

THE PATHFINDER SCHOOL &
BLIND HORSE KNIVES PRESENT

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SELF RELIANCE



illustrated

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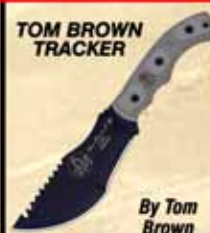
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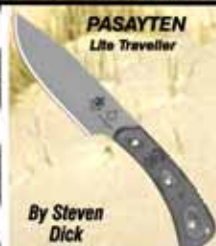


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TRACKER

By Tom
Brown



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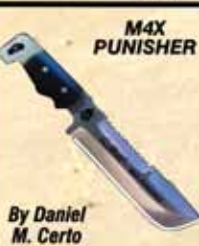
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Cover Image:

Dave Canterbury and Garrett Long. Taken by Iris Canterbury at the 2010 Pathfinder School Gathering.



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 survivability. 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.

Within these pages you will not find articles that jump from skill to skill or technique to technique. It will not focus on several types of plants for edible or medicinal purposes in the same article, giving you sparse and incomplete information due to restrictions of space. What you will find are detailed descriptions of specific skills and other things provided by nature that affect survivability. These articles will focus on one single skill, e.g. "Using the bow drill to obtain fire" and all that encompasses or "The dandelion, a versatile plant to befriend" with full descriptions and text that cannot be truly absorbed or learned in a scant few sentences before moving on to another method or plant.

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 - so 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
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Dan Coppins
L.T. Wright.

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From the Editors...

Why a Magazine?

Good question: why a magazine? I have always thought a magazine gave the ability to get information to the public in a timely manner by putting fresh information out every month or so. Couple that with an awesome cover, good pictures and fantastic ads and you have something that will be on your coffee table for weeks if not years to come. It is something Dan and I had thought of doing since the very first Blind Horse Knives meeting. Recently Dan was talking with Dave about it and next thing you know...well you get the point...here we are.

All of my life, I have enjoyed the written word in magazines. I've always liked the fact that, every month or so, a new and exciting issue would be out to lead me on some great adventure. I guess I never really had the patience to read many books or novels. Magazines have always seemed to click for me-- plenty of pictures and just enough print to get the point across without being too repetitive or boring, not that books are.

It's just that the time I allot to reading has always been short and to the point. I remember my father sitting in his recliner reading just about every outdoor and hunting magazine that was available. He would read anything from *Field and Stream* to *Rifle Shooter* to *Popular Mechanics*. Magazines allow you to explore worlds that you may have not yet been able to get to. You may read stories of adventures that have taken place just a few months back as opposed to a book that may have been written a decade or so ago. I can remember laying on our living room floor thumbing through any one of my father's magazines looking at all the pictures and ads, dreaming about the deer hunts or new gear I wished I had. The ads were probably the best part for me as a kid. I loved seeing the new knives or backpacks advertised for sale; the guided hunting and fishing trips that were offered. In the classifieds you could find anything from where to purchase honey bees to that redbone coon dog you always wanted. It was a lot of fun for me.

I can say that for most of my life, a lot of what I have purchased over the years was a direct result of magazine ads and articles. That magazine could be rolled up and stuck in your back pocket and go with you anywhere. I would take them on car trips when I was stranded in the back seat with my two sisters. I still take them with me today when we are set up at gun shows. And yes they make great reading material when you are otherwise (ahem)...occupied. Try doing that with your desktop :-)

Times do change though, and now we have super fast desktop computers, laptops and telephones that can be taken anywhere. There is almost nowhere that we cannot be connected directly to the internet. It's just not the same though. I love the feeling of thumbing through a brand new magazine and seeing all the ads and articles that will keep me busy for the next few days. Guys, who are we kidding...one of the only reasons we go grocery shopping with our wives is so we can hang out at the magazine rack and check out all the latest offerings. I know myself when I am interested in a subject, I buy up all the magazines and hit all the websites there are on that subject.

There have been a lot of great magazines over the years that have given me inspiration to do what I do. I think that this magazine will fill a gap that you and I are interested in. Hopefully, it will give you the reader a chance to write of your adventures, tips, modifications of gear, and share it with the world. I would not know how to make knives if it were not for R.W. Wilson who took the time to pass on his knowledge to me. We hope this magazine will inspire the ones that are on the fence about getting in the woods while providing us all a place to pass on the knowledge that we have to share. It is our sincere hope that we can make this magazine a family affair that involves not just us but, you the reader as well and fast becomes one of your favorites.

Over the years some of the magazines that have inspired me are Tactical Knives, what a great place to see the latest knife offerings. Backwoodsman is another fantastic offering as well as Blade, Knives Illustrated, JP Magazine, Hand Loader and many, many others. These have been great sources of information for me in my life and I hope that we can bring you that kind of feeling in the pages of this magazine. If you've never tried any of these other magazines by all means pick up a copy and thumb through it. There is still a lot of great information in these magazines, please continue to support them and others that bring the subjects that you are interested in. I will still continue to buy and read many of these and more that I have yet to discover. Thank you all for your support of us on this new adventure. I hope that this will be a wonderful and rewarding ride for us all.

God Bless
L.T.

The Self Reliant Mindset

By Larry Carr

A self-reliant individual finds no more hardship in having to weather a night or two in the wilderness than the traveler who missed his plane finds in spending an extra night in a hotel room. The distinction between a self-reliant person and a survivor may seem trivial, yet I assure you it is not. A survivor manages to stay on this side of the grave, despite nature's uncompromising personality. Nature does not care if you are rich and powerful or poor and weak. Nature will still force you to recon with thermodynamics stealing the warmth from your body, gravity trying to pull you off the hillside you are traveling (causing mechanical injury or worse), and dehydration depleting your body of its ability to sustain itself.

The survivor somehow manages to avoid perishing under these circumstances by chance: they ended up stranded in the woods on a summer day near a river and followed it to civilization and rescue. Perhaps, they were stranded in the winter yet were lucky enough to have a lighter to build a fire to keep them from hypothermia. Perhaps they just happened to have the sheer determination to make it through their ordeal. With that word (ordeal), we come to the true difference between the survivor and the self-reliant person.

The self-reliant person will not find the time spent stranded in the wilderness, or any

other situation for that matter, an ordeal, for they will have the skills to overcome the loss of body temperature, to find the safest way to traverse the terrain, and to locate and purify water so that they will not become sick and weakened. Even injured or otherwise unexpectedly handicapped, the self-reliant person will thrive in the time it takes to be rescued or to rescue themselves. Once the self-reliant individual learns that he or she can do things for themselves and do not have to rely on others to make it through an unexpected situation, they can adapt these skills to any situation.

The self-reliant can enjoy having no electricity after a severe winter storm, because they have the mindset that they can do this on their own and don't have to depend on emergency services—or anyone else—to come out the other side of the situation looking like they never had a problem in the first place. Once you begin to learn the basics of keeping yourself alive, you can't help but want to add to your arsenal of skills and find ways that these skills help you through normal days also.

How can being self-reliant help you through the normal times? When you understand that you can do things for yourself, you find that maybe you don't have to pay the mechanic a couple hundred dollars just to replace the alternator in your car, you won't have to pay a contractor to fix that small leak in the roof, and you don't have to worry if you run out of lettuce and

don't have the time to run to the market, when you have wild lettuce and lamb's quarters to make a salad growing in your backyard. Once you begin to understand you can be self-reliant there is no limit to what you can accomplish.

A hundred years ago, the average American had this self-reliant mindset and today it seems to be a lost art. The Pathfinder system is not just another survival method; it is how life should be lived. The Pathfinder, no matter your skill level, blazes the trail for others to follow. So let's begin the journey and teach others what you have learned and let's leave this world in a better state than we found it.

