.

If you see a snake, any snake, the safest thing to do is to leave it alone. Even a rattler won't warn

you that he's there every time you're about to step on it.

With over 7,000 people per year in the United States reporting venomous snake bites according to the University of Florida Institute of Food and Agricultural Sciences, there has been a good amount of information gathered as to what works and what doesn't in the treatment of these wounds. Drawing from my own knowledge of 30 plus years dealing with snakes as well as speaking extensively with representatives from the Red Cross, several local EMS crewmembers and the Penn State Poison Center located at the Milton Hershey Medical Center who sponsors the National Poison Emergency Hotline, I've compiled the following list of things you should do and some things not to do after a snake bite, all of which are taken from the combined current treatment recommendations endorsed by these groups.

DON'Ts:

Don't use an ice pack, cold spray or any similar type of cooling device applied to the bite area as it may increase the possibility of necrosis at the site of the wound.

Don't use a tourniquet. This will completely disrupt blood flow and could cause the loss of the wounded limb to gangrene.

Don't bother with a snake bite kit. At all. Almost all of these kits include a blade for making incisions at the fangs point of entry and a suction device for removal of the venom. Neither of these has been proven to benefit any documented bite victim in any way as this technique removes almost none of the venom and in many cases cited by the Red Cross, has been shown to make the wound worse either by blood loss or infection leading to necrosis around the bite.

Don't attempt to suck the venom out of a snake bite victim by mouth either. This may only serve to envenomate you either by a sore in your mouth or most likely, through the mucous

Dave Lohmann is an avid outdoorsman who has spent the majority of his life as a hiker, camper, a tournament angler and hunter. Dave is also the co-owner of, and chief designer for the Second Amendment Knife Company in Pennsylvania.

membrane.

Don't panic. Maintaining a resting heart rate will slow the reaction to the venom and allow you more time to get to a medical center.

DOs:

Identify the snake as venomous or non-venomous. This is fairly simple in North America as there are only a couple main kinds of poisonous snakes indigenous to the United States. There is the coral snake whose habitat is generalized in the southern U.S. and the pit viper which covers virtually all areas of North America. The coral snake can be identified by its black, red and yellow rings along its body with the red and the yellow bands touching each other. Remember that red on yellow will kill a fellow. Red on black, venom lack. Of course this only pertains to the North American species. The pit vipers are generally distinguishable by the small holes or "pits" located between their eyes and nose as well as the wider, fairly flat looking triangular shape of their heads. Most non-venomous snakes will have a more oblong yet rounded head shape. Try and remember any colors or markings as well to help an emergency team or doctor treat you properly.

- Note the time of the bite.
- Clean the wound with an antiseptic soap or rinse and flush with clean water.
- Remain as calm as possible as mentioned earlier. Keep that heart rate low.
- Immobilize the wounded area and keep it below chest level. It has been proven to assist in slowing the flow of the venom to the heart.
- Apply a snug dressing (not tight like a tourniquet) several inches above the bite just tight enough to slip your finger underneath.
- Remove any binding items such as watches, rings, wristbands or anything else that may constrict a swelling limb.

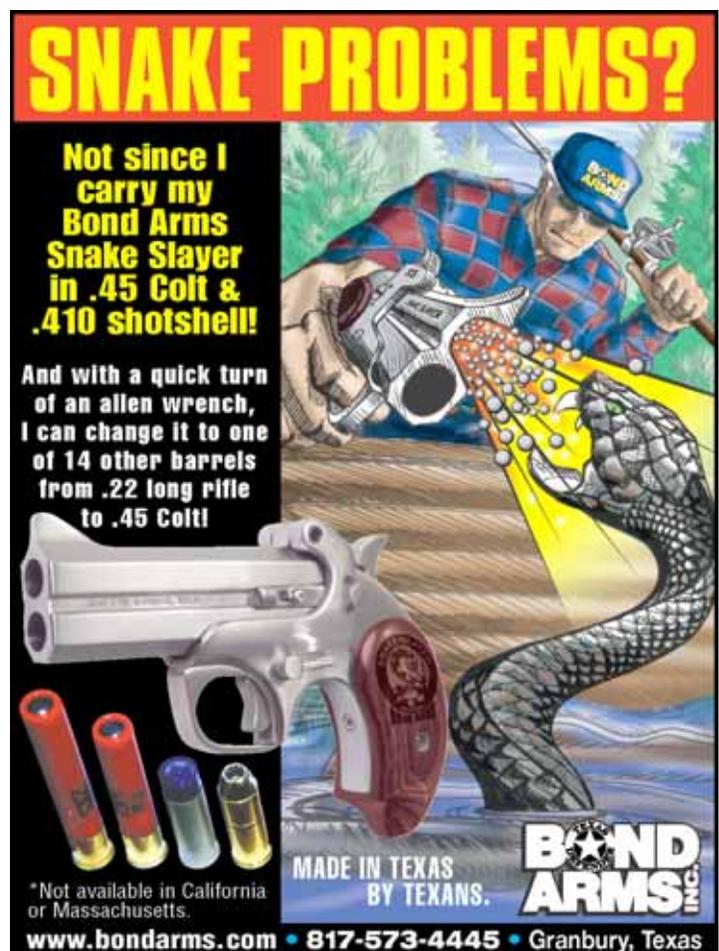
If you have a cell phone, use it! No matter how the bite is field dressed you will need to get to a hospital A.S.A.P. Let 911 know where you are, the type of snake, where the bite is on your body, how long ago you were bitten and if there is a place for an EMS helicopter to land. Clearings large enough for helicopters to land are something that every hiker or camper should map out before going on any

extended outing.

Snake bite victims will want to get medical treatment as close to within 30 minutes as possible from when the bite occurred. This has been noted as the average time that emergency treatment should be delivered to save tissue and limbs as well as avoid possible permanent heart and nervous system damage. Remember, time saved equals tissue saved.

Keep in mind when you feel your heart rate begin to accelerate that on average, 30 percent of snake bite victims never get venom in them at all and according to Florida State University's statistics, of the 7,000 plus reported bite victims, an average of only 15 of these people ever die from their wound.

Please note that snake avoidance is the only sure way to keep from being bitten so when you're out in the deep woods, hiking up the big, blue mountain or becoming one with the earth by cooking yourself alive in the sandy desert remember that you might need to get out quick but if you can't, then make absolutely certain that you can at least get out eventually and with as little injury as possible. If you think about it, the only thing better than being able to enjoy the great outdoors is to make it back alive to enjoy it again so be safe out there. 



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Experience for the Common Man

By Kelly Martin



Most folks serious about wilderness trekking carry a “mini kit”, usually a small tin full of stuff for an emergency stay in the woods. The Author’s kit is focused on first aid for cuts or scrapes as well as fire prep.

There are two reasons for wilderness emergencies: loss of direction and loss of mobility. Every single scenario can be peeled down to these two factors. From plane crashes to shipwrecks and whiteouts to whitewater, loss of direction and mobility will check you in for an extended stay. Losing one is bad, losing both is worse.

Kelly Martin is a concrete finisher that resides in the state of Pennsylvania. He enjoys all aspects of the outdoors, as well as firearms and similar pursuits. Kelly was active for about three years and an EMT-B and has recently re-certified after several years of inactivity in the field. He is married with four children.

Anything can happen, but the truth is loss of direction is easily avoidable with common sense and planning. Add a modern GPS unit to the mix and a bag of hammers could find its way home. Even if you do get turned around, mobility gives the wilderness trekker options. Without mobility it doesn’t matter if you know your location. You’re skunked.

Loss of mobility is commonly caused by bodily injury. For the healthy survivor it's typically trauma of some sort, like a deformity (probable busted bone) due to a fall. For others, a medical emergency can bring about the trouble. A MI (heart



Above & At Right: The Author's main first aid kit consists of the basics and takes up one external pouch on a medium ALICE pack. It's waterproof and has enough extra space for additional considerations depending on the needs of the group. The "quick grab" envelope has all the stuff for a laceration or minor burn and prevents the need to rummage around.



attack) or perhaps an allergic reaction to venom can put the survivor in a real fix. For whatever the reason, injury leading to loss of mobility is the most difficult obstacle to overcome in a wilderness survival situation. The mental aspects of dealing with pain and demoralization can be enough, but the fact that your body has a real injury that needs dealt with adds a whole new dimension. The first requirement for the injured person is to get a good hold mentally. Nothing can prepare you for this except exposure to the real thing. It's like getting "buck fever". I've seen formally trained professional individuals make ridiculous decisions where the metal meets the meat because of mental obstacles. If your brain can successfully accept the situation, advanced first aid training is key to survival. Fortunately the average man can have both. Volunteering with local EMS as an Emergency Medical Technician gets you formally trained in advanced first aid, as well as exposes you to injury and death. Not only do you get the exposure you need, but you offer the community a vital service

as well. This article focuses on getting started in EMS, and the crossover benefits you receive as a wilderness enthusiast.

Getting Started

I was in EMS for about three years. After an extended vacation, I recently completed all the continuing education requirements and training to reactivate my certification and begin running calls on a basic life support unit. This puts me in a unique spot- a trainee all over again. I quickly found out that



All your junk along for the ride should be considered for first aid applications. ALICE straps can serve as restrictors or immobilization devices. A larger blade can quickly process resources into splints, litters, a crutch, and so forth.

you don't stay fresh without practice!

Getting started in EMS is easier than you might think. If you're in high school, great! Check out the public service options in the vocational technology programs. You can get credentials as an EMT and have some fire fighting certs before you graduate high school. For us old folks, just tap your local ambulance station for information on certification. My local station set me up with Pennsylvania's web based con-ed program, and away I went. Your best bet to get started is to find out who your local provider is (the service that responds if you call 911) and call the station. If nobody answers, leave a message asking for information about local training and possible volunteering. Someone will get back to you. Most times, a local station will reimburse costs or provide free training if you commit to volunteer service. Failing that, tap a local hospital by asking the receptionist for information on CPR training and other available programs. Thirdly, call your local community college and they can set you up. I took my State test as well as my practicals at a local community college. Exploring those three venues in that order should get you satisfaction. If you have no other option, try the net, but it can be a mixed bag.

EMT Training- what to expect

Training is not hard, but it isn't a handout. The EMT- (Basic) course consists of 125.5 hours of classroom and practical training with tests throughout. At the end you face a surprisingly

challenging final exam. After the course is complete, you must pass your State's written exam as well as practicals by displaying competence in CPR, trauma simulations, and medical simulations. Live actors will serve as your patients. It can really rattle you as you run through your assessments and apply your training while the instructor glares at you. Don't screw up! I know at least one good EMT that failed this test on the first go-round.

Your scope of practice will include how to determine mechanism of injury, patient assessment, advanced first aid treatments for trauma and some common medications as well as administration of oxygen, airway management, CPR, and so forth. The skill set is actually pretty broad. A paramedic has a much larger scope of practice, but the main thing that sets an EMT-B apart from a paramedic is advanced drug treatment and administration. Because of the complexity of this skill set, the paramedic trains for approximately two years before being cut loose on the general population. Paramedics usually make EMS a career.

In addition to practical field skills, you will learn how the body works. Muscle and skeletal systems, major arteries, basic childbirth, and the likes. It's all critical to the EMT. This aspect of your skill set fits smoothly into wilderness emergency applications as well. Blood and guts, bolts and nuts. Your body's a machine. Learn how it works.

Experience is Critical

I'm a concrete finisher. A normal guy with a



Mobility is key to survival if you need to self-rescue. You may need to consider a compromise in care to stay mobile. Most of the time this compromised approach will not be acceptable outside of a wilderness emergency.



Prevent injury by considering safety. Minimize your exposure to falls and other possible trauma. Here two fathers stand on either side of the log bridge as the kids cross.

family. I've also splinted broken bones, inserted airways, administered oxygen, performed CPR, and checked vitals on accident victims. One of my most exciting memories is in regards to a vehicle accident that happened at an intersection while I was at work. I threw my construction tools down and crawled into the smashed up SUV, treating two injured kids with assistance from a policeman. I was still in the vehicle when firemen began to rip the thing apart with a tool called the "Jaws of Life" to extract the injured driver. I'll never forget that sound! It was unreal, just like a movie. After the ambulances left the scene, I washed the blood off my arms in a wheelbarrow on the job site and picked up my tools. When the adrenaline wore off, I almost cried. Later I was told they all survived.

This story is very important and was relayed for a reason other than drama or self-promotion. It should be noted that the children were screaming from inside the SUV and injury was evident from

blood splatter on the windows. Also, the severity of the crash was to be considered. Several bystanders appeared on the scene shortly before me and refused to approach the vehicle despite the cries for help. *I had to run past them to provide assistance.* You see, no amount of practice or training can prepare you to actually patch holes in real people. To perform, the average person must consistently do it for real. Experience is critical.