The word power can be described as the ability to act. Let's develop the skills, so that we can act and not just react to life's challenges. The Pathfinder is powerful because he has options to deal with any situation life throws at him. Let's learn together.

Larry Carr grew up on his father's twelve acres of woodlands and was active in the Boy Scouts, he is also a veteran of the United States Marine Corps, he completed both the Desert Survival Training in Twenty-nine Palms, California and the Jungle Survival Training in the Philippines. He is a current student of ITT Technical Institute working on a Bachelors Degree in Network Security. Larry currently lives in north-eastern Ohio and is the proud father of a five-year-old son.

What's in my pack?

3 Minutes

By Steve Voss

3 Weeks



3 Hours

3 Days

Figure 1: Rule of 3's and the skills of life.

This started when L.T. Wright and I realized we both had picked up the same Camelbak MULE on closeout. We discussed building a compact, lightweight rig that could go with us on a trip to the grocery store or on a short daytrip into the woods.

I, by my own admission, am a confirmed gear-head. I find myself carrying things “just in case” or because I know I want to spend time playing with “this or that.” The challenge was to pack in all my “must have” items and keep the weight down. The total configuration with one quart of water weighs in right around 11 pounds.

I believe in a slightly modified version of the 7-P's (Proper Prior Planning Prevents Prematurely Perished Persons)—in a word, “Me.” To that end, the gear conforms to my view of the Rule of 3's. In the first three minutes signaling might get me rescued before I need to use any of my other kit. Likewise,

putting on my rain gear might be all the shelter I need in the first three hours to prevent hypothermia. A few well chosen tools may be just what I need to build a better shelter, maintain my fire or gather water during the first 72 hours. A compass, map and navigation skills might allow me to walk out on my own OR to prevent my getting lost in the first place. Finally I always carry some small store of food—a snack while I'm hiking is always enjoyable and if I do find myself “surviving” that little store of food gives me the peace of mind to avoid the “must find food” mentality that sets in when one first utters the word “Lost”.

To go along with the Rule of 3's you'll notice my pack contains what I consider to be the three caveman skills—Cutting, Burning and Binding. There are other “nice to have” items to be sure but in a self-reliance situation these three skills, plus time, will enable you to live another day!

Let's take a quick run-through on what's in my pack; broken down by the eight focus areas:

Signaling:

I carry a mil-spec glass signal mirror, a red laser “flare”, a Sidewinder flashlight and a pea-less whistle. These four items cover visual (day and night) and sound signaling. There is a spare set of AA batteries for the Sidewinder and a CR123 spare for the laser.

First Aid:

A very small, lightweight kit with emphasis on bleeding and blisters—really just enough to patch up me or a companion and get us going again. I carry a bottle of insect repellent and a few hand warmers year round. In addition to their normal uses the insect repellent will lubricate a small patch of dry skin and the hand warmers will sometimes soothe stings and bites. I carry a few packets of hand sanitizer gel to clean and disinfect—they also serve as an alternative fire starter.



Figure 2: When adventure calls, packed and ready.

Shelter:

I like to think that my 7-P's preparation will find me adequately dressed for my outings; but there is a commercial backpacker's poncho and an AMK bivy-sack to rig a temporary shelter or overnight bivouac. If I do "remain overnight" I carry a pack towel and a small traveling soap dish packed with toothbrush, paste, dental floss and a few personal comfort-care items. There is a small packet of toilet paper tucked in with the food module.

Fire:

Way overboard here but I like the assurance of being able to start a fire when I need one and do it quickly. I carry a couple of butane lighters, some cotton balls smeared with Vaseline (carried in a cut-down .50 cal speed loader), a firesteel and some jellied alcohol. The jellied alcohol is the same paste your wife uses in her warming dish—buy it in bulk at the grocery or hardware. I have another lighter in my pocket and

usually a K&M match safe packed with waterproof matches. The foodstuffs are packed in plastic bags which can be cut into strips, braided and then lit—even soaking wet they will burn.

Tools:

I carry a Gerber multi-tool on my belt, along with my cell phone, a liner-lock folder and my BHK Large Workhorse (or one of the other many knives I've bought from L.T. and Dan!). In the pack is a Bahco folding saw, a small Mora carbon blade; along with oil, stone and diamond sharpener. We can round out the tools list with a monocular and an assortment of paracord and mason's twine.

Water:

The Camelbak has a 2L bladder and I carry a 1-quart GI canteen, cup and stove stand. Along with the canteen I carry a bottle of Potable Aqua and a small dropper bottle with iodine for water purification. There



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Survival or S



By Dave Canterbury

our skills at building shelter and fire, collecting water and food, and navigating in and out of wilderness areas.

So with the above said, is it enough to understand the building of simple shelters using man made materials like tarps? No. To adapt to change we must plan and practice as if we do not have these items so that we can adapt if and when the need arises. We must learn to build different types of natural shelters so that we can **adapt** to environmental as well as weather changes depending on our situation. A simple lean-to may be completely ineffective against certain weather conditions and a nice warm debris shelter may not be the answer in a swamp. As we cannot pick the time that we get thrust into the emergency situation that becomes '**survival**', we need to understand all aspects of adaptation needed to combat the above changes.

Within the realm of definition, the following definition I believe describes both '**Survival**' and '**Self-Reliance**': *A natural process resulting in the evolution of organisms best adapted to the environment.*

As you can see by the above definition, the art of survival comes from adaptation which is learned through being self-reliant! After all, adapting to change is what self-reliance is all about.

So now that we see that these words are synonymous in many ways, we can better understand what we have to do to affect our own **Survival / Self-Reliance**. Adapt to change! This is the root of all survival theory. By adapting to changes in simple conditions like weather and environment, we learn to become more self-reliant. For this reason, we practice

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.



Above Left: Collection of water is always a priority, collecting it from vines allows quick potable water without calories expended to start fire for disinfection of ground water sources. **Above:** Setting Traps a game of percentages more is always better in Self-Reliance situations.

elf-Reliance?

Starting fire with a lighter can be easy within the controlled setting of a camp ground, but it is very different during a snow storm or heavy rain. There are many ways to start fire and, to be '**adaptable**', we must understand several methods including the most primitive in case we need them to affect our own survival. Understanding multiple ways of collecting food and water, along with fire and shelter will help us '**adapt**' to the situation and control our body's core temperature. This is the key element of adaptation that has separated modern man from all others. Through understanding all aspects of controlling core temperature whether by dressing in layers, getting closer to the radiant heat of a fire, or making a more weather resistant shelter, man has defied nature's various changes and has adapted for '**survival**'. Understanding the additional variables like water, food, consumption & conservation, we also control and maintain core temperature. All of these things must be



understood at the most rudimentary levels to become '**self-reliant**'.

My theory is, as I have said in the past, when your mindset become '**survival**' (life and death vs. making the best of a temporary situation by adapting through '**self-reliance**') you have already set yourself up to fail. Practicing the skills featured in this publication, as well as many books and other media, are the key elements to adapting to change. This ability to adapt to change is the true definition of '**survival**'.

Left: Rudimentary Skills like basket weaving can be used not only to occupy the mind but to contain wild edibles in a base camp.

Above: Creating items like Snares and Burnt containers for Grease Lamps, conserve calories while resting in camp, but accomplish tools for later use to affect survivability.

The SteriPEN® Water Purifier

By Andy Blanchard



Water. Regardless of your circumstances, the value of water is paramount. The human body needs about 1 liter of water a day to remain healthy and functional. This is assuming, of course, that one starts off well hydrated. The climate an individual is faced with as well as the level of physical activity he or she might undergo can seriously impact this number.

Many people in the world take this vital resource for granted. Think about the volume of water that goes down the drain in your home every day. To many of us, it seems the supply of water is infinite. After all, 70 percent of our planet is covered in water, right? It is one of the most abundant resources we have. Even our bodies are nearly 2/3 water (62.5 percent). Simply put, without water there can not be life. Every life form on earth needs water to survive, and therein

lies the rub.

If you are fortunate enough to find a water source in a self-reliance or self-rescue situation there are organisms in competition with you for that water. Most of these life forms of the microbe variety are not friendly should you ingest them. They mean you no ill

Andy Blanchard is an avid outdoorsmen who resides in Ohio. The outdoors have been a part of his life since he was young and got his first taste of self-reliance thinking from his time in the boy scouts. Since that time he has sought to expand his experiences and abilities in the outdoors. He enjoys reading, hiking, backpacking, hunting, camping of any kind, and is genuinely more at home in the woods with his dog Timber as nearly anywhere. Andy is a proud Christian and his professional life is based in the metals industry. His hobbies include photography, knife making, and shooting sports. He is also a contributor for woodsmonkey.com and Ohio Valley Outdoors magazine where he chairs the prostaff.

Purifier: Partner in Survival

will, it's nothing personal; you just happen to be a moist warm place to breed. Doesn't sound bad, right? Providing a habitat for some critters to escape the harsh world, even if it is in your bowels? Well, I'm afraid it is bad, in a survival situation it is just about as bad as it gets.

The experience of microbial infections probably resembles the worst flu you've ever imagined. If you took those few mouthfuls of water from a less-than-savory water source it was likely you did it in an effort to get rehydrated. The irony is if you didn't take steps to ensure purification of the water you may have just made a horrible miscalculation. If you were unlucky enough to have ingested a nasty cyst, coliform bacteria, or virus, the clock just started ticking.

Individuals who are unfortunate enough to be in this situation and are able to receive medical attention may survive: that is *may*! Someone in a survival or wilderness self-reliance scenario in this predicament has a very grim outlook indeed, In as little as three hours, symptoms like diarrhea and cramping can start. Within eight hours, symptoms can escalate to crippling headaches, dizziness, vomiting, and many other unfavorable symptoms. None of these will help you find your way home or enjoy your time in the woods. The simple truth of the matter is you could easily die from a number of these situations. Simply put, water is one of the big 3 (Trinity of Survival). Dependant upon environment and the situation, you can only survive 3 hours without shelter (regulated body temperature), 3 days without water, and 3 weeks without food. These are the rough limits of the human body and your job is to not test them.

The only thing you want out of the water source is the water, as pure as you can get it. One thing to keep in mind about all of the means of water treatment, save for an activated carbon system, is they have no ability to negate chemical contamination. This relies on the individual to be mindful of the water source. Watch for signs of a defoliant in use, and if it smells or tastes bad, don't risk it.

Let's examine what means there are to accomplish the goal of getting clean water. The most common means of cleaning water is filtration. There

are tons of units available for the consumer in this category and I'm not going to go into them here. The thing to know about filtration is that, for 90 percent of the water sources you will encounter, it is a safe means of cleaning water. Simple filtration can never be said to be a purifier as it lacks the ability to negate viruses. Filters are able to remove most biological contaminants including cysts, protozoa, spores, and other waterborne entities. Viruses, however, are too small to be removed and will pass the majority of filters. Thankfully, the level of viral water contamination is much lower than



Here we see the SteriPEN in the most common setup for usage. Any container which will allow the contacts to be submersed may be used. 1 Liter maximum.

the levels of contamination by other organisms.

Other means of purifying water include chemical additives such as iodine treatments, and purification tablets. Some of these can leave the water tasting less than good. All require a period of time to allow the reaction to take

effect. Thirty minutes for a liter of water to be purified is an average. It has been shown, however, that some of the large cysts are resistant to chemical treatments like this. That covers the most well known methods of water purification.

Now let's look at the old stand-by, and the new kid on the

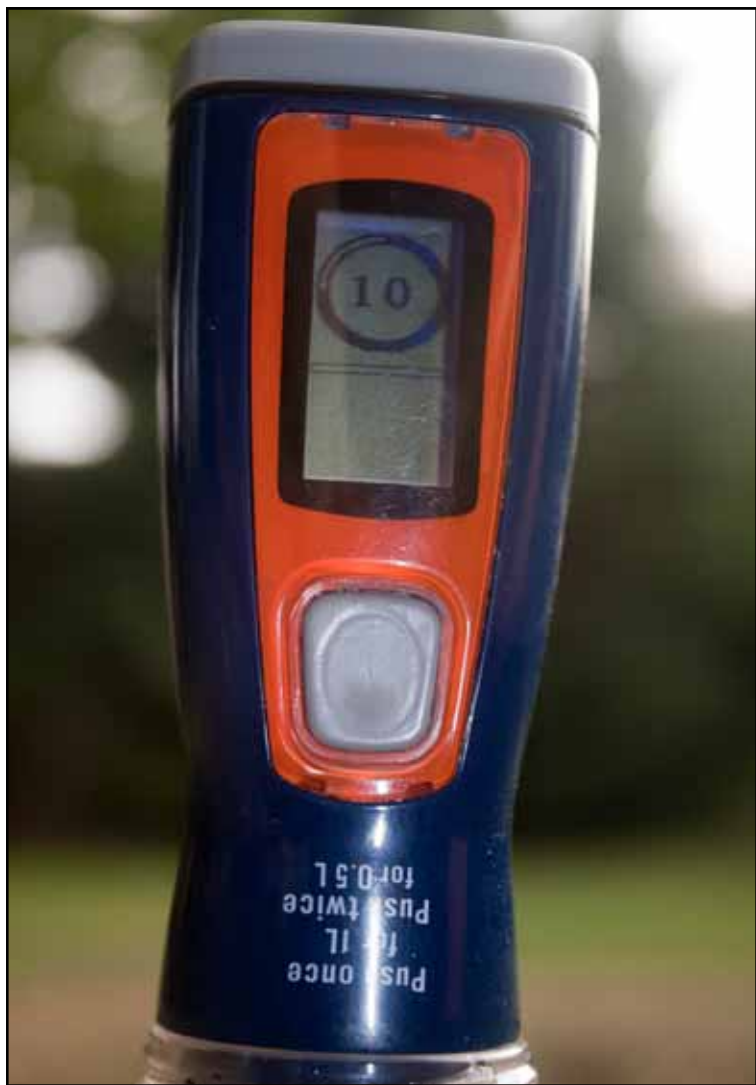
block. Boiling water to purify it is probably one of the oldest and most reliable methods of water purification. With the exception of some exotic cysts, bringing water to a rolling boil for a period of 3 minutes will kill 99.9% of all waterborne organisms. The downside of boiling to me is now I have a quantity of water that I have to wait 30 minutes or so to let cool off before consuming. I'm not saying I am against boiling. In fact, I always have a container of some sort in my pack capable of transporting and boiling water. It just isn't very refreshing to drink hot water when you are parched. That covers the old means.

Now let's check out my personal favorite and a relative new kid on the block when it comes to water purification.

The SteriPEN® is a self contained water purification system proven 100% effective in negating waterborne organisms. Using ultraviolet radiation, the SteriPEN doesn't remove any of the contaminants, you should understand that you are still going to consume them. The UV radiation passes through the water and is absorbed by the nucleic acid of the organisms DNA. This scrambles the DNA and renders the cell sterile. Your body can easily take in a small quantity of these microbes with no adverse effect. It is the organism's nasty habit of reproducing once it is inside of you that creates the adverse effects already discussed. Now we are saying: "UV radiation, but radiation is bad, right?" This is not going to make you glow or turn your pet lizard into Godzilla. This is the same stuff in tanning beds and what gives you a tan or sunburn. UV radiation is used by many towns to sterilize their water. It is an accepted, safe, and reliable

Here we see the LCD display, the control button, and the UV lamp illuminated.