Experience is not only necessary for mental ability. It helps you set priorities as well. When you run on an established ambulance you are part of a system. It's a continuum (or flow) of care that progresses from first aid to secondary aid- a hospital. On an ambulance you have resources, tools, help, and mobility. You have options. In a survival situation you will most likely need to compromise care to balance those needs. For example, a combat medic is typically fixing up people in an unsafe environment. His approach to care of the injured may



Kids can learn too! My son learns the basics of C-spine management as well as improvised immobilization.

be different than an EMT at a car crash, even though the trauma may actually be very similar. An EMT has a safe scene secured by LE and firefighters. Our combat medic may have to compromise care to quickly get to a safe area, or safe scene. He may have to do things that fix the big problem now, but create two or three others later. If he refuses there's a real possibility of getting shot up.

Survival first aid suffers from the same concept. It's entirely acceptable to consider eating a cigarette or drinking a bit of kerosene to cure intestinal parasites if the alternative is death by intestinal parasites. It's dangerous, and may or may not work. You must have the presence of mind to balance the medical problem with available solutions and other critical needs like shelter, water, food, and mobility. Simply put, I'd rather survive with half my rear end than die with all of it!

Crossover for operating in a wilderness environment

Truth is, much of the EMT-B's skill set is not applicable in a wilderness environment. Remember that a typical EMT is one element of a continuum of care. Your training is relevant to that section of the process and the tools provided to you. After you drop off the patient at a hospital, you fill out a trip sheet and your done. It's uncommon to see that patient again. In a wilderness emergency, that process is all screwed up. In that case, you must provide secondary care and build on your typical scope of practice. Stuff like shelter, hydration, and calorie intake must also play into care, as well as the need for mobility. You may have to do something way outside of your scope to solve a persistent problem. It might get

tricky, and it will certainly not be acceptable outside of a wilderness emergency.

Additionally, note that I have no training beyond EMT-B. My wife has a college degree in science and works as an RN specializing in telemetry, (heart care). She observed that the typical wilderness heart attack emergency would be practically untreatable. Without specialized tools and drugs available to her, a highly trained individual would be reduced to simply saying, "yep, it's a heart attack." Point is, education and tools are tied together and one is dependent on the other. Don't think more training is the key. It has to be relevant training.

So we've observed the link between training, the care continuum (first aid leading to secondary aid), and the importance of tools. So what? Should I even do this? Will it even help me in a wilderness environment?

The answer is yes! There are several elements of your training and experience that will be a great help in a wilderness medical emergency.

First is mental toughness. You've already seen insides on outsides. You've had your hands red with the blood of others. You've smelled it, and you won't forget it. If it sounds grim, it's because it is! With this behind you, a person can mentally process the wilderness disaster experience. Without this ability, it's over.

Second is your understanding of the body and its immediate needs in an emergency. Something as simple as being able to identify where major arteries are located can be invaluable.

Thirdly, use your learned ability to prioritize. Combine all your wilderness survival needs into a



Below:

Top - The driver provides fast mobility, a crucial aspect of care. Loss of mobility in a wilderness medical emergency is difficult to overcome. Pictured here is a communications unit as well as the on-board computer. Modern GPS aids as well.

Middle - A “first-in” bag strapped to the litter. The unit is re-stocked and sealed for the next call. It has all the tools an EMT needs for basic considerations in a trauma situation.

Bottom - Strap em' in! A basic board for immobilization. Typically immobilization is required in trauma to prevent further injury, however compromise may be required to facilitate mobility in the wilderness.



Above:

Top - Your local EMS station will be able to answer questions you may have concerning training, as well as volunteer opportunities.

Middle - A basic life support ambulance ready to roll.

Bottom - The Crew Chief is responsible for communications as well as directing patient care. Pictured here are a radio, on-board oxygen, and a suction unit.

workable structure and play your hand as best you can.

Finally, confidence, in yourself, and placed in you by others. The mental outlook of an injured survivor is much brighter if there is an experienced EMT providing care. If you are not confident, act like it anyway. Don't lie or be macho, just exude raw confidence. My wife has seen many medical emergencies over her years as an RN. I remember awhile back that she told me staving off death is just like flexing a muscle.

The more confidence an injured survivor has in you, the longer they will continue to flex.

First aid kits and other considerations

It should be noted that I have never been badly hurt in a wilderness environment and my experience is limited to formal EMS situations. My approach to a wilderness first aid kit is theory based on that experience, so keep that in mind. I have observed many different approaches to wilderness first aid kits. A first aid kit for wilderness application is a highly tuned thing, based on who you are and what you're up to. For someone with pre-existing medical conditions exposing them to certain injuries, the kit must be tuned to those possible needs. For example, last year I ran a basic survival class at a local elementary and Jr. high school. A handicap fellow was in the group (he did fine), as well as several others new to the subject of outdoor survival. We worked with Mora 511's, a very sharp little cutter. I vamped up material in my kit for cuts or stabs and would have pulled out stuff like the cold pack and pain pills to make the room. You get the idea.

I've seen everything from nothing aboard, all the way to a do-all tackle box sized "first-in" bag complete with surgical options. Wow! Your lets-get-real-here first aid kit is restrained by size and weight, just like all your other junk along for the ride. Consider the fact that you will probably not need your kit. Most guys trained in first aid poo-poo the idea of it as an "extra", but how many times have you actually used your first aid kit out of absolute necessity? My dedicated kit consists of just the basics in a waterproof can and takes up one exterior pocket on a medium ALICE pack. It probably wouldn't even need to be that big. A consistent point made by folks involved in "ditch" first aid is that basic care is almost always better than advanced

secondary aid. For example, an attempt at stitches (even by the trained professional) is discouraged in wilderness applications for many reasons including pain management as well as infection. Consider these things while building your kit.

Crossover is a priority in wilderness first aid considerations. It keeps the size and weight of your dedicated first aid kit manageable by considering one item for a second use as a first aid item. A good example is using your bandanna for bulky bandaging material in case of a laceration requiring a pressure dressing. Consider using a clasped ALICE pack strap or a belt in conjunction with other available padding for a restrictor band to help slow the flow of a hard bleeder. Consider a large wilderness knife as it can quickly rough out splints and other items from available wilderness resources. Get training, and then get creative with your crossover ideas.

Points to remember

Certify and run ambulance as an EMT. In addition to this, read stuff that goes way beyond your scope of practice. In a dire emergency, you may be called upon to do something outright wild. At least you'll have read about it. Consider adding Hugh Coffees excellent book "Ditch Medicine" to your library. It's a good read. The military FM "Emergency War Surgery" was beyond my ability to comprehend, but I read most of it anyway. The chapter on wilderness medicine in FM 21-76 "Survival" was pretty solid stuff as well.

Be pragmatic. Remember to actively apply crossover abilities in all your stuff. A simple headband is a lot of things in first aid. A large "forts and fires" knife is more capable and can quickly punch out splints, stretchers, crutches, and other stuff to aid in overall mobility. Think through your kit. Remember, don't over kit- cross kit.

Prevent accidents. Take the safer approach. Consider minimizing stuff like aggressive chopping, negotiating steep grades and boulders, river crossing and the likes. If you are deliberate your chances of getting hurt drop remarkably. In my experience a first aid kit in the pack is dead weight 99% of the time. Work to keep it that way.

Stay healthy. Eat right, avoid inactivity and excess weight. Years ago I watched a man die from COPD (a type of difficulty breathing) contributed to

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Basic Land Navigation

The Need-to-Know's

By Derek Faria



Using this Compass-To-Cheek method, you want to make sure you hold the compass as level as possible and get it right up to your cheek so that you can use the aiming sight and look at your degree reading at the same time. This will get you a very accurate reading.

Although land navigation can be pretty basic as far as the fundamentals, there is quite a bit involved in knowing exactly how to go about it. This article will not make you a land navigation guru, but will shed light on the topic and get you started in the right direction. We will cover where to begin and the tools needed to be successful and get more in-depth in future articles. So where do we start you ask? Usually the first thing that comes to mind is a compass. This is a good start and is what is in most of our packs and such when we embark on

our many journeys into the wilderness. Some of the other tools that go hand and hand with navigation are a protractor, map, and pacing or "Ranger" beads. But let's stay focused on the direction we want to head here and get back to the compass!

Derek "Sarge" Faria- Instructor, Derek is a current US Army Infantryman as well as a Navigations expert. His time is spent between military schools to include Man Tracking and the Eastern Woodlands of Massachusetts. He is also the North East site coordinator for The Pathfinder School.



Using the Center-Hold method, you want to hold the compass as level as possible while using your two index fingers to point in the direction you want to aim. You should hold the compass close to your body and around your waistline for best accuracy here.

Which compass is the best and what type do I get? Well contrary to popular belief, a button type compass for general direction (although better than nothing) just doesn't cut it for navigation...you will need a bit more advanced compass to do this. Let me explain. A button compass is fairly small and leaves a huge margin for error when traveling over long distances. Although it can keep you in a "general direction", you can be way off by the time you get to where you want to go. The one good thing about a button compass though, is it will keep you from walking in circles. I know we have all heard this before. People tend to "walk in circles"...what do they mean? Well everyone has a dominant side to their brain which makes one side of our body a bit stronger than the other (i.e....left or right handed). So when we walk over a long distance, we will be kicking off with that strong side leg and thus, walk in a circle like fashion. The

button compass will help avoid this common problem and in most cases, keep you from getting lost. It is not that you are lost really but, you are not walking in the most direct route.... a straight line. This is all a compass is designed to do, help you walk in a straight line. So why can't I get away with just a button compass then if it will stop this problem? Please.... let me explain. As I mentioned, a button compass has room for a large margin of error because it is so small. Every time you turn, even if slightly, so does the compass. The button compass is not designed to shoot azimuths (a straight line), so it is harder to keep in one direction without constantly checking it. This is where a larger more advanced compass will be a key to your success in navigating.

There are many compasses out there that are of good quality and I don't want to promote any one in particular. There are only two compasses that I

use mainly, a Commenga military compass or a Silva Ranger. These are just the ones I am comfortable with and that I prefer. Again there are many others out there that are good compasses as well. The thing with these types of compasses that have a distinct advantage over a button type is that they can give you exacting information. These compasses are designed to shoot azimuths and depending on which one you get, they can even do some other tasks. As a Pathfinder School Instructor, or even as a student, we all know the importance of multi-use items. This is where the Silva Ranger compass exceeds a bit over most others. It has a mirror on the inside of the top cover that can be used for signaling, as well as a magnifying glass that can be used for fire starting.

Since we have touched a bit on azimuths, let's go over a couple of the proper techniques of holding a compass that will help you better shoot your azimuths. The first method or technique of holding a compass is the Compass-to-Cheek method. This is the most accurate of all in shooting an azimuth (see illustration 1 for example). The object of this technique is to get the compass right up close and use the aiming sight to pinpoint a target or reference that you will walk to. You will be aiming the compass and getting an azimuth from your compass simultaneously. The margin of error when using this technique is usually between one and three degrees, but for the most part is right on. When shooting this azimuth, you want to pick out something in the background to be able to keep an eye on and walk to without having to keep referencing the compass again. Some of the common things to aid in this are major terrain

features (which will be discussed in future articles), trees that stand out, man-made objects that are dominant in the landscape, and many others.

The next technique is the Center-Hold method and is used when you do NOT need to be as accurate. This technique allows for a 3-4 degree margin of error and is usually used in an on-the-fly situation. The center hold method is performed with the compass opened all the way up and held close to the body at or around the waist (see illustration 2). You will also want to use all the basic principles as you did for the compass-to-cheek method in this application as well. With this technique you can also add another feature of your compass that will help aid in staying on course fairly easily, and that is by use of the bezel ring. On the bezel ring and the north-seeking arrow (on mostly all compasses) there is an illumination line that can be aligned as to help you stay on your azimuth without having to stop and re-shoot your azimuth frequently. This is a great feature and should be practiced regularly, and this exact technique is used commonly during night navigation.

So with all this said, remember there are a lot of compasses out there that can do what you need them to do. The biggest key is, knowing what you want it to do for you and also how to use it. So I say...."don't go out there looking for something GENERAL, get a compass that will give you the information you need... and that is, how to get home".



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The Realities of Harvesting Wild Plants

By Caleb Musgrave
Photos by Ethan A. Huner



The beautiful flower head of a Jack-in-the-pulpit. Though edible when properly processed, it takes a great deal of time and sometimes energy to make it safe to eat.