Above: This view shows the LCD display as it counts down to the end of the cycle.

Right: At the end of the cycle we get a smiley face on top showing a complete dose of UV has been delivered. The bottom display shows the battery is in good shape.

solution, and although we're using the term 'radiation' it is nothing like radioactive radiation.

Water that has been exposed to UV light is totally safe in all respects. First, it is effective on 100% of organisms. No worrying if you have the resistant cyst strain or a virus that a filter couldn't remove. This sterilizes everything organic. Secondly, it is fast: no waiting around for 30 minutes for treatment. No 15 minutes to build a fire capable of a boil and 30 minutes to cool the water to lukewarm for dinking. The SteriPEN can treat a half liter of water in 60 seconds and 1 liter of water in 90 seconds. I think you will agree that is just the ticket for those of us that are ever so impatient.

SteriPEN has a few different models to suit your needs and CamelBak is bringing a system to market for their bottle line. The model I have and is

pictured here is the SteriPEN Journey LCD. The journey LCD model has some truly dummy-proof features sure to keep your digestive tract parasite-free. The built-in LCD counts down for you assuring you a full dose of the UV treatment. All you have to do is gently stir or agitate the water while the cycle is running. When the cycle is complete you get a smiley face on the display, assuring you that your water is now safe for consumption. An additional safety feature on the journey LCD model is a set of contacts which must stay submerged. This ensures a full cycle and dose of UV light.

The SteriPEN Journey runs on 2 CR123 batteries and has settings for 1 liter or .5 liter. It is even easy to operate. Having only one button there is literally no wrong way to use it. Push the button once and the unit comes on set for 1 liter. Push it twice and it is set for one-half liter operation. Submerge the UV element within 20 seconds covering the electrodes and the cycle will start a count down on the LC display for you. 90 seconds for 1 liter and 60 seconds for one-half liter. When the countdown starts gently stir or agitate the water keeping the electrodes in the water. Once the



cycle is completed you get a smiley face showing you it is ready to drink, if you get a frowning face something about the cycle went wrong and you just start over.

One can see the advantages to the individual from the standpoint of purification effectiveness and speed. The fact that you can confidently carry less water with you on your treks into the woods is of great advantage as well. After all water is 8 pounds a gallon. With the SteriPEN you can carry less water in with you and simply purify as you go. The size of the unit is fairly diminutive at 7.3 inches long and 4.1 inches deep. It won't weigh your pack down either coming in at just 4.5 ounces with the batteries. The unit comes with a protective cover that snaps over the element for storage and a belt style sheath.

Operating on two CR123 batteries which are included, the SteriPEN can do 100 - one-half liter treatments from one set of batteries. It is also compatible with rechargeable batteries but will drop to 40 -50 treatments. The UV lamp life of the unit is good for 8,000 treatments. Since we are talking about the limitations of the unit it is only fair to state the only two drawbacks as far as I am concerned. The unit does nothing to effect the taste of the water. If you fill your bottle from fishy tasting water it will still be fishy after treatment. This is a minor inconvenience to me when compared to the fact that I know I am not going to get sick from drinking it. Also if you happen to stir up silt or you are forced to take water with suspended solids in it you will have to handle this differently. I usually will try to prefilter a little through a bandana or use the bandana to soak up the water and squeeze into my

container. It then needs to sit and let the particulate settle out before you treat the water. The simplest way to think of it is you want anything that will hinder the UV radiation from saturating everything in the container to be out of the way, get the water as clear as you can before the treatment.

If you're a backwoodsman, survivalist, hunter, or even a world traveler and you want to make sure your water is safe to drink every time the SteriPEN is up to the challenge.

Solar Water Treatment By Tim Stetzer

Taking a trick used in rural African villages and adding it to your wilderness tool kit

Sometimes simple works just fine. In today's world of battery powered gizmos and the rush to the latest piece of new gear we sometimes forget that much of the world doesn't move at the same pace we do. An awful lot of folks around the world make do with a

lot less than we do and seem to get by just fine.

One thing everyone needs whether it's in the heart of New York City or the savannah of Africa is clean water. While pumps and purifiers are great when you have them, it makes sense to know some methods of purifying water for when you don't.

Boiling is always best but that may not always be possible. Maybe you don't have the gear to do so easily, or maybe you don't have the fuel. I can see places in the wilds where it might not be practical. One thing you do always have though is the sun. The basic principle of using heat and ultraviolet light to kill the kind of bacteria which causes common water-borne diseases like cholera, typhoid, dysentery and diarrhea is what's used in some of the modern devices like the Steri PEN or Camelbak All Clear water filter. What modern science can do the sun can do too, just maybe not as fast.

Throughout Africa and other parts of the Third World a new trend in water treatment is spreading and that's using the sun



Any sort of clear container should work for letting the sun treat your water. Be it a humble zip lock bag folded up in your kit, or the hydration bladder from your pack.



A dark or reflective background can help heat up and attract sun to your water bottles. A reflective space blanket is an item many outdoorsmen have in their kits already that can be used to help enhance the water treatment process.

to treat their water. Villagers simply take clear plastic bottles and place them out in the sun and let the heat and UV rays kill off the bacteria. On a good, warm clear day an hour is said to do the trick, but leaving the bottles out longer is recommended and may be required depending on the location, cloud cover, etc. The key is getting the water temperature up to 122 degrees Fahrenheit (50 degrees Celsius) to kill the germs. Rule of thumb is to allow 6 hours in direct sunlight and up to two days under cloudy conditions. Villagers will also place the bottles on black rooftops or reflective backdrops to help heat the bottles quicker. This inherently simple, but practical approach to water treatment is making big inroads on cutting down on waterborne illness in Africa, and it's a method that can work anywhere you have a steady supply of sunshine.

So, how does this translate into practical field use for long term woods bumming or in a survival situation? Well, it's one more tool in your kit for when you're out longer than you plan to be or if things go a little off-kilter. This is a pretty easy method to use if you don't have anything else available, and it's also a very minimal drain on your energy and

resources. How much effort is put into chopping firewood, building a fire, and boiling water versus just setting a bottle out in the sun and letting the life giving rays do their work? All it takes is a little forethought in making one of your water bottles or bladders clear plastic, simply sliding a couple of zip lock freezer bags in with your water carrier, or some luck in having one of the ubiquitous disposable plastic water bottles

along with you on your day hike. You probably won't have a black roof to put your bottles on to bake either, but try placing them in direct sunlight, on rocks, a dark background, or possibly best yet, on top of a reflective space blanket that many folks have in their kits already.

Now, I'm not saying give up on your fancy water filter, or not to boil your water ever again. I'm also not guaranteeing that this will do the trick every time. However, its a trick that's working for a lot of folks in the Third World and its good to keep in the back of your head in case you need it. If push comes to shove, and the choice is to not treat your water at all, or give this one a try, you can bet that I'm going to leave my bottles out in the sun a while and give it a shot.

Below: A simple Platypus container on a hot rock could make all the difference in having safe water to drink. While this method shouldn't replace a good water filter or boiling your water, it's a good trick to have up your sleeve if nothing else is available!



The Hand Drill

By Alan Halcon

The ability to make fire is, undoubtedly, one of the most important priorities in a survival situation. With fire, one can keep warm, purify water, cook food, protect, provide comfort, light your path, signal for help, etc. While there are many ways to start a fire, of significant allure is the ability to start a fire by rubbing sticks together.

In North America, Native Americans relied on the hand-drill to provide fire. While it is a primitive method, it is nonetheless an advanced skill to own. I have seen countless people fail time and time again with the hand-drill.

I have always been a huge proponent of getting a fast coal, for a couple of reasons. For one, getting a fast coal means there is less chance for injury by creating blisters on the hands. Second, getting a fast coal is less fatiguing on the body and helps retain energy stores for other tasks.

The Arizona episode of Dual Survival is a perfect illustration of these two points. Earlier in the episode, Cody quickly and effortlessly produced a coal with the hand-drill. The outcome was he had no blisters and wasn't tired. Contrast that against Dave, who with the same hand-drill set, was having problems getting the coal. The fact that he kept trying over and over, resulted in injury to Dave's hands in the way of blisters. And, if you recall, when Cody came walking back, Dave was sitting under the tree with the appearance of having little energy.

Selection and preparation of the hearth and

Alan Halcon is a Field editor, writer and photographer for the former "Wilderness Way" magazine, Alan is the author of the informative booklet, "The Hand Drill." He is a member of the City of Los Angeles's CERT Team, FEMA certified in incident command, a Survival Instructor, certified instructor/provider for The American Red Cross in Wilderness First-Aid, CPR and Basic First-Aid. Alan is also the record holder at getting a coal with the hand drill... 2 Seconds.

drill play a vital role in maximizing efficiency.

The Hearth

To begin, I like to use a thin hearth no more than a quarter-inch thick. The wood should be dry and of medium density. To determine if the wood is of proper density, one can use the thumbnail test.



Above the Author demonstrates the stance he uses for maximum efficiency and downward pressure.

Drill

Using your thumbnail, make a mark in the wood. If it leaves a nice clear visible mark, it should work fine. If it barely leaves a mark it is too hard. If the wood is too soft, you'll know it because your thumb can make an indentation. As a general rule, willows, cottonwoods, poplars, ash and aspens will be medium density. After you gain some experience, you'll learn which medium density woods will work better than others.

The Drill

The drills I like are no smaller than one-quarter inch in diameter and no greater than $\frac{3}{8}$ of an inch in diameter and about 30 inches in length. I also like my drills to be of medium density hardness and thoroughly dry.

If the spindle is too long, the top has a tendency to whip around as you're spinning the drill. It may also have a tendency to bend in the middle as you apply pressure. The diameter of the wood is also important because you want to be as efficient as possible when you spin it. I have found that the tip of the hand-drill is most effective when it is about $\frac{1}{4}$ to $\frac{3}{8}$ of an inch, because it provides the best transfer of energy when you spin it. If the tip is too wide, then the transfer of energy is expanded over a wider area, making it less efficient. If the tip is too small, then there is not enough surface area contact between the drill and hearth to provide you with the dust and friction you need to make a coal.

Think of the beam from a magnifying glass if you will. It has a point where it is most efficient. If the beam is too wide, it disperses its energy over a wider area. That means it would take a lot more energy to create the heat needed for combustion. The same happens with a piece of

wood whose diameter is too big. It disperses its energy over a wider area. When using a magnifying glass, you concentrate the beam into one point to make a fire. The same thing applies to the hand-drill. However, with wood you need surface area contact in order to create friction. If the drill is too small in diameter, there will not be enough surface area to create friction. If the drill is too big, it will require you to physically work harder.

The all-important notch

The notch is there to allow the dust that is created by the friction of the two pieces of wood to accumulate in one location. Without this notch, the dust has nowhere to go and would be smothered by the spindle, along with any hope of making a coal.

First I figure out how far in from the edge of the base the spindle should be. In this case, if the diameter of the tip of the spindle is $\frac{1}{4}$ of an inch, I move in $\frac{1}{4}$ of an inch from the edge of the base towards the center. This new position will be where the edge of the spindle's tip will sit. Once I have figured that out, I give the spindle some spins just so I leave its impression in the base. This will give me a visual reference when I start cutting out the notch. Once I have a nice impression, it is time to work on cutting out the notch.

Take your knife, saw, or whatever is best for you, and cut a V notch in the wood as shown. It is important that the notch, where the V comes to a point, is not too wide. If that happens the spindle will have a tendency to slip into the notch and prevent you from



The image above shows an improper notch on the left with a proper notch on the right.

spinning. The point of the v should come to a point about 1/16 of an inch into the depression where the spindle will be working. Once you have finished making the V-notch, you are ready to start using the hand-drill.

Technique

When actually spinning the hand-drill, I am a firm believer of maximum downward pressure with maximum speed.

To help with downward pressure, I do two things. One, I get up over the top of the drill by getting up on one knee and centering my body mass over the top of the drill. Two, I flare out my palms a little, so the point of contact on the drill is between the meaty ridges of my palms. This helps me dig into the drill more.

I've performed various measured pressure tests from the various body positions, and the act of getting up over the top of the

drill, as opposed to being seated, really helps in adding downward pressure. Now, instead of your arms doing all the work of providing pressure, your body aids them.

Before you get into position, you should place something under the base to catch the coal. You can use a leaf, a piece of paper, or whatever else under the notch of the base. This will facilitate placing the coal in the tinder. You should also have your tinder, kindling, and wood ready to go. The last thing you want to do is run around scrambling for fuel to feed the fire. Always think ahead!

Once all the elements are in place and you're ready to go, get into position and place the tip of the drill in the base. While applying downward pressure, start spinning the drill between the palms of your hands. You will notice that as you continue spinning, your hands start sliding

down the drill. When your hands work themselves to the bottom of the drill, grip the drill with one hand while maintaining downward pressure. Take the other hand and bring it back to the top and re-grip the drill, always maintaining downward pressure. Release the opposing hand and bring it back to the top to meet with the other hand, where you start the spinning all over again. It is important that you maintain downward pressure as you shift your hands back to the top. This will prevent heat from escaping at the point where the drill and base meet. I know it sounds complicated, but with a little practice, all these moves should flow into one smooth action.

As you continue, you will see the wood starts to wear away and dust starts to fill the notch. The dust that fills the notch is what eventually will turn into a coal. At first the dust will come out a light

The image below shows the hands turned out a bit with the meaty, ridge portion of the hands doing all the spinning.





Above: The handdrill producing smoke and a coal

color, similar to the color of the wood. Then you will see the dust turn darker and coarser in texture. you will also notice that you start producing smoke from the base. As the dust continues to heat up, it will start to turn black and smoke will come out in plumes. This is when you should give it your all and really spin hard a couple of more times and stop. If the dust continues to smoke on its own you have successfully made a coal.

Through practice, I know my baseline is around 12 seconds. If it is taking me longer than 12 seconds to get a coal, I know I am risking injury and fatigue. If that's the case, I stop and change out the woods I have selected.

A short Story on Injury

At Wintercount, one year, I was confronted with a friendly challenge, by Tom Robins, to produce a coal using Desert Ironwood.

For those that don't know, Ironwood is known as quebracha in spanish, which translates into axe breaker in English... Yes, the wood

is that dense and heavy. After unsuccessful goes with it, Tom and I decided we needed help. Of course, here comes Cody Lundin walking our way. We explained to him what we were attempting and asked for his help. Cody looked at both of us with that “are you crazy?” look, but agreed. The rotation would be first Tom, then Cody, and finally myself.

Almost immediately Tom started producing smoke from the wood, but no coal. After a few passes on the drill, Tom tired and Cody took over, picking up where Tom left off. By now we had a lot of smoke and a nice pile of powder but no coal. It was evident that we may actually achieve a coal with wood that by all standards should not be possible by human strength alone. When Cody finally tired, he gave me the go and I picked up where he had left off. With all of my strength and pressure I leaned into the hand drill. Smoke poured out massively and Cody began to fan the powder with his hand. After feeling like I couldn't go anymore because my hands were on fire

from the friction, Cody yelled out we had a coal. I quickly dropped the spindle and ran for a bucket of water to cool off my hands.