There are many schools of thought regarding the harvesting, preparation and consuming of plants found outdoors. This article is not meant to discredit wild plants as a viable food source, which they definitely are, but to help the reader understand some inherent risks and help them gather safely. Wild plants are definitely of great value to the outdoors person, as a food staple, a tea, an herbal remedy or as a functional piece of their tools. But unsafe practices could jeopardize an otherwise enjoyable pastime or even the safety of the survivor. So to make our outdoor skills more enjoyable, some realistic outlook must be involved.

Flora versus Fauna

There are very few animals in the forests that cannot be eaten. The majority of mammals, reptiles and birds are safe to consume, as are most fish and some amphibians and insects. On the other hand,

Caleb Musgrave is an Ojibway man from Central Ontario Canada. He has spent well over three quarters of his life learning from Native and Canadian Woodsmen of high regard including; Wilmer Nadjiwon, Dr. Gino F. Ferri, Craig MacDonald and Pinock Smith. Caleb often works as an Aboriginal Liaison for Archeologists; bridging the gap between the scientific/anthropological community and his Native peoples. He currently resides on his family's Native reserve, where he teaches at the wilderness school 'Canadian Bushcraft' and constantly lives the self-reliant lifestyle





Can you count how many wild leeks are growing in the photograph? Stands of wild leeks can spread for acres, as can Mayapple, garlic mustard (a powerfully invasive specie), and Trout Lilly.

there are many plants that have to either be prepared to make them safe to eat, or are not safe to eat at all. Jack-in-the-pulpit (*Arisaema triphyllum*) is a good example, where the root is a good meal if dried thoroughly or cooked for a long period. Otherwise the painful burning sensation caused by the oxalic acid can lead to more serious complications (due to the poisoning).

Even animals that are suspect of disease can in most circumstances be cooked well enough to kill any parasites or pathogens (this is not always the case, so please research and use educated judgement). Whereas an unripe Mayapple (*Podophyllum peltatum*) could cause an excruciatingly painful experience, cooked or uncooked.

It is believed the Inuit had (past tense due to modern diet) one of the healthiest lifestyles when it came down to diet. Their diet consisted of very little plant-life except during the summer months. Being

mostly carnivorous, they consumed great quantities of protein, fat, vitamin C, vitamin D, calcium (via marrow and bones), and many fatty acids and other important nutrients. On the other hand there is great argument now that grains and other plants have such cellulose that the digestive tract of the human being is not made to break them down enough to gain full nutritional value. This explains how a raw vegetable diet helps the dieter lose so much weight!

Does this mean plants are useless as food? Of course not, but be aware that you must have very good identification of the plant before harvesting it. In summer the amount of blueberries (*Vaccinium myrtilloides*) that can be harvested from a single field is astounding. On the other hand anyone that has tried hunting moose (*Alces alces*) can attest that it is rare to find a large enough population to take your pick as to which one you will take home for dinner. Obviously the argument could be held that a moose feeds more people than a basket of



A close up of a few of these delicious wild leeks.

blueberries, but the point is that the berries were much easier to find and harvest.

Dangerous Lookalikes

As previously stated, several plants are dangerous to consume. What is more dangerous is the fact that several look like very safe to eat plants. Some call these “Good Twin” and “Evil Twin” plants. If Cattail (*Typha*) is the good twin, with all of its’ useful and edible values, then Blue Flag (*Iris versicolor*) would have to be the evil twin, due to iridin and glycoside toxins in it. Such toxins would quickly leave the consumer in severe pain. As evidence; a case of confusion between Sweet Flag (*Acorus calamus*) and Blue flag lead to several poisonings of First Nations powwow singers, who use the root of Sweet Flag to soothe their throats after long periods of singing.

Poison ivy (*Toxicodendron radicans*) has often been confused with Sarsaparilla (*Smilax regelii*) due to similarly shaped leaves (though Sarsaparilla usually has five leaves, unlike Poison ivy, which has three). While Wild rhubarb (*Rumex hymenosepalus*) has been often confused with Greater Burdock (*Arctium lappa*) due to similar growing habitats and leaves. What causes even greater confusion is many people referring to the greater burdock as “wild rhubarb”, which it is not even related to.

The only means of lessening the dangers of

such misidentifications is to thoroughly learn the differences. Wild plant classes are better than books or videos, because the instructor/teacher can answer questions the student may have. As well, hands on practice beats words written by another person any day of the week when it comes to memory retention.

What lies beneath

Not all of the readers of this article reside in wild or rural regions. Most likely a good many will be from urban environments like Toronto or Buffalo. Due to this, any wild plant harvesting may only happen in town parks or when weeding the garden of dandelions (*Taraxacum*) and plantain (*Plantago major*). In the past few years, many types of pesticides and herbicides have been banned. One reason is due to the toxic chemicals found in them, such as DDT.

However, such chemicals can reside in an area for years, sometimes decades. Many urban plant gatherers will not harvest from an area that has been sprayed in the past thirty years. When I was younger and not as wise, I once became extremely ill due to harvesting cattail roots from a ditch near a town park. All chemicals ever sprayed on the fields and flowers in the park eventually washed off and leached into the ditch. Cattails being a filter plant absorbed and stored the chemicals. I had a concentrated dose of chemicals that could have potentially killed me.

So research the history of where you are harvesting, and avoid any wild plants near roads (no matter how temptingly large they may be). Petroleum by-products can contaminate a plant and



Compare the ability to catch this ghost of the woods versus gathering plants like the leeks, and you may see some benefit. But don't forget how much meat this moose has to offer!

not ever be known until when they are treating you in the hospital. This being said, research all wilderness areas that you may be harvesting from as well, seeing as how many mines exist in the North Country, who knows how many plants may be contaminated.

Famine

Many people boast that they know plants so well that they could survive indefinitely on them. This may be true to an extent, but do such people ever take into consideration the fact that famine is not that unheard of in the wilds? Consider the early springs of 2008 and 2010 in Ontario. Both were very poor years for harvesting maple sap. 2008 was just too cold, and 2010 was too warm. Add the invasive species (insects, fungi, plants, etc) that may arrive and wipe out the native plants. Or a sudden frost, an early winter, a long summer drought, or simply the plants dying off in a certain area for untold of reasons, and suddenly the ability to thrive off of nothing but the wild plants becomes more difficult.

Think logically and research. Study how the wild plants respond to different stresses. Understanding the climates and terrain each plant requires to survive will help in the near future as much as it will in the long run.

Moral Issues

The wild plants we love to harvest seem to be endless. So much that I know several people that proudly announce that they picked over twenty pounds of blueberries in a single weekend. I also notice many signs stating Wild Leeks (*Allium ampeloprasum*) for sale when driving through Central Ontario. Such harvesting can cause many issues.

First is the fact that throughout history, the over-harvesting of any species has almost always lead to the demise and/or extinction of that species. Ask the beaver, and I'm sure they will argue that their pelts weren't worth their almost complete destruction.

Secondly, many animals depend heavily on these plants, and taking more then we need at one time is dangerous for them. What may seem like a nice addition to a few meals to us is the only choice for survival to others.

Thirdly the fact that what you eat now may not be there tomorrow. If we eat all the plants around our shelter, then what will we depend upon when after two weeks in the wilderness we are too weak to do more than crawl out of the debris hut?

Harvest conservatively, and only harvest large quantities when you have no choice, and can guarantee preserving whatever you harvest. Leave at least one out of five things that you harvest. That means if you find thirty leeks, leave at least six leeks. If you could harvest five hundred blueberries, leave one hundred still on the stem. This means the animals, the plants and you have a chance to survive another year.

Conclusion

There are many reasons to be full of caution now when gathering plants. However, this article was not written to scare the reader away from harvesting Nature's bounty! Wild plants are rated by many nutritionists as being better for you than farmed fruits and vegetables. It is also a great way to enjoy the wilderness, or even your own backyard of "weeds". But the better you know the plants around you, the better off you will be. Always try to use three or more different references when identifying plants, and if possible, contact local nature clubs to see if they know any people nearby that would be offering plant walks. Such an education can increase the safety and therefore enjoyment of any plant gathering.



The flower and leaves of Blue Flag. To the untrained eye, the leaves can look very similar to those of Cattail."

Fire

By Larry Carr

In the early months of 1991, my Marine battalion just finished a “Red Force/Blue Force” exercise in Twenty-nine Palms, California. We still had one more night to go in the desert but, we did not have to follow the tactical “noise and light discipline” we had for the past four nights. As a twenty-four year old squad-leader, this was not my first time in this desert, so I had my squad grab anything that would burn: dead Beaver-tail cacti, dead Joshua trees, even dead Ocotillo flowers. Although not true—there is an old saying in this desert that you’ll only find one plant on each acre—it is not far from the truth. The ammo cans, which recently held .50 caliber machine gun and MK-19 rounds were soon full of fuel for tonight’s campfire. Despite my years of fire building, in the Boy Scouts and on many canoe trips, this campfire was to teach me the true power of fire.

We stopped somewhere just off the MSR (Main Supply Route) and set up camp. I passed out the MRE's (Meal Ready to Eat) to my seven squad-members. Even though I knew we were going to have a fire, I made everyone cook on the trioxane tabs. Despite spending the entire day gathering fuel for our fire, it would not last long. Of course, I got the dreaded omelet with ham. I ate it because I knew I would need the calories. This time-of-year it may be 60-70 degrees Fahrenheit during the day but the water would freeze in your canteens at night. Everyone put on their polypropylene base-layers and donned wool sweaters under their M-65 field-jackets.

Now, it was time to test my new Cold Steel Imperial Tanto. The knife was brand new on the market and I had not tested it yet. I took one of the .50 caliber ammo cans and laid it on its side. This would be a good test, I thought, especially if I am deployed to the sandbox during our next West Pac (a six-month cruise placing us near any military hot spot in the Pacific Rim). The Imperial Tanto was supposed to pierce a car door with ease, according to the advertisements of the day. It performed as advertised and soon I had the ammo can looking like

a television without the picture tube. It was not the world’s prettiest fireplace, but after a week in the desert, we weren’t all that pretty ourselves, especially with the remnants of our camouflage grease paint staining our faces. We lit our little fire and sat around our impromptu fireplace like a family watching a sit-com re-run. We reverently took turns feeding our small fire with the silence and respect it deserved. For ninety minutes, our small fire burned and none of us said a word. Though we were not really any warmer than the rest of the Marines in the camp, our little group was peaceful and content, with none of the feet stamping and grumbling heard throughout the camp. That night I realized fire was more than the most important tool humanity has ever harnessed, but food for the soul as well.

A few decades later, I am back in northern Ohio, where in winter, fire can have a far more immediate impact than feeding my soul. Whenever I build a fire I can’t help remembering that desert night and wondering just how many times this ritual of fire starting played itself out over the course of human history. Every time I fail to think ahead and knock the snow from a branch overhead, only to have it fall onto my fire just before it reaches the self-sustaining phase, I wonder how many have cursed themselves for a fool under the same circumstances over the millennia? How many have burned their lips eating meat removed too quickly from the spit? Could fire possibly be the most commonly shared experience among humans?

These days on You-Tube and in magazines, the emphasis seems to be on starting fires the primitive way with hand-drills, bow drills, fire-steels, and even carved ice magnifying lenses, and, although I agree, knowing and practicing these methods may one day save your life—I am all about getting that fire started! When I am out in the woods, and it is near zero degrees Fahrenheit, I am not going to waste my time hunting materials and a constructing elaborate primitive fire starting apparatus, when I have a butane-lighter and piece of paper from my notepad to get that fire started immediately. My calories would be better spent getting a shelter built. Some might argue that it would be better to build the shelter first, and then worry about the fire. Well, in

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some circumstances that might well be true, but from experience, it takes time to build a shelter, and when your fingers and toes are getting numb, it can be down right pleasant to have a fire to warm them up a bit before continuing to construct a shelter. Remember, “Common Cents” is the only coin accepted when your life is on the line.

What type of fire should you build? That depends on what you need it do. If it’s mid-summer and you just need to boil some water to purify it or to cook your dinner, a small fire is more than enough. Using smaller diameter sticks for fuel will shorten the time to getting a bed of coals, and waste less of nature’s resources. However, if it is mid-winter in Ohio, I am building a larger fire with full-length hardwood logs. I use a variation on the star fire. A star fire is a fire made with four full-length logs with one end of each log touching the others at the center and radiating outward in four directions—like a star. When the end of the log has burnt mostly through, you simply, move the log a little closer to the center point. I only use two logs, as it is easier to reach out of my lean-to shelter to move a couple of logs than to have to get up and move the ones out of reach. I can also keep this fire closer to my shelter. Using the full-length logs also reduces the time necessary to process the wood for the fire, saving my calories for something else.