While we achieved the seemingly impossible, I did suffer with a blister so big it spanned the entire meaty portion of my hand from the base of my pinky finger, to near the bottom of my palm.

Had that been a real survival situation, I might have been in some real danger. Not only did I risk infection of a wound, but I essentially negated my ability to perform other tasks.

While I like to consider myself accomplished with friction fire, make no mistake, it is a last resort in my book. If it comes down to me having to rely on friction fire, I screwed up well before I left the house by not being properly prepared. At minimum, on me, I have two ways to start a fire at all times. One is my lighter and the other my mini match magnesium and ferro rod which hangs on my key chain, ALWAYS!



Penobscot Bay Axe, a Classic

By Steve Davis

On my journey through bushcraft and wilderness skills I often find my taste in gear reverting to the old ways. I have grown to appreciate the wisdom and thought put into the kits of the longhunters and mountain men as well as more modern men such as Kephart and Sears. These were men who considered form and function rather than the trappings of modern hype. Their kits consisted of the tried and true, with everything being functional and multi-purpose. Although matches replaced flint and steel as other modern things worked their way into the kits of the backwoodsman, one thing has remained a constant companion through the generation of pioneers: the belt axe.

With my recent acquisition of a classic canvas pack, it was time to add a quality belt axe to my kit. In the past I'd been caught up in the weight game, trying to make everything as light as possible, so an axe was out of the question. But as you



The Penobscot Bay axe.

progress in your skills you realize just how much of that light gear you don't even need. With the elimination of the unneeded gear we free up a lot of space over time. My heavier old style kit now weighs less than my "lightweight" modern kit. So the weight versus rate is not an issue for me anymore. The addition of an axe to my kit significantly increases the rate, while not adding a lot of weight.

The amount of quality axes to choose from can be confusing. Just the different styles of heads and handles could take a magazine article, let alone steels, forging and heat treating methods. I decided to stay with a known maker of good reputation. With those criteria I narrowed my search to a few American and European makers. After some research I decided to go with the American Snow & Neally. A



The 1.75-pound head makes short work of splitting tasks.

ssic for the Common Man



Fine carving accomplished with a choked up grip.

proven record of quality, backed up by a warranty. And why wouldn't I support an American company?

In 1864, Charles Snow and Edward Neally opened a chandlery along the Penobscot River in Bangor Maine. During the 19th Century Bangor was considered the heart of the lumber industry. They set out to supply the growing timber trade with quality tools. All of their tools are forged from high carbon steel with native hardwood handles. As their reputation grew, they became the standard. They have been making these tools for 146 years now, backing them all with a multi-generational warranty.

My criteria for a small packable axe were pretty simple. It had to be small enough to pack, yet big enough to work. The weight is not worth the rate if your axe gets no more done than your knife. And if it is too heavy and too awkward for smaller camp task, the same is true. So with this in mind I chose the Penobscot Bay axe.

It has a 17 inch overall length. With the head itself weighing 1.75 pounds. Large enough to get some chopping done, small enough for camp chores and packing. Just what I was looking for. So after a quick Google search to find a reputable dealer, and some pleading to my wife, I placed my order. For \$65 I had one delivered to my door. If that's not quality for a common man price, I don't know what is.

When my axe arrived I immediately took it out of the box and headed outside. The first impression always seems to make the biggest mark with me. It chopped well, split well, and carved well in my first few small trials. Although I'm not a fan of varnished wood handles on tools, this was easily remedied. All I had to do was sand the varnish off, and rub in an oil finish. The day it took the oil to dry was torture. I'm the type that has to play with his new toys. Watching oil dry is not on the list. But finally it had the satin smooth handle that it deserved. Not a blister-causing varnished finish. The leather guard was well made and looked great. Although I'm sure it would offer protection from the



Driving stakes with the pole end.



Chopping with the two handed grip affords power and speed.

blade, I had a Kydex insert made for the leather cover. Classic looks with modern protection. Now it was time to get to using this beauty. Off to the woods to break this baby in, and to work on my axe skills.

Although I cut a lot of wood to heat my house, I never use an axe for this. I, like any other man whose wife controls the temperature of the house, does this nowadays with a chainsaw. So axe skill and safety was not learned from an early age as well as it should have been. I proceeded with extra attention to safety. A belt axe can take a chunk out of a man in a big hurry. So I would advise all new axe owners to do the same.

With its 4 inch wide bit and 1.75 pound head, the Penobscot Bay axe chops with authority. Chopping one handed was best accomplished with a slightly choked up grip. This afforded controllability as well as power. Using the full length of the handle in a two handed grip, I had the wood chips flying. I was amazed at how fast I could get through a piece of wood. And I was not expending as much energy as I would have thought. This is accomplished by letting the weight

of the head and the leverage of the handle do the work. Physics at work!

Splitting ability is very important to me. Being able to split open a wet piece of wood to get to the dry innards is literally a lifesaver. And a belt axe shines above all else for this task. I can make kindling pretty fast with a knife and baton, but nowhere near as efficiently as with the axe. When put to a 16 inch piece of oak, the Penobscot parts it without hesitation again, aided by the weight of the head and leverage of the handle.

Woodworking and

bushcraft tasks are made a little easier with my addition of the axe. Carving with the Snow & Neally is a joy. It removes large amounts of wood when needed fast. It is also adept at the finer carving tasks with a choked up grip. From removing bark for a roasting stick, to starting the cavity in a bowl, it performed admirably. I made everything from tent stakes to trap triggers with the razor sharp blade. The pole end of the axe is also substantial enough to drive those stakes. That is just one more bonus to its versatility. It's also a hammer.

If you, like me, are looking to add a belt axe to your kit, whether it is for sheer functionality, or to get back to the roots of bushcraft, look at the Penobscot Bay axe from Snow & Neally. Quality, functionality, and classic looks, at the common mans price. All made in the U.S.A.

Steve Davis is the lead instructor at The Pathfinder School. A hunter, fisherman, and trapper, he has been learning and practicing modern and primitive skills for over twenty years.



The well-made leather cover with additional Kydex insert.

A Knife Tip for Beginners

By Brian Andrews

“But I am no beginner!” Says you, experienced and wise *Self Reliance Illustrated* reader. Of course you are not. But, if you live by Dave Canterbury’s code of “pass on the tribal knowledge” then I pray that you regularly take children, women and newbies to the woods with you.

If you are a true addict of the outdoors, it becomes a part of your lifestyle, and not just a hobby. You eat, drink and breathe it! During that process, something happens to you. You forget that everyone else is not like you. They don’t have the same knowledge, understanding and, especially, abilities that you have acquired through weeks, months and years of pursuing your passion. A knife skill to you that has become second nature can sometimes be extremely difficult and frustrating to a beginner. Not only do you not want those things to happen, but the beginner wants to have fun and enjoy the same things you do. So, from time to time, I have found that it is important to not teach “exactly what you do” but instead teach how to reach the same end goal without requiring the same skill level. I will demonstrate what I mean by using a reverse knife grip and different cutting technique to prepare tinder for a fire.

As the name would imply, the grip includes turning the knife around in your hand a full 180 degrees. It is not partially turned (such as in a chest lever grip), but fully backwards. The following photo demonstrates the grip. Its usefulness will be shown later.

In showing a practical application of this grip, I am going to momentarily turn our attention



Knife shown held in reverse grip.

to fire. Preparing for a fire is much like Chinese cooking. The time is spent in the preparation. By the time you are actually ready to start the fire, the majority of your work has been done. In the course of preparing, I like to have different thicknesses of kindling ready. Shown below are three different sizes, from approximately the thickness of a single match, to the thickness of 5 match sticks, and finally some prepared to the thickness of 10 match sticks. These can either be prepared by splitting larger pieces down to this size, or gathering dry sticks of appropriate size. Shown in the photo is a

mixture of both.