The type of fire you build is less important than building a fire that makes the most efficient use of fuel, heat, and oxygen. It doesn’t matter if you make a tee-pee style fire, upside down fire, or a log cabin style fire as long as it burns easily. I generally make what I call the lean-to fire. This is where I take one thicker log and lay it on the ground and place my

tinder next to that. Then, I lay my kindling on the thicker log and over the tender, that way air can move easily under the kindling until I have a self-sustainable fire. The fire I prefer for boiling water in my stainless-steel water bottle is the Cherokee fire pit. You dig a small pit in which you will build the fire and then dig a small tunnel to the fire pit to allow air to flow in. It makes a small hot fire and produces less smoke compared to just building a fire on the ground. This fire is good if you don’t want others knowing you’re in the area. It is also easy to put out without leaving a trace that you had a fire there. You must be careful with this type of fire; however, if you catch an underground root system on fire it can burn underground for long time devastating the environment undetected. When collecting firewood for the night, when you think you have enough—double it, then double it again. You won’t like having to get out of your warm shelter to gather more wood in the wee hours of the night.

Lastly, I would like to talk about the least mentioned part of fire construction: the reflector. The reflector is generally a wall of logs or rocks used to reflect the heat radiating away on the far side of the fire, doing you no good. The reflector redirects this potentially lost heat back into your shelter. One trick I use to make the reflector even more efficient is to place some shiny metallic material like aluminum foil over the reflector. An emergency space blanket will work; however, it is made of a plastic material that could melt from the fire’s heat if placed too close. So, whenever you build a fire, take the time to reflect on not only the warmth it brings your body, but also the warmth it brings your heart.



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SELF RELIANCE

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Homemade MRE's

By Gerald Young



Breakfast Options

My solution to preparing camping meals/menus is what I call the homemade MRE. While not actually an MRE (Meals-Ready-To-Eat) the menu I've put together is simple to plan. The cooking portion of the meals only involve adding boiling water. Also for equipment you'll only need a cup or mug, some sort of pot and a spoon.

Lets start with the store bought options for camping meals. Some that come to mind are the Military MRE's and Freeze Dried meals. From my experience, the MRE is truly ready to eat and a self-contained package with a heater packet to warm up

your food. The first issue I have is that I end up with a lot of items that don't get used. For instance with the actual Military version, you can't see what's inside the bag. This could lead to an item that is not needed for the meal or that is not liked by the consumer, leaving you with unwanted weight for the hike out. The Freeze Dried meals do solve both of

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Snack Options

these issues. First off they are light-weight. Second, you know what you're getting when you buy it. But you do end up paying for these costly meals. What I've found works for me is somewhat of a cross between the two. My goal was to have the meals taste good, save on some weight and also save money in the process.

Lets get started. I like to make my menu and shopping list then go to the supermarket and purchase the items needed. While not gourmet, you should have no trouble at all feeding yourself for under \$10.00 per day.

Breakfast

Since it's the first meal of the day we will start here. Me, I'm a person who needs coffee first thing in the morning so this is priority number one for me. I found the Folgers Coffee singles in the market a few years back and these are pretty slick. Very similar to Tea Bags, you place them in boiling water and let them do their thing. For those who aren't coffee drinkers, there are other options. Hot Chocolate, Hot Cider, Tea or a powdered beverage mix.

For the morning meal, I go for the oatmeal. Warms you up on a cool morning and stokes your interior fire. My second choice would be Poptarts. These are good when you're in a hurry and need to eat and run. Another option would be cereal bars, such as Nutrigrain or something similar.

Mid Morning Snack

We all know how important it is to stay hydrated and my beverage of choice is Gatorade. These come in single serving powdered mixes. I start off with a one-liter bottle of Gatorade purchased from the store and when this is empty, I use it to mix up the mix in. This allows you to keep regular water in your primary water bottle and not have to worry about cleaning it.

For my morning snack, I go with something simple like trail mix, sports bar (Cliff, Zone, Metrx, etc) or granola bars. If you're hiking, fishing or hunting, they're a fast way to eat on the run.

Lunch

My lunch choice is Ramen soup and a Spam



Lunch Options

single. Boil some water add, stir and eat. The Ramen comes in a wide variety of seasonings. As for the Spam, I know some don't and won't eat it, there are other options such as, chicken, tuna, salmon or seafood that all come in foil packaging that can be substituted.

Make sure to keep drinking, so drink some water, Gatorade or Kool-Aid.

Afternoon Snack

As with the morning snack I like to keep this simple also. A few Pretzel rods and a peanut butter snack-cup should take care of that growling in your belly. If that doesn't work for you then some good old beef jerky should take care of it.

For a beverage, I like to have some EmergenC mixed with my water. It gives you some vitamins and a nice boost of energy.

Dinner

Now its time for a nice, simple meal to eat while sitting around the fire. Keeping it simple, my choice is instant Idahoan Potatoes with a package of foil packed chicken. Again, just boil water, stir and eat.

I tend to have a craving for sweets after dinner, so I throw in a candy bar or two to have with a nice cup of coffee and hot coco mix after dinner.

OK, let's put it all together now. For each day I'm going to be out I will take a gallon sized Ziploc bag and add in my choices for the days menu. Below is a sample menu:



- Idahoan Potatoes
- Foil packaged Chicken
- Coffee/Hot Coco Mix
- Candy Bars



Breakfast

- Coffee singles (2)
- Oatmeal (2)

Snack

- Gatorade
- Trail Mix

Lunch

- Ramen Soup
- Spam Single
- Orange drink

Snack

- Pretzels
- Peanut butter
- EmergenC

Dinner





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Beyond the Ten Essentials

By Kevin Estela



Students were required to carry a coal with them during a land navigation exercise to the camp area.

We've all heard of the Ten Essentials, the survival or bushcraft items you should always have in the bush. Chances are, you just read "The Ten Essentials" in the last sentence and have already started making mental notes of your top ten items. The ten essentials are seemingly timeless and have been revisited over and over. Well, this article will not regurgitate the ten essentials into "must have" items. It will rather focus on the eleventh and other additional items you wished you had room for in your original list of ten.

The idea for this article was born during the last Advanced Survival Course I taught in the summer of 2010 at the Wilderness Learning Center. Students of mine were required to carry gear with them in a small pack to meet ten basic needs (Note needs. They were not limited to only ten items.) These include:

1. Cutting Tools

2. Fire Making

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Students prepping the fire pit area for the group to warm-up by.

3. Water Collection/Purification/Storage

4. Navigation

5. Shelter

6. Cordage

7. Illumination

8. First-Aid

9. Signaling (Audible and Visual)

10. Trapping/Snaring/Fishing



Fishing Rod eyelet made from a safety pin in a first-aid kit.



Students learned to build birdtraps utilizing a minimal amount of cordage.

I prefer my students to focus on universal concepts of survival rather than 10 universal content items. The situation will always dictate what you carry, you can only carry so much on your person and thus, there is no such thing as a perfect survival kit. It is always changing. Students carried what they needed for 3 days and documented gear use and what would have made “survival” easier.

11. Salt

After a few days of sweating, students wanted more of it in their diet. After eating foods with limited seasoning, salt packets from MRE’s became gold. While dangerous in excess, in moderation, salt was a precious commodity.



Example of a primitive shelter incorporating tree bark shingles, organic debris and a fire reflector. Jerry, the builder and occupant stated he was too warm in it. Great construction!



Wet misery. Trying to eat soup under poncho in the pouring rain.

12. 10’x10’ Tarp

After spending solo time making individual shelters, students all agreed a simple tarp would have been worth the calories of packing in. In summer weather, it provided a basic but effective shelter from the elements.



In order to cook in the rain, instructors and students built a covered fire like those used in jungle environments.



13. Bug Dope

After suffering through the skeeters, black flies and horse flies, the students all remarked a little liquid bug dope could be stored compactly and go a

Students learned to harvest game in a variety of ways. Here Brian is carving a four-pronged split stick spear for frogs.

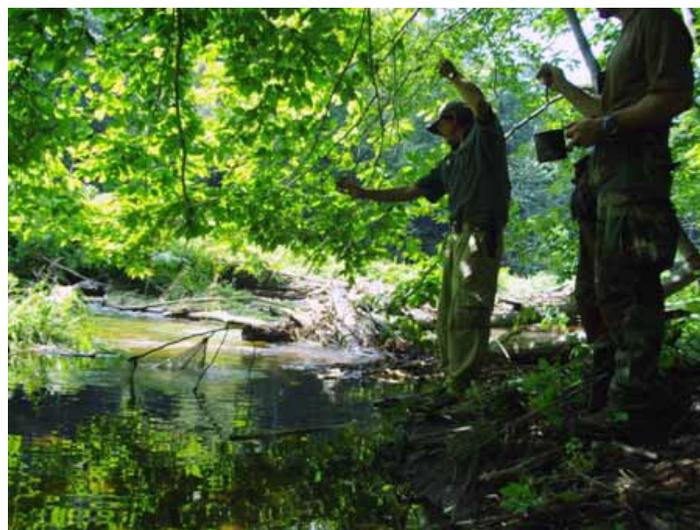
long way. A head net could be added for more protection too.

14. Gill or Seine Net

Try fishing with a size 20 hook and learn the frustration of seeing minnows nibble on bait but never hooking up. One student made a fish stew with some MRE crackers, leeks and small fish. A net could have caught more fish with less effort and fed more bellies.

15. Folding Saw or Chopping Tool

Limited to their 4" average belt knives, the students found some tools will work but aren't designed to work for everything. Firewood prep, tool construction and general utility could have been improved.



Pocket fishing kits were put to use. Smaller size 20 fishhooks were the key to catching finicky fish.

16. Sleep

While not tangible, sleep is highly underrated in the outdoors. Sleeping in primitive shelters does not afford the same luxury as home or in a tent. Sleep deprivation definitely impacted the group dynamics, limited energy levels and elevated irritation.

The items you carry beyond the ten essentials will be determined by your own experiences. You need to learn yourself and test your limits safely. What will make your life easier once you have your basic needs met? Only dirt time and practical prep will make your life easier.



The Office Kit..

Survival in the Cubicle Jungle

By Eric McCracken



Items the Author keeps in the top drawer of his desk. "Other Considerations Section"

Many of us spend most of our days in a carpeted jungle. I am sure most of you are not able to turn off the survival instincts that you have been developing for many years. You need to ask yourself would you go into the woods without any gear.? In contrast think about how much time you spend at your job every week which includes the commute to and from work. We have learned not to treat any trip lightly and the importance to be prepared for any situation that life can present. These situations could range between spending an unexpected overnight during a weather

emergency to having to walk home from your place of work to your home during a larger disaster situation.

The office can pose some challenges to carry the equipment you find necessary and keep into compliance with most modern corporate cultures.

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The Author's Travel bag contains a Multi-tool, Guyot Bottle and Poncho with Liner.

As you can imagine a person walking into the conference room with a carabineer full of their gear of choice could raise some eyebrows.

Cutting Tool

I have found that a quality multi-tool fits the basic requirements of a cutting tool and offers additional resources to the user. In some cases the other choices such as fixed blades and tactical folders do not fit well in the office environments. There are always exceptions but fixed blades are larger and typically need to be worn on a belt and tactical folders often take on a visually threatening look. In contrast a multi-tool appears to most laymen as a tool not a weapon. It is not uncommon in my workplace to have a co-worker borrow my multi-tool for tasks ranging from stubborn staple

removal to tightening screws on office chairs. There are 2 items that I look at to choose a quality multi-tool. The first of which is the main blade. I look for a sharp blade that can hold a good edge and most important the ability to lock in place. The second thing I check is how the tool mechanically operates. I check if the pliers operate smoothly and if they have a strong grip and solid wire cutter. I also check how easy is it to access the blade and other tools contained on the multi-tool. I have carried some "Swiss Army" type knives but have found the pliers on the multi-tool give it advantages over this type of knife.

Combustion

There are very few situations where you would need a combustion device if you should

remain in the office. It is more likely you will require one if it is necessary to leave your location. In most cases you will likely find that a cigarette lighter or matches will best fit your needs. This is the case when a ferro-rod type device would not be the best choice. You will find that starting fires in urban or suburban environments would be provided by a flame verses a spark. Your office can also offer various forms of tinder but some are better than others. If available rolled up newspaper or hand towels from the bathroom would be the preferred form and it can also be rolled up and kept under you clothing as additional insulation. If your office utilizes commercial monitor wipes you will find that some contain a large percent alcohol and can be used for fire starting proposes. This is also true for eye glass cleaning pads and alcohol prep pads found in most first aid kits. Hand sanitizer can also be used for fire starting purposes. A word of caution sanitizer has such a large percent alcohol that it can burn clear. It is best used in conjunction with toilet paper or hand towels from the restroom to prevent burns. Standard copy paper could be used but most of the above items are a better choice.