In the spirit of resource conservation you might want to save your jute twine, petroleum jelly-coated cotton balls, or chemical fire starter, and just use all natural resources. Or in the case of a combustion device, you might want to run your bic for as short a time as possible, or use one match instead of ten. In any case, even with our nicely prepared kindling, we would like some finer tinder. We are going to create this tinder ourselves with fine wood shavings.

An experienced woods guy can take a piece of dry wood, and whip up a couple nicely carved



**Above: Kindling prepared and divided by size.
Below: Reverse grip cutting technique in action.**



feather sticks and make it look easy. If that is the case, you could pretty much be done with your fire prep. But what you don't realize is that you have forgotten that it took a while to develop that skill. It requires coordination, control, and a decent amount of hand strength, even though it can look extremely easy. Get someone not used to this skill to give it a try and you can easily leave them frustrated. Even worse, I have found that younger kids tend to just have issues with the hand strength required to do this. This is where the reverse grip comes into play.

By using the reverse grip, you can transfer the source of your muscle power from your hands and forearm, into your shoulders and

back. These muscles groups are much larger and fatigue less easily, so that is what we want to do: Generate a nice group of fine wood shavings using our back and shoulder muscles. The following



Fire prepared and ready to light.

photo demonstrates the technique.

The actual motion can include the knife alone moving; just the wood being cut moving; or a combination of the both moving. All work well in exercising the larger muscle groups. I tend to prefer both knife and material slightly moving. But having the wood only move can be a great way to enhance safety.

The only trick is preparing a spot for the curls to land. As you can see, the motion can be very powerful. It limits the amount of knife movement, which can be much safer than traditional way of trying to create curls. In a short amount of time, a nice pile of curls can be created, and complete what we need to easily start our fire.

As a fully grown adult, you may try this technique and not be very fond of it. Or perhaps you have your own way of doing the same thing better. But, keep this in the back of your mind the next time you see a youngster, or less experienced knife user struggling with more traditional cutting techniques.

Brian Andrews claims that he doesn't have any professional qualifications to be a woods bum but he is a professional photographer, knifemaker, a lover of the outdoors and he enjoys doing things with hand tools - the old fashioned way.

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By David Simerly

Field Sharpening



Various sharpening equipment for the field. The broken piece of brick and the rock were found within 10 minutes of searching around.

Sharpening is an integral part of edged tool care and ownership. There is an incredible diversity found not only with the systems used to sharpen, but the methodologies as well. With all the products and information out there, it can be quite difficult to keep up. Once the additional problems of taking equipment into the field are added to the equation, sharpening can get downright confusing. It takes careful consideration, practice, experimentation, and patience to become a proficient knife sharpener in the field.

The field, the bush, the wild, the mountains. Those and many other labels are used to describe the outdoors. Wherever a person may be in the world, it is always an intelligent decision to have a knife when in the field. When you consider a knife to be a survival resource second only to your brain it very quickly becomes clear that the usage and upkeep of a knife in the field requires careful consideration. Many people

discuss such concepts nearly constantly, whether the location be online forums, the local or national camping and survival enthusiasts' meet and greet, or out and about while in the field. Through personal experience and seemingly endless discussion with others, I have come to the conclusion that many are over-thinking sharpening while in the field.

Why would I say that people are over-thinking field sharpness? The reason for that statement is very simple. There are two kinds of edges: The first kind is an edge for showing off. The second is an edge that works for the task. Are these two mutually exclusive?

Born and raised in western Maryland, David Simerly had a love for the outdoors instilled into him at a young age. Camping with his parents, Scouting, and other outdoor activities framed his childhood. As an adult, David has branched out to include shooting and hunting on top of camping, backpacking, and hiking. David feels that there is nothing quite like an adventure in the outdoors.

I would certainly say not at all. However when a sharp knife is needed for a task, a hair whittling and atom splitting edge is not always necessary to efficiently and safely get the job done. In our day-to-day lives, most knife enthusiasts will have the time and equipment available to constantly touch up knives after the slightest of tasks, keeping the edges of knives at the highest level of polish and sharpness. The problem with doing so in the field is two-fold. The equipment that most have to create the best edges is usually larger and bulkier than what they are willing or able to carry when out and about. On top of that, most of the time when out in the field, especially in a survival scenario, there isn't the time or energy available to dedicate to keeping knife edges at such a keen level.

With those two major considerations many have reached the conclusion that they might as well not even take any sharpening equipment into the field with them. The idea revolves around having a knife or knives that are extremely tough and wear resistant, thus they will have the ability to use their equipment for some time without needing any sharpening. While that is a good idea in theory, every knife will become dull

with use. Every knife will lose its edge if accidentally swiped across or smacked into rocks, glass, certain metals, and certain situations involving bone.

That brings me to a very important question: How can a knife be sharpened in the field if I don't have any sharpening equipment with me? When I was a small child in the Cub Scouts one of the leaders of my pack gave me a piece of advice that has and will always stick with me. Anything that will dull a knife can be used to sharpen it. Most people are aware of leather being used to sharpen knives, and that is an obvious choice for a quick touch up when in the field. Leather does not have a very aggressively abrasive quality to it, so it should mostly be used to keep a knife sharp, not to sharpen a knife that has been dulled.

What else that would be considered regular gear could be used to sharpen a knife? Here are a few examples: Like leather, a stout pair of blue jeans or any cotton based pants can be used as a field expedient hone. If the edge of a knife is rolled from scraping bone or hitting a rock, it can be pushed back into alignment using the piece of bone it rolled over on, the rock it struck, the spine of another knife, or even the



Using a stout leather belt, maintaining an edge is far easier than re-sharpening.



In a pinch, a pant leg can be used as a strop. Rubbing some sand, dirt, or other abrasive into the fabric can help speed up the process.

metal frame of a pack. There is the obvious choice of a flat river rock or and otherwise relatively flat piece of rock. A basic geologic knowledge of the area will help immensely in proper selection of a piece of rock. If no dedicated sharpening equipment is available, try to think outside of the box when finding a way to keep a knife sharp in the field.

Upon considering those factors, it seems like having some

sort of sharpening equipment when in the outdoors is certainly a good idea. The problem lies in finding equipment that is both cost and size/weight efficient. There are the pull through type of sharpeners, ceramic crock sticks, diamond plates and rods, leather hones, sandpaper, pocket oil and water stones, and many others. Trying to decide which equipment is best does not need to be a lifelong and wallet breaking endeavor. A

question asked of a more experienced friend can go a long way towards picking good field sharpening equipment. If a friend is not available, the best thing to do is start simple and see what works!

I have been through many of the styles of sharpening equipment described, and for now my kit is a small double sided leather hone with ~3 micron compound on one side and one micron Boron Carbide on the other side. I have a few sheets of sandpaper (1000, 1500, and 2000 grit) wrapped around it. The whole thing is stored inside a sandwich sized zip top baggie, weighs 1 3/8 oz. (38g), and is about the size of a deck of cards. Why choose a kit like that? It is rather versatile, cheap (I have less than \$10 invested in the whole thing), easily replaced (the leather hone can be made from easily available parts, the compounds have substitutes that can be found at a local hardware or auto store, so can the sandpaper), and I can add lower grit sandpapers to it if I want to be

Ceramic sticks are excellent for maintaining and edge and moderate sharpening, take up little space, and are light.





Ten minutes with a broken piece of brick and a belt, and an edge which can scrape shave hair or create excellent curls is easily created.

able to sharpen a knife from completely dull.

Not only is it a handy kit in the field, but I have it with me in my camera bag every day. There are any number of kitchen knives in friends' and relatives' houses

that have benefited from the kit as well. The kit also allows me to maintain a very high level of refinement with my knife edges. Do my findings make any other choices of field sharpening equipment invalid? Certainly not!