Cover

When it comes to cover it is important to keep an eye on current and future weather to ensure the proper selection of clothing. You need to ask yourself when you leave in the morning am I dressed appropriate if I should have to walk home or spend a prolonged period outside. I have also gotten into the habit of changing into my work shoes when I arrive at work. This allows me to travel in my preferred foot-ware which is typically comfortable sneakers or insulated boots. In most cases the shoes we wear at work are inappropriate for walking long distances and provide limited foot protection.

I also pack a combination army poncho and liner in my work bag. The poncho can be used for its intended purpose as a raincoat and can be used as an improvised lean- to shelter. The poncho liner serves as a sleeping bag and does not take up the space of a standard sleeping bag. I have found the poncho liner offers enough insulation and will keep me warm even if the heat is not functional in my office. The combination of these two items can be easily rolled up and kept in a laptop or gym bag.

Container

In most situations it would be unnecessary to sanitize water that comes from the public water supply. This would be the case if there were not currently a boil order in place from your town or municipality. There are also very few situations when the water out of the faucets will stop flowing. Should the need arise to boil water this would be best served by the heavy gauge stainless water bottles we are all familiar with. I keep a stainless steel water bottle on my desk and refill it throughout the day. I have found that they are actually more sanitary than



Network Cable unplugged.



The same Network Cable with the connector removed exposing wire within.

plastic bottles, are easier to clean and are more resistant to odors. I keep a few pair of medical exam gloves in my desk. In addition to their intended purpose to provide the user protection from an infectious subsistence they can also serve an improvised container to carry water.

Cordage

An office is an environment where cordage is not tough to acquire. Most of us have over 64 feet of cordage within kicking distance. This can be found in your standard computer networking cables. Consider CAT-5 cable as the paracord of the office. Inside each cable there are eight smaller coated copper wires. If the need should arise unplug the cable and cut the two ends off of the cable and slice into the cables jacket. This will give you the ability to pull out the internal wires. They will typically be joined in pairs. You will find that it is easier to twist these cables with a multi-tool rather than attempting to tie them. You will find that this will meet most of the requirement of cordage but of course does not have any spring to it. If you keep the wires in pairs it will be strong enough to even build shelters with. I also wear a paracord bracelet which I am in the habit of putting on at the same time I grab my keys to leave the house in the morning.

Other Considerations

Securing calories could be a challenge in some offices. Some locations could be limited to snack machines. I keep two options in my desk for emergency calories. The first of which is an MRE. This is a good choice because you will be able to get yourself a hot meal even when electricity may not be available through the use of the included heater. They are also modular so you can ration the contents of the bag to provide additional smaller meals. A typical MRE contains about 1250 calories. There will also be an “accessory packet” included that will contain items such as matches, toilet paper, gum and other items. Peanut Butter is also a good choice for a calorie dense food. When you add up the calories in a typical forty-ounce jar of Peanut Butter you will find that there are over 6000. This is a simple solution to provide a protein kick. The can be stored for long periods even when open. It is important that you keep foods that you are comfortable with and enjoy when storing emergency food. Do not let your first experience with an MRE be the day you have to eat it. Try out a few of the menu selections to determine what you like. You do not want to add more stress to a situation by bad choices in the food you put aside. There are also options to forage for food in your office if a true emergency should exist. It is likely a considerable amount of your co-workers

have small amounts of canned food and various snacks in their work area. I am sure if the situation was extreme enough your co-worker would not have any issues with your actions if you volunteer to replace any missing items.

I also keep the following items in the top drawer of my desk:

- Flashlight – “D” cell battery type with spare batteries
- Duct Tape- full roll
- Contractor Bag – rolled up
- Medications- any prescription or over the counter medication you may require for a 72 hour period.
- Hygiene items – examples cleansing wipes and travel tooth brushes
- N95 Air-Mask- provides basic protection if there are issues with the air quality in office
- Battery Operated or Crank type radio- to keep you updated with the latest news and weather

The above items are not intended to replace a full bug out bag. The intent of these recommendations is to provide some item that will allow you to get to the bag or provide you a basic kit where carrying a bug out bag is not possible.

Should I stay or should I go?

There are many factors that effect the above decision if you should stay in your current location or make an attempt to get home. One of these is do you have your own transportation home or do you rely on public transportation. In most cases when over the road travel is dangerous public transportation can be a safer choice. Please keep in mind that most emergency situations tend to last between 24 to 72 hours. It is critical to have an understanding of some of the possible emergencies your area can have. Most of your basic needs for survival are in your office so the decision of if you should leave your location should be compared to the possible risks of making the journey home. It is typically better to stay put and hopefully you have prepared to make yourself more comfortable when the unexpected happens.



Making Your Own Oilcloth

By Chance Sanders



Your local hardware store will provide all the necessary components for making your own oilskin.

If you are like me, then you want to know how to make as much of your own gear as possible. Making your own knives, clothing, or even your own bow is not outside the realm of a true woodsman. In my opinion, to be truly self-reliant one must endeavor to learn as much as possible to this end. There are many reasons for this approach to bush craft or self-reliance in general. One may be finances, creativity, or it simply may be the urge to create tools much like our forefathers did. No matter the reason, the results are the same: a more self-reliant woodsman.

One of my first forays into making my own gear came in the form of an anorak that I purchased at a surplus store when I was stationed at Camp Lejeune, NC. The garment was a pullover affair with a big pocket on the chest. Being made from mostly cotton, it did absolutely nothing to keep me warm or dry. I felt that if it was going to keep its

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The author likes using an ammo can to heat up the mixture due to the fact that it has a lid. You will most likely experience a flame up while heating and this can be used to extinguish the flame.



A wax washer like those found in your plumbing section will work well for this. Simply carve the wax off of the plastic ring with your knife. It should be the first to go into the ammo can.

Once the wax becomes a liquid, carefully add your boiled linseed oil. The size of the project at hand will dictate how much oil is used.

place in my increasingly full pack, it had better start earning its keep.

In all fairness, I was approaching the deficiencies of this garment at the wrong angle. Only after reading a portion of Mr. Kephart's little book on camping did the proverbial clouds part, and I saw the light. The anorak, cotton and all, was the perfect test subject for a little experiment.

After a quick trip to the local hardware store, and a brief Internet search, I was on my way with a new project: making oilcloth. Six smelly days later I donned my newly treated anorak with pride. This piece of gear remained my faithful companion on many a day and night out in the bush. I would even wear it in the field when my "Gunny" wasn't around;

the fact that it was once issued to another Marine at some point only gets you so far.

The great thing about oilcloth, as you will soon learn, is its usefulness for proofing just about anything made of cloth. The Pathfinder Haversack is made from oilcloth, as well as the drover coats that are so popular in Australia. If I am not mistaken, you can order the Pathfinder Duluth Pack in oilcloth as well.

So how is it done? Well for this project, we are only going to use items found at your local hardware store. I know there are commercial wax kits sold for this purpose, but let's keep it common-man.

First thing you will need is a safe, ventilated place to do your work. This process can get messy and it definitely smells to high heaven. So unless you want a moratorium on projects, it's best to keep these types of endeavors outside. At the hardware store you will need to purchase the following items:



Get it while its hot! My wife and I work on this painters cloth. You will need to keep the mixture hot as you apply it. Otherwise it will start to set up and seperate.

- Boiled Linseed Oil
- Mineral Spirits
- A 9' x 7' lightweight canvas painters' cloth
- Two wax toilet washers

Find yourself an old pot in which to heat your oilcloth mixture. To keep yourself in good standing with the Mrs, do not use one of her good ones! Shave the wax off the two toilet washers into the pot that you now have suspended over a nice fire. Once the wax begins to liquefy, start mixing in the linseed oil. Remember that these are all highly flammable components and the utmost care should be used to make sure that it doesn't turn into a fireball. (As my wife suggested to me, you may want to keep some baking soda nearby to smother a fire in case things get out of hand.) Slowly heat this mixture to the consistency of thick maple syrup. Use the mineral spirits to thin it out as necessary.

Next thing you will want is a stiff paintbrush with which to apply your warm goop to the canvas. A clean flat surface is also necessary to place the canvas on while you work. If desired, you can suspend the cloth between two trees or posts. While the mixture is still warm, apply the goop with the

stiff brush. Start at the top and work your way down. If it is hanging, you can easily move around to the opposite side and paint that too.

Although it may not be necessary, you can repeat the process a few hours later, or the next day. Another advantage to using this method is that you can save any unused portion for later use out in the field to re-proof your gear. While you're at it, perhaps you have a small canvas bag or something



This surplus pack is a great candidate for an oilskin upgrade!



else you would like to proof.

If you decide you want something old-fashioned to go with your wool blanket and canvas pack, consider an oilcloth ground sheet. Using a grommet kit, fold the edges of your cloth over about 3 inches to give added support. Next, place a grommet every foot or so. This way you can add tie-offs to your ground sheet. Obviously you can use this as an overhead tarp as well. If you are feeling

really industrious, you can fold the canvas and sew it on both sides to form a “ticking” into which you can stuff forest debris to make a wilderness mattress. Once again, you need to let anything treated in this fashion air out for several days.

If you decide to use this for treating a canvas pack, another method works a little better. Lay your pack out on a clean surface and pour a small quantity of your heated goop onto the pack. Work the mix into the material with your hands, paying special attention to the seams. I treated an old surplus German pack in this fashion while preparing the canvas sheet for this article. Due to the smell, I left the pack outside and it happened to rain that night. The next morning, I checked the pack and it was thoroughly dry inside.

I hope you find the methods outlined herein useful and test them out yourself. I wore my anorak around many a campfire and never exploded. Oh yeah, if you were wondering whatever happened to the anorak, Dave is wearing it in the first issue of *Self Reliance Illustrated!*



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Knots

Trucker's Hitch

The Trucker's Hitch (T/H), is my favorite knot. I have used this knot more than any other for rigging tarp ridge lines, clothes lines for camping, even a double Trucker's Hitch for rigging a long clothes line at the house. The T/H is one of the top five knots you should know not just for camping but, one you can use for everyday lashing.

The history of this knot is, at one time it was known as the Waggoner's knot and used to lash the load onto the covered wagon. What do you think was used before we had ratchet straps? I have even used this method lashing a load in the bed of a pickup truck but that was back when pickup beds had lashing cleats on the outside of the bed, i.e. early '80's Toyota beds. Most modern trucks have good lashing points on the inside or right on top of the bed rails so, the T/H will work well again.

One reason for all these knots is not only to 1: not lose the skills of an old but still very useful art but 2: save you some money. What do you think is cheaper, fifty feet of rope from the Army/Navy store or a pack of ratchet straps? I have seen those mechanical ratchet straps freeze up with no use. Rope will always be available and ready. There is a small item on the market now, I believe they're called "figure 9's", it's so you do not have to tie knots and secure loads. So for a few minutes of learning a knot, you'll buy this twenty-dollar item? Come on people, learn a knot or two! Buy some other survival gear with that money. Just one more example of a solution to a non-problem. Ok, onto the knot tying.



The beginning has to be an anchor point to one post/tree/fence/etc. Almost any knot can be used, I prefer the bowline and making a loop with it. I will cover the bowline in a future article but here is a quick shot finished and tied with the working end loosely put through it.



Here is the bowline loop tight and pulling tension on the anchor tree. Notice the working end is pinched a bit at the angle of pull.

Scott Wickham Jr. is an apprentice knifemaker at Blind Horse Knives. In addition to knifemaking he has been writing for ten years now and has had a love for the outdoors since a young age. Scott is also the co-founder of the Fort Pitt Land Rover Group and when he is not making knives or writing can be found in his Land Rover.



We can now string the working end over to our other tree and start working on the actual Trucker Hitch itself. This span can be however wide is necessary and if extra tension is needed.



Next you need to come away from the tree approximately 8-12" and pinch it. The distance is not critical. If it's too short, you'll know when you tension it and can just move out farther.



You will now start your slip knot here. As you stand with the para in front of you, take your right hand, grab the para where you pinched before, take a loop in that working end, turning your hand over. Think of the motion of turning on the ignition key in your car. So, the para coming from the working end will be on top of the standing end.



Next, you need to open this up enough to reach down and grab the working end and pull a loop through.



Pull that loop through the first and have it look just like the picture. You want this second loop to be approximately 3" long.



Caption at top of page 78.

We have now pulled the slip knot tight and have a good, working anchor point for the rest of the Trucker's Hitch. You'll see in the next image that this loop will be pulled toward your body and will hold tension because the para crosses itself perpendicularly and lock into each other. You will know it's right if you can grab the loop and pull it in the direction of the second tree and the loop holds. If you were to pull the loop toward the anchor tree, it will collapse.



Here you can see we have now put the working end around the second tree and back through our slip knot loosely. Notice the loop has not collapsed and will hold the tension.



Here it is with tension pulled. You have just created a simple machine, the pulley. No moving wheels or fancy stuff but the 2:1 mechanical advantage is still there. Now you can pull your ridge line tight with less effort and more tension than just pulling the para directly from one tree to the other. This is the same way a winch on a 4X4 works when rigged from vehicle to snatch block (pulley) that is

attached to a tree, and back to the front bumper: it gives you that 2:1 mechanical advantage. Now you have some knowledge of the correlation of knot tying and winch rigging.



Now that you have your tension pulled, pinch the para where the two pieces intersect.



We are now ready to tie this knot off and finish it. You need to tie a half hitch with the left over working end and that will suffice. I prefer a slip knot similar to what we tied to get our loop for redirecting the para to get the mechanical advantage. Take a loop of the working end and take it from the bottom (piece sitting between my index and middle finger) over the top with another loop.



Pull the loop through as shown. As I said before, you could just put the working end through and pull it and be done. With a loop pulled through instead, we are creating a quick release so we are not fighting untying it when it's time to break camp.



See the image before, and look at this one, I am still pinching the point where the para crosses AND I am pulling this knot tight from my right to my left. I'm pulling toward my body as well as pulling right/left. The last bit of para will lock in and you'll feel when it's tight and can let go of where you are pinching.



Here it is tight and holding the tension you have pulled into it with the 2:1 ratio. Now it's a simple process of just pulling the tag end and it will release itself to break camp. Also, the loop we tied into this piece of para to redirect things will pull right out too. The original bowline we tied is an easy knot to untie, I'll go into that later, and you are back to your original piece of para with no knots in it you can't untie, no cut line, and it's ready for it's next chore.



The Trucker's Hitch is complete at this point. As I said though, it is easily untied by just pulling on the tag end. So, as an extra security, I like to tie a back up knot. This is simply an over hand knot tied not too tight and it still gets the job done. This will keep the tag end from accidentally getting pulled by a fellow camper in the night, dumping your roof on you, or by you accidentally pulling it. Once this ridge line is set up and you stake out the tarp, you want to keep that line tight for wind.



Here I'm just pulling the loop through and finishing the simple over hand knot.



Done. Don't pull it too tight, it doesn't have to be. We still want to be able to easily break camp and have this para useable again later.



Now lets say you have a really far span between trees, or are rigging a clothes line and might have 20' between poles. Or maybe you need the line REALLY tight or want to use the rope like a winch as actually move an object. This is where I use the double trucker. To start, use the bowline as before. Get the rope around the second tree, and find a point farther up the rope, not the 8-12" as in a single trucker. Make your slip knot just as before.



Now, you'll want to add a second slip knot to the piece of para you just pulled through your first slip knot as in the picture. This will be pulling the opposite way so, as you face the second tree, you'll 'turn on the ignition' from this direction and make your 2nd slip knot.



Here I have already reached down into the loop made, and loosely pulled a bight of para through for the slip knot.



And with it tight.



Here I have pulled the working end through the slip knot loop and will start to pull tension on the whole rig. You'll see the two slip knots coming together and you now have a 4:1 mechanical ratio. Can you see that all we did was make a second T/H facing the other direction? If you need more pull, mark the first T/H farther up the rope and you will have a farther span to pull together and you can really watch the power of this rig.



Now as you have pulled the tension, pinch it off as before and hold it so you can put the quick release half hitch in to hold the tension.



The start of the quick release half hitch. Keep holding that pinch. This half hitch will now get pulled toward your body and left to right to secure. The mirror image of the first T/H in this rig.

Finished. You have just tied the Double Trucker's Hitch. For most applications the single will do but, this will come into play every so often and since you will be mastering the regular T/H, this is a no brainer to tie since it's the same thing, just pointing the other direction. Hope this was easy enough to follow. Practice makes perfect so lets get out there and get knotty! Next issue: The Bowline and different variations of it.



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Budget Bush Blades

Bushcraft tools for the common man

By Tim Stetzer



When you look at many magazines on the newsstand, or browse the various knife forums on the internet, it's easy to get the feeling that you have to drop a couple hundred bucks on a custom blade to be able to make it in the wild. While there are a lot of great reasons to get a custom knife ranging from unique designs, top quality materials, and superior fit and finish. It's also true that our forefathers made do with some pretty simple and inexpensive cutlery for a long, long time. If you're working on a tight budget, or you just like to keep a spare blade or two around in your pack or vehicle, there are some great deals around to be had. Let's take a look and check out a sampling of offerings that can be found for under \$30!

Okay, I know what you're thinking. "\$30? Either he's nuts or we're going to be looking at junk not fit for the field". Well, lest you stop reading too soon, rest assured that there are some great bargains

out there in the knife world that don't cost an arm and a leg. Now, before I go into my picks let me say that this is by no means a definitive list. I did not include the ubiquitous Mora or the Green River knives. They certainly both are contenders for this list but they're also knives that a lot of folks already know about so I passed on them for this article. So, with those caveats in place, let's take a look at five models that I've found to be good working field blades that won't run you over \$30 with just a little bit of shopping around.

Tim Stetzer was born and raised in Western Pennsylvania, an avid camper since the age of 12. Tim has served in the US Army, the Air Force Reserves and is now a Police Detective and enjoys shooting, knife collecting and hiking. Tim has been writing professionally since 2006 and helped found the online outdoor magazine, Woodsmonkey.com in 2008. Tim is currently Associate Editor of Woodsmonkey.com

Buck Bucklite MAX



When Americans think knife, Buck is one of the first names to spring to mind. Buck has a long history of providing high quality, good value blades to outdoorsmen and they're newer Bucklite line is a superb example of that tradition. Made in both a large and small model the Bucklite MAX knives feature 1/8 inch thick, hollow ground; drop point blades of Buck's Bose heat-treated 420HC steel. Handles are of an ergonomic Alcryn MPR rubber and are available in black on the basic models and orange on the Boone and Crocket Club editions. The MPR rubber covers a full tang so the Bucklite's are sturdy knives. For this article I acquired an orange handled Bucklite MAX for evaluation. The bigger Bucklite carries a 4 inch blade and is 8 3/4 inches overall. Weight is a feathery 5.5 ounces. The Bucklite's come with a nylon sheath featuring a hard plastic insert that's quit decent.

It's hard to believe the Bucklites are American made knives that cost under \$30. The

MPR rubber handles feel good in the hand and are comfortable in a variety of grips. Buck's 420HC isn't fancy but it's stood the test of time and combines excellent corrosion resistance, with good edge holding ability, and easy re-sharpening. I had very good luck doing typical camp chores like notching and sharpening sticks, cutting up meat, cheese and veggies, cutting cordage and just plain old casual whittling. You get an awful lot of value out of these knives and I've heartily recommended them to a number of folks since first working with them. The small model can be found for about \$19, and the large around \$24, add a couple bucks more for the orange handled version as seen here. That's an outstanding deal for a US made, full tang field knife and goes to show you don't need to drop big money to be well equipped.

- <http://www.buckknives.com>



Cold Steel Finn Bear



If Buck is a company you think of as a traditional American knife company, then Cold Steel is the one that comes to mind for unique approaches to things. Cold Steel has never been afraid to think outside the box and try new ideas and they've come up with many popular designs over the years. Sometimes that was something as simple as re-imagining historical designs and putting their own twists on them, and that's the case we have with the Finn Bear. The Finn Bear is based upon the very successful puukko design of Finnish industrial artists and designer Tapio Wirkkala. Original Wirkkala's are a little tough to find and are fairly pricey. Luckily for us though, the Finn Bear is the Wirkkala for the common man! Featuring the same basic lines and handle ergonomics of the original, the Finn Bear is made of much humbler materials and brings the design into easy reach for the average guy.

With a 4 inch blade and 8 ½ inch overall length, the Finn Bear is an easy knife to pack, especially when you consider its 2.8 ounce weight. The blade is made of Krupps 4116 stainless steel with a Rockwell around 56-57 that makes it durable and easy to sharpen. The grind is a shallow hollow grind and it strops up quickly to a razor sharp edge. The handle is a much-simplified one piece Polypropylene version of the Wirkkala design. The Finn Bear comes with a basic, stiff Cordura nylon sheath

I've used the Finn Bear a good bit over the past few years and I really enjoy it. It takes the ergonomics and design of the Wirkkala and puts it into a package that's readily available and very affordable. The Krupps steel has good edge retention and is a joy to maintain. It's held up well to batoning and heavy use too. One of my first experiences with the knife was watching a friend baton chunks off of a frozen oak log that I thought was way too big to be attacking with a knife. The Finn Bear not only handled the weekend of abuse in 7 degree weather, it came away no worse for wear. No breakage, no loosening of the handle, and no edge deformation! We had a number of high end blades develop chips and cracks that weekend from the hard wood and extreme temperatures so I walked away with a good respect for the lowly Finn Bear. Since that time I've used the knife a lot and time hasn't done anything to diminish my opinion of the knife. It's simple, sturdy and inexpensive. Its MSRP is only \$19 and street prices are down around \$13. That's pretty hard to beat no matter how you look at it!

- <http://www.coldsteel.com>



Condor Tool and Knife Sapien



Condor Tool and Knife has a history that traces back through its German parent company into the late 1700's. In more recent time this El Salvadorian company has been a major provider of machetes and tools to much of Latin America and their most recent venture has seen them branch out into knives for the U.S. and European markets. The brainchild behind many of these new designs is

fellow knife writer and compatriot Joe Flowers. Joe has come up with a string of designs for Condor but the one that I think best suits our purposes here is his Scandinavian influenced Sapien. The Sapien has a good bit of puukko in its roots but it melds that style into a sturdy full tang design. The edge is essentially Scandi with a slight secondary bevel for durability. The 4 inch blade is ground from 1/8 inch thick 1075 high carbon steel and the knife is 8 ¼ inches overall. The handle is of well-contoured Guatemalan walnut scales epoxied and pinned into place for durability. Weight is 6.08 ounces. The Sapien comes with a heavy-duty fold over leather sheath, probably the sturdiest of all the knives discussed here today.

Most of the inexpensive field knives I've talked about use stainless steel blades and synthetic handles. For the folks who love good old carbon steel and walnut though the Sapien is a nice option. To add some corrosion resistance the blades are coated with a black epoxy. Some folks like that, others don't. If you don't care for it it's easily removed with a product like Strypeeze. Handling characteristics of the Sapien are quite good. The rounded handle works well in a myriad of holds and the overall size makes for good control when carving and notching. The visible full tang blade gives a good deal of confidence in the product too and it holds up well under rough use. The Sapien carries an MSRP of \$39.98 but street prices come in around \$27 making it easily fit within our budget.

- <http://www.condortk.com>



Gerber Metolius Fixed Blade

Jeff Freeman has done a lot of design work for Gerber Legendary Blades over the years but his



Metolius series really reaches out to outdoorsmen. Inspired by the Metolius River wilderness area in Oregon these are knives that yearn to take you back to the woods. I've worked with the Metolius folder in the past and was anxious to get my hands on its fixed blade brother for this article. The Metolius Fixed Blade features a 3.75 inch drop point blade with a distinctive hump to it along the forward portion of the blade. The blade itself is made from 9Cr18MoV steel and features a plain, non-serrated edge. Gerber likens this steel to 154CM in its properties. The handle has what Gerber refers to as a SoftGrip over mold, and features deep finger grooves to provide a positive grip under adverse conditions. Overall length is 8 ½ inches and the weight comes in at a solid 7.7 ounces. The butt of the Metolius features a stylish triangular shaped lanyard hole. The Metolius comes with a basic nylon sheath.

My field time with the Metolius Fixed Blade compared favorably with the time I spent with its folding brother. The blade shape lends itself well to hunting tasks as well as general camp chores. It works well for your typical cutting, carving and



slicing required on the trail, and its sturdy point was great for drilling and prying into wood. The big advantage of the fixed blade over the folder for me was that I wasn't hesitant about doing light chopping and batoning with this sturdy blade. While the Metolius Fixed Blade carries an MSRP of \$50, you can find them for about \$29 with some shopping around and that's a pretty good deal for another great design from Jeff Freeman.

- <http://www.gerbergear.com>

Marttiini Condor MN15 Puukko



While I passed on the Mora's since most folks know about them I did include another Scandi pattern knife that often tends to get overlooked. Marttiini is a Finnish knife maker that makes a wide range of knives from very traditional to very modern. Their Condor line features somewhat more Westernized designs and they tend to be very affordable. The MN15 puukko discussed here comes with either a black Kraton handle or a birch wood handle and carries a 4 1/4 inch Scandi ground blade of high chrome stainless steel. Marttiini's stainless blades are relatively low Rockwell, in the low to mid 50's, and some folks don't care for that. Personally, I've had good luck with them and have found that the durability and ease of maintenance makes up for any perceived lack of edge retention. Overall length on the MN15 is 9 inches and that encompasses a good-sized, hand-filling handle. The wood handled MN15 features some simple but attractive etchings giving it a more traditional appearance over the checkered Kraton version. The guard and bolster are actually plastic with a metallic coating but they're sturdy and functional. The MN15's comes with pretty nice sheaths for the money. They're a fold

over leather design with a dangler loop and feature a stiff plastic insert for safety.

My first experience with the MN15 was on the same brutally cold winter trip where I saw the Finn Bear abused. The MN15 held its own on that trip, and has done well ever since. I recently traded off my old Kraton handle MN15 for the fancier wood handled model and I like the upgrade. They function the same but the warmer wood handle and brown leather sheath appeal to me. The Kraton handled MN15 is about \$20.98 and the wood handled one comes in at \$29.98, just sneaking into our \$30 budget. It's a good knife in either handle configuration and a nice option if you like a Scandi edge.

- <http://www.bensbackwoods.com>



Bushcraft on a Budget

A limited budget doesn't mean you have to settle for poor quality. There is certainly a difference between cheap and inexpensive, and with a little looking around you can find some very good buys that offer good performance but that won't cost you a lot of bucks. The knives covered here are just some examples of ones I've worked with personally and know to work, but there are definitely others out there. If I missed your favorite, drop us a line here at *SRI* or leave us a message on our Facebook page and let us know what it is!



Bullpac

By Brian Mayer



Bullpac frame alone showing ALICE attachments for ALICE pack.

A few years ago, I was looking for an external pack frame that was not only rugged, but comfortable, as well. Being a fairly broad shouldered person, I was looking for something that would not bind in the crease of the shoulders as I carried my load – a problem I've had with many of the soft pack systems out there. I knew there were several external pack frames on the market, but nothing struck my fancy.

While searching the Internet, like most of us do when we are looking for gear, gadgets or gizmos, I came across Bull-Pac. I noticed a frame for chest sizes 48 Plus and larger than average backs. I felt this had to be what I was looking for. After reading about

the frames and some of the customer reviews, I decided to purchase a regular frame(After all it said, “life time guarantee”. How can you beat that?) and the fact the frame is designed by a machinist and avid elk hunter out of Idaho.

I received the pack and was amazed at the quality of the frame. I tried the pack frame on and could not believe how comfortable it was. With everything strapped and buckled, it felt like a part of me. The shoulder straps came straight over the shoulder, in sort of an “H” and not an “S” from behind the back of the neck. The shoulder straps also had a sternum strap. The pack rode comfortably on my hips, and at only 4 lbs, the pack wore like it weighed less.

While on a deer hunt in Wyoming I had a chance to use the frame. Needless to say, the frame delivered as I had expected.

Being retired from the military I had always been a fan of the ALICE pack, but less than enthusiastic of the tubular, aluminum frame it came with, and how uncomfortable it wore; moreover, I knew there were many people out there who felt the same way I did. One day, while looking at the frame, I thought this would make for a great frame to carry the military ALICE pack, so I took my medium ALICE pack out and laid it on top of the Bull-Pac. It was a perfect fit. All the frame needed was a slight addition to the cross frame. I called Janice at Bull-Pac and discussed my idea with her. Janice asked me to draw up a design and take some pictures and forward them to her and Dave to review. They both liked the idea and decided to implement it into the design of the Bull-Pac frame.

Dave and Janice sent me some frames, with the addition, for my review. It was exactly as I had envisioned. I mounted my ALICE pack on the “fins” that were added to the cross member of the frame

After retiring from the US Navy, Brian Mayer currently works as a law enforcement officer in Southern California, his achievements include: SWAT, Primary Response Officer, Field Training Officer and Metro Team. Brian is an avid outdoorsman, hunter, trapper, and he enjoys archery and bushcraft.



Above: Bullpac and ALICE in use.

Left: Bullpac frame with medium ALICE pack attached.

and it fit snug. I strapped the lower mounting straps of the ALICE pack around the side of the frame and it was complete. I loaded the pack up and could not believe how comfortable it felt. I have since then given others the opportunity to try these frames, and see for themselves. So far, the sentiment is the same. It is a remarkably vast improvement to the old ALICE pack frame. For those of you who have experience carrying the ALICE pack, I encourage you to give the Bull-Pac frame a try to breathe new life into that old trusty pack of yours. I think you too will say, "This is a no Bull Pac!"

To see various other ways to use this frame, I encourage you to visit bullpac.com



What's in my Pack? by Dave Canterbury

(Continued from page 9)

used for the first fire. What needs to be realized here is that the Wet Fire Cube is an absolute emergency solution to create fire and should never be used if dry tinder is available in the area; this conserves another resource when absolutely needed.

Covering devices for this purpose should again be light compact but multi-purpose, I prefer to carry at least a poly tarp of 8x10, a 55 gal trash bag/drum liner of 3mil construction and an emergency re-usable space blanket this small roll will give you tons of versatility and adaptability for a minimum cost. Other uses for these items include rain catchments, sleeping bags, ground coverings, rain gear, and signaling (if the tarp has an orange side) can be very beneficial for short-term survivability and rescue.

Containers are one of the most important pieces of gear you will ever use. Without water we cannot survive for extended periods even if we have accomplished CCT. For this reason we must ensure this container can accomplish several tasks very well, it must be water tight, capable of being placed into the fire for water disinfection, as well as cooking if necessary. It also should be constructed of thick-wall materials to withstand shock from being dropped and banged around. There are only two devices I have truly trusted in many of my adventures around the world for this purpose and they are the Guyot Designs SS Bottles, which are heavy gauge, thick-walled Stainless Steel or a US Issue Canteen Cup and Canteen combination. The Guyot is my most preferred due to the fact that the smaller opening allows for ease of manufacturing charred cloth for future fires in a longer-term scenario.

Cordage is something that is a must due to the fact that it has so many uses and it can be very time consuming as well as difficult to find materials in nature for this purpose depending on season and environment. I always tell students to ensure that any cordage is multi-ply so that it can be broken down to smaller fibers if needed. There are two main forms of cordages and one that I prefer over the other for several reasons. Until recently the main go-to cordage for any survival type or outdoor use has been parachute cord, 550 cord, or facsimiles of it. True PC has 7 inner strands so that it can be broken down for use on smaller tasks like fishing and it is very strong and light. The main disadvantage to these

inner strands is that they tend to fray out very easily and they are a bit difficult to work with for certain tasks like trapping or snaring and the entire cord is actually too large in diameter to make effective small game and bird snares. I discovered a while back something called Tarrad Bank or Mariners Net line, This is not Masons line like sold at hardware stores it is different. It is a three ply cordage that again is very strong and can be purchased up to 350# test; it takes up less room and weight than PC and is a lot more functional for things needed in an Emergency Outdoor scenario like trapping, fishing, lashing and things like that. It is a great material for small game snares and traps and is also dark colored usually Brown or Black, which adds to its camouflage abilities when used for fishing and hunting. It also stretches less than PC so lashings and bindings on tools and shelters do not loosen over time. As far as the cost effectiveness it can be purchased for about half the price of true PC for three times as much taking the same weight and space requirements in my pack. All around, it would always be my first cordage choice, with the second being PC.

Understanding these five items and all the uses for them is the first step to understanding what it really takes to reduce the size and weight of your kit and effectively maintain true survivability. What is even more important to understand is the skill and ability to replace these items using natural material if and when needed because this is the true measure of your own skills.



Popular Chemical Water Treatments by Joe Flowers

(Continued from page 30)

Bleach

Chlorine bleach can also be used in an emergency situation, but the stuff is Mr. overkill when it comes to killing everything. You only need just a few drops, the recommended amount for 1 gallon of water is sixteen drops for cloudy water. Be careful not to use scented bleaches or anything with color fast agents, and this is more for emergency than anything else. I drank bleach treated water from the Amazon River while on a survival course in Peru, and had no ill effects.

It is important to remember that these are methods to treat pathogens rather than chemicals. The process of removing chemicals out of water is a

different ball game entirely. For the avid outdoorsman, iodine works pretty well, again, not for Cryptosporidiosis though. The combination of a low micron filter and iodine also helps prevent it, and if you are in an area of high crypto, boil it! For most normal situations though, these methods of water treatment will ensure your intestines remain in top function, and will help ensure your health for more bushwhacking adventures later.

Potable Aqua

potableaqua.com
1 Pharmacal Way
P.O. Box 198
Jackson, WI 53037

Polar Pure

Polarequipment.com
12881 Foot Lane
Saratoga, California 95070



The Bamboo Fire Saw by Ken Seal III

(Continued from page 40)

piece, and place it in the notch, and using just the one hand, you can saw into the bamboo, just as if you were trying to cut it in half. You can also use a shorter piece for the saw with this method, as you are only going to make strokes as long as the node itself. The process is the same as with two hands, slow and steady, increasing downward pressure as you see smoke, and always saw a little longer than you think you need too. When you have a coal, lift the notched piece off the nest...and slowly lift the nest, fold and blow as before. While bamboo tends to burn fast and hot, it will burn even when it's wet. This is due to the wax coating on the outer shell of the trunk. So if you find a grove of it growing.... don't be afraid to scrape some tender off it won't kill the tree itself, and I have found that even in the most humid of conditions, you can blow a coal into flame with nest made from bamboo scrapings. It's a little harder to chop than most woods, but the saw from a multi-tool makes short work of it, and it splits with little effort. I hope this gives you some insight into another primitive fire starting method you can practice, and I hope that you can go out and scout out a place where some bamboo is growing so you can learn even more of the many uses this amazing Tree holds. If you find some, ask the land owner, I am sure they won't mind you tasking it, and practice this skill till you own it. Take the working set, and pack it inside itself, and

store it in your pack for future use. From water collection, bows, trap materials, to fire and even food. But those are stories for a future article. Till then, continue to follow the path less traveled.

Advanced First Aid by Kelly Martin

(Continued from page 49)

smoking. The process was horrible. Smoking degrades just about every positive wilderness trait the human body has. Keep your body in working order by treating it right.

Conclusion

It's exciting to consider the possibilities first aid articles cover, but it's not advisable to get your medical training from a magazine. I recently sent a letter to the editor of a prominent gun rag concerning a columnist' overly aggressive promotion of tourniquet devices. It was not well received. Point is, don't take some guys word for it when you can go do it yourself. Advanced first aid can be learned and applied by the average man. Everyone wins. You get experience in real survival situations, apply critical thinking skills in a tough situation, and of course learn advanced first aid. And by the way, that fellow that called 911 just might be glad you showed up! ♪

Book Review *(Continued from page 98)*

little of a fire and not enough prepared tinder, he finally gets around to describing the camp fire as it is supposed to be made: you'll need butternut for the backlogs since they'll be green which will burn low and last a long time.

Cooking is another good read in "Woodcraft and Camping". Coffee (a very good read), beans, and stews and fries, fish and condiments are covered. A smattering of other foods are covered as well, "Woodcock are to be plucked, but not drawn. Suspend the bird in a bright, clear heat, hang a ribbon of fat pork between the legs, and roast until well done; do not parboil him." Venison steaks and rabbit are covered as well.

A ten day trip and canoeing are excellent chapters but I'll let you discover these gems for yourself. This copy I own is a slightly abridged and altered republication of the 1920 edition and is 105 pages. I have never seen any other version myself but am curious as to what might differ. Regardless, it is a read that will take you back in time to an easier pace and when hundreds of dollars of gear simply wasn't necessary to enjoy a camping trip. All you need are a few healthy boughs of Hemlock to loft up your bootlegs for a pillow and you're all set.

His writing style and word craft is not of this modern era and forces you to slow down and actually read it, rather than skim through. Not once did I have to read, LOL, IMHO, or any other short hand. A joy. ♪

Pathfinder Youth Organization

Why?

By William Sigler



Just a tributary of the main water flow, but a separate world to explore.

Authors note: I was asked to add to my first submission of this article. Imagine that, ME not being long winded! Which got me to wondering what to add. Thinking about it kept leading me back to the reasons for my “WHY”. I was also asked to include pictures, which also led me back to take pictures of an important place that helped to define my “WHY”. I found myself walking in a place that I have not seen for more than 35 years. For aiding in this rediscovery, I would like to thank you Mike!

The PYO’s founding principle is to bring

“Wilderness Self-Reliance” to the next generation. We are an eclectic group of volunteers that enjoy nothing more than to help children learn Bushcraft and Wilderness Self-reliance skills. It is an easy thing to do once you can answer the question

William Sigler is 52 years old and has been a resident of Western Pennsylvania his entire life. He is part of the Pathfinder Youth Organization family and has been named as the President of the soon to be formed National Pathfinder Youth Organization. He is a certified commercial and public safety diver, and is also a student of Bushcraft and Wilderness Self Reliance.





The “Falls” as the Author remembers it from his summers of adventure.

“WHY” for yourself.

- Why “Pass on the Tribal Knowledge”?
- Why teach “Wilderness Self-reliance”?
- Why teach the next generation so that they can depend on themselves?
- Why teach the next generation to respect nature and to use its resources wisely?
- Is it worth fighting a battle to show the next generation that not every problem can be solved by technology?
- Is it worth the time and effort of so many to pass on our love for “Ma Nature”?
- Is it worth the time and effort of so many if it helps to change the life of ONE child, or to keep that child safe in the wilderness?
- With so many questions, where are the answers?
- You only have to look into your heart to find them.
- That is where you will find the TRUE answers.

- The reality is that OUR reasons are not the most important thing.
- The only thing that “TRULY” matters is the end result.
- The only thing that “TRULY” matters is the child.

As we look forward to all of the challenges that are before us as the PYO, our biggest challenge seems to be how to balance “Passing on the Tribal Knowledge” in today’s technological day and age. We live in an ever increasingly “What about Me” society where people expect more and more to have things done FOR them. The closer the electronic connection between us, the less self-reliant we seem to become. Technology has given us some great benefits, but not everything can be solved with technology. The greatest resource that we possess is based on carbon not silicon, and that is what Self-Reliance is all about. The tricky part of the whole thing is to get the Next Generation to truly understand that. After that their curiosity will guide them.



The Falls as it stands today, accessible but not nearly as respected.

As technology advances it takes only a few generations to start to lose Tribal Knowledge. Can we live without it? Sure we can. Are we better for it? Not if we can't find a balance between technology and nature. Tribal knowledge brings along with it the understanding that becomes self-reliance and a fundamental respect for nature that causes us to use its resources wisely.

Am I preaching to the choir? If you are reading this you probably have a good understanding of the concepts. But do you understand the WHY?

The more we as students can learn about

wilderness self-reliance the more we can pass on. What we get out of it is secondary. Whenever we start doing it more for ourselves and less for others, is when we start losing sight of WHY.

For some of us our WHY has been there as long as we can remember. Our family, friends and countless trips into the woods taught it to us. Others among us are either just discovering it or are re-discovering it for ourselves. I am part of the latter group.

My WHY started when I was growing up. The love I have for the wilderness was forged by



Water park of the wilderness.

almost daily summer trips to the FALLS. Back then the days were full of adventure and imagination. Of course we had Baseball, but to explore the steep sloped ravines, follow the watercourse, and search for that secret cave (that we never found) was as enjoyable as sleeping out under the stars.

It would help at this point to understand that I was a child of suburbia living in a housing plan. As boring as that may sound the adventure literally started in my back yard. The tree line that led to the FALLS just happened to start outside my back door.

I have wondered many times since joining the PYO how different life would have been if I had been part of the PYO and the extended Pathfinder family back then. As good as the Boy Scouts were, we weren't a good fit. The Explorers was more in tune with my direction but they weren't quite right either. I knew this because of the many hours and days spent getting wet and muddy and missing many lunches exploring.

Fast forward through High School, getting married, College, having two kids, and all of the joys

of having a family, to the recent past and a trip to visit my (now adult) daughter who at the time was teaching Special needs children in Hawaii. At the time my plan was to re-discover my childhood summers by getting out into the wilderness to explore. But being a child of the modern age, I was thinking more about the THINGS that I would need to do this rather than the WHY. Little did I understand where this path would ultimately take me. Two of the most memorable parts of this trip were the tour of the Polynesian Cultural Center and a visit to the Lava fields.

Something that I discovered about the Hawaiian people through my daughter is the deep ancient respect that the Polynesian culture has for the earth. This came in the form of a warning that Pele protects the land and does not appreciate visitors taking away any part of her beloved islands. I am not a superstitious person but understood that by not bringing back the piece of a lava flow that I wanted to, was a way of showing respect.

During the tour of the Polynesian Cultural Center we attended a fire-plow demonstration that

sparked my interest. I sat there thinking that even though the Samoan presenter was making it look hard, he knew exactly how to do it by many hours of practice. Since hands on were not part of the demonstration I figured that I could use the Internet to research how. As I look back, it seems to me that this is a perfect example of using technology to further understanding.

The Polynesian Cultural Center is a “For Profit” endeavor but passing on the knowledge of their ancestors is what the place was all about in my opinion. It educates you on their traditional ways of approaching daily life, and in my opinion is well worth a visit.

What I didn’t understand at the time was that a Fire-Plow demonstration started me on a road that is leading through the second great learning adventure of my life. I was recently asked how many years that I was planning to devote to this endeavor and to my wish list of skills, to which I replied that I am looking forward to keeping the list alive for as long as I am. I only expect this adventure to end “In the clearing at the end of the Path”.

My research has led me from the “Best and

lightest toys for the quickest hike” group, to the “What are you going to do if you loose your toys” group, to Dave Canterbury, the Pathfinder family and the PYO. I consider myself to be very fortunate to have been associated with excellent people in both of the major learning adventures of my life. I was taught to dive twenty years ago by a former Navy Seal that remains a friend to this day. Two former members of the Air Search Rescue diving search team are still good friends. The Pathfinders and the PYO families are also among the most dedicated and caring people I have ever known. My associations with all of these people have proved to me that even though there is great evil in this world, there is also great good and caring.

With all this having been said, the important things are not whom we know or what we have done. In my humble opinion, it is more about whom we help and how we do it.

Have you found your “WHY” yet?

As a wise man once said, “Let’s Learn Together”!

“Be Safe!” ~ Bill



Please join us at Rocky Fork State Park in Hillsboro, Ohio for the 3rd Bi-Annual Pathfinder Gatherings

Spring Gathering: June 3 – June 8

Fall Gathering: September 23 – September 28

2011 Pathfinder Gatherings will be held at the same beautiful location and will be limited to 100 adult tickets per event. Last year’s event was a great success with over 180 people in attendance and thousands of dollars in equipment giveaways.

Classes scheduled for this year’s events include Pathfinder Concepts, Canteen Cooking, Primitive Trap Building and Sets, Basic & Advanced Fire Making, Compass Navigation, and numerous others.

Please visit thepathfinderschoolllc.com to reserve your Gathering ticket now!



What's New at *Blind Horse Knives*

By Alicia McQuain



this.

The Cambridge shop is hard at work finishing up the February special (Brumby Lite) and is getting started on the March special (Drover). The Drover is the first model on special that we have offered liners as a choice and people are really enjoying customizing their knife. We have had so many different variations ordered it is unbelievable but one of the most popular color choices has been the Green/ Black that is "The BHK color". It has been very neat taking everyone's orders and seeing what people like, as a company this is great information to have, we are getting an idea every month of what our customers like and want so we can try to deliver.

Hello everyone, I'm here to let you know "What's new at Blind Horse Knives".

Well it is never a dull moment at the Cambridge shop. We are keeping steadily busy with the PLSK 1 & 2's and the new PLSK-SP (Spear Point) our newest and way cool addition in the pathfinder series.

We have now started offering most of our knives in all three grinds on the website. I think our customers are really enjoying being able to pick their grinds as well as their handle color. We are now offering Scandi grind (one of the most favorite), Flat grind and Hollow grind. In addition to choosing your grind we have also added an upgrade page, so it's like ordering a custom knife. We have different liner colors to choose from so you can add that unique look to your knife and as always you have your choice on most of our knives to have the Traditional hip sheath, the modified dangler or a neck sheath.

As Scooter stated in the last issue the Steubenville shop is working on a rather large order for the Friends of the NRA. The Friends of the NRA has made a nice choice in our classic Frontier Valley and the Frontier First with a very nice laser of their logo on the knife and the sheath as well.

The Steubenville shop is also keeping busy with many custom knives, working on SRI and starting to plan for the Ohio Classic knife show that we will start promoting this year.

The machete Scooter has also mentioned in the last issue is getting closer to being released. Dan is tweaking the sheath and working on perfecting it. Stay tuned to the website for more information on





The Cambridge shop has also been hard at work doing kydex sheaths. Our kydex sheaths are catching on, we have had a lot of requests from people who would rather have kydex instead of leather and who are also sending their knives back to us to have the kydex sheath made.

All in all it has been another busy but amazing month at BHK. In April we will have a little R & R as we pack up and head to P.W.Y.P. in North Carolina and do some camping. We are all looking forward to seeing our friends and learning some new things.

Thank you everyone for your continuous support; stay tuned to see "What's new at Blind Horse Knives"

Over and out!

Alicia McQuain



SELF RELIANCE

illustrated



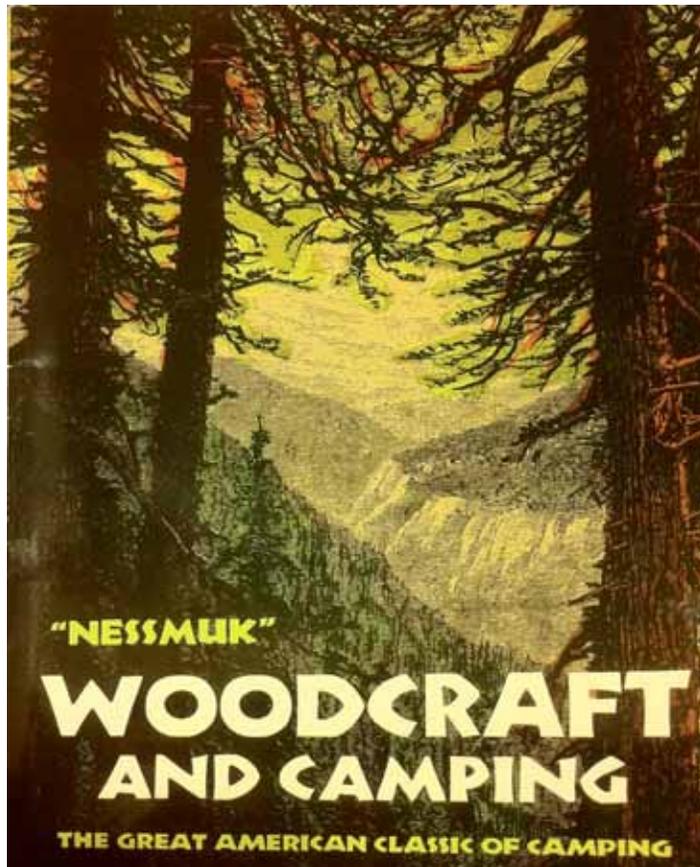
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Woodcraft & Camping By George W. Sears (Nessmuk) Book Review by Scott Wickham

If there is one book we should all read, it's "Woodcraft and Camping" by George W. Sears (Nessmuk). Covering topics near and dear to our hearts, in a time when a lot of these skills were still second nature to folks. Written in 1884 by the diminutive Nessmuk, it's ten chapters cover everything from why even go out into the woods to camp cooking. Being a gear hound, I thoroughly enjoyed chapter II where he covers his knapsack, tinware, fishing tackle and rods, and the holy grail of tools to take with you, the hatchet, the fixed blade, and the folding knife.

He tells of his twelve year search for the perfect pocket-axe, finally sourced in Rochester and made by a surgical instrument maker named Bushnell. His friends made it a point to not let him forget he had spent \$10.75 and three days acquiring this perfect tool (of which he had to fashion his own handle and leather cover). I guess that makes a Gransfors Bruks Mini Hatchet for \$160 a bit expensive.

The Indian Camp, Shanty-Tent, and Bark Camp, these are the shelters Mr. Sears covers in this great little book. Short on illustrations but, he does give dimensions for some of this and in his own unique style of recanting it, these simple shelters are a joy to read and trying to envision watching him construct.

One of the most important aspects of camping and self reliance, fire, is covered in chapter four. In the beginning of the chapter, there I a recant of years of watching tenderfoot "outers" try to make the best fire. With both too

(Continued on page 90)

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