Every person must find the equipment that works best for them.

In the field, a balance must always be maintained between being able to easily pack and carry gear and being able to keep knives sharp. There's no reason to over-think the usage of expensive, bulky, or fragile components for knife care. The simple maintenance of an edge that will efficiently and safely get the job done is far more important than having a picture-perfect edge. Keep it simple, and worries can be passed on to other important methods and equipment involved with hunting, camping, and survival in the outdoors.



Left: Using found items, including old debris such as a broken piece of brick can expedite field sharpening quite a bit.



Mora's Bushcraft Series

Above: The Mora Forest and Mora Force are two of the models in their new Bushcraft line.

By Tim Stetzer

Anyone even vaguely into the bushcraft scene knows that the humble Mora knife is a staple amongst its advocates. The extremely reasonable price coupled with high quality Scandinavian ground blade makes it a prime choice for woodcraft, trap making, and other bushcraft chores. Since the merger of Frost of Sweden and Eriksson the newly formed Mora of Sweden has begun consolidating the two product lines and has discontinued many older models from the two companies. In their place they've brought out a series of new models including a line geared directly at bushcrafters.

The Mora Bushcrafter line consists of four models, the Forest, Signal, Force and Triflex. The new line uses the handle of the older Eriksson 911/946

knives which is a contoured rubber grip over a hard plastic core. The Forest and Signal mate the popular Mora 2000 style blade to the handle. The M2K has an unusual grind in that it's Scandi towards the handle but blends to more of a full flat grind towards the tip. This provides for a blade capable of fine detail work while still having great slicing capabilities. Its a popular style and a bit beefier than some of the other Mora blades. The Forest has a subdued khaki green handle and sheath whereas the Signal uses a bright, easy to see lime green color instead.

Blades on both of these are 4 1/4 inches long and 1 7/8 inch wide by .098 inches thick Sandvik stainless steel. The next model up is the Force. The Force also uses a 4 1/4 inch by .098 inch thick Sandvik blade but this one isn't quite as wide at 15/16ths of an inch and is ground in a more traditional full Scandi grind. That results in a heavier spine than the Forest and Signal models. It differs in color slightly in that it has a black handle and olive green sheath.

The last model, the Triflex, flip flops those

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, Woodsmonley.com in 2008. Tim is currently Associate Editor of Woodsmonkey.com

Mora of Sweden Takes on the Bushcraft Market Head-on with a New Line of Knives Directed at Woodsbums



move with the user when sitting, getting in and out of a vehicle, or while moving around. They also are large enough to fit a wide leather belt as well.

For testing purposes, I picked up a Mora Forest and a Mora Force. I figured the Signal was just a color variation on the Forest, and other than the steel, the Triflex was fairly similar to the Force, so I started with those two models. Now, I know the new handles have

Above Left: The Mora Forest and Force share the same handle style but carry different grinds on their blades. The Forest uses a grind like the older Mora 2000, whereas the Force bears a more conventional Scandi grind.

Below Right: The Moras are known for their ability to notch and carve wood and the new Bushcraft models were no exception. The Forest worked well for notching out tent stakes and making trap components.

colors and has an olive green handle and black sheath. The blade on this one is still 4 1/4 inches by .098 inches thick and full Scandi ground, but of a slightly different profile and only 7/8 inches wide. Mora's Triflex steel is a progressive heat treated high carbon steel with a softer spine than edge. It generally makes for a tough steel with very good edge retention. Weight on all four models is a meager 5 ounces. The sheaths on all four models is a big improvement over older Mora sheaths. They're all of a hard, durable plastic and the knives click into place. It isn't Kydex, but it seems sturdy and secure. The belt loops are a swiveling affair of a slightly softer plastic that lets the knife





The Bushcraft line uses sheaths much upgraded from previous generation Moras. They feature a sturdy sheath body which the knives snap securely into.

caused quite a bit of controversy amongst lovers of traditional Moras. Many folks seem to prefer the simple wooden barrel handles, or at least the more basic plastic handles of older Moras. I'll admit that the Bushcraft series handles are a departure from those styles but they work well for me. They've been around for a while now on the older 911 and 946 model, and on the earlier Mora 2010 as well. So it isn't anything crazy or revolutionary. They've been out and in the field and have been worked for some time now.

The biggest concern seems to be the finger grooved handle. Well, I can't say I'm a huge fan of finger grooves but I don't have any issue with this style handle. Its a subtle groove and it actually feels

very good to me. It falls naturally into the hand in a saber grip and is unobtrusive enough that I can use a variety /of grips without it getting in my way. To the folks that are skeptical about it, I'd say use one for a while before you really decide. I think you'll find that it works out just fine. The rubber surface is comfortable under extended use. It has a slightly tacky feel to it, but it doesn't chafe like some rubberized handles do. I think the solid core underneath it helps in that regard. It's firm enough to be solid and to ensure you have a firm grip on the knife.

The blades on both the Forest and Force are what you've come to expect from a Mora. Well ground, scary sharp, and great on wood. What really hooked me on

Moras oh-so-many years ago was how ridiculously sharp these inexpensive knives came, and how easy it was to keep them that way. The new Bushcraft models are no exception. Mine came with great edges and they held up well under testing. When it did come time to touch them up, a quick stropping on my JRE Stropbat was all it took to bring that scary sharp edge right back.

While I used both blades on the usual range of camp chores from opening up packages, food prep, and cutting cordage, it was on wood where they really came into their own. I did quite a bit of whittling and shaving down of walking sticks with the knives and I really appreciated the comfortable handles and Scandi edges when I



Above: The Bushcraft sheaths have a useful, swiveling belt loop that will work with most outdoorsmen's belt sizes, unlike some of the older Mora sheaths that had very narrow loops, or simple button attachment slots.

from Ragnar at Ragweed Forge. Ragnar is one of the best sources for Scandi knives in the U.S. He has good prices, very reasonable shipping and he's super fast about getting your orders out. He also is a font of knowledge on everything Scandi. He has the Forest and Signal models listed at \$34.50, the Force at \$30.00 even and the Triflex at a very modest \$20.00. Those are great prices for just about any field knife and I have to say that these Moras easily exceed that value in what you get out of them in performance. I was impressed enough with the Forest and Force models that I'll be turning to him in the near future to snag a Signal and Triflex as well!

See: www.ragweedforge.com

did. It was especially noticeable when switching between other knives and then back to the Mora. I was using a couple of other much more expensive knives with

different grinds and for wood, I preferred the Moras hands down. Not bad for knives that sell as inexpensively as these do.

I picked up my test knives

Below: The Mora Forest compared to the older 840 Clipper (top) and Model 760 Craftsman (bottom).



Common Man VS

By Ken Seal

So you're thinking about buying a knife. With all the choices we are faced with today it can be a daunting task to say the least. How thick, how long? Full tang, rat tang? What grind should I get, and stainless or carbon? Well I am not claiming to be an expert. I also am not going to push any one ideal upon you like it's the gospel. I am however going to lay the facts on the table and let you make a rational, educated decision, so that your first knife purchase won't leave you with a bad taste in your mouth.

Grinds. A lot can be said for the many different grinds you can have on a knife these days. Each has its good and bad points, and none is really

perfect over the other. More so, it's the grind that works for the job you're doing at the moment that matters. A Scandinavian, or scandi grind is a great grind for most if not all small woods chores, from carving tent stakes to making fuzz sticks. No other grind gives you the control, or the keenness of a scandi grind. With that being said, it's NOT the best grind for ALL chores in the woods. It is sharp, sharper than most every grind out there, but it isn't the best for chopping. If hit against a hard object in a chopping motion, a scandi grind can chip out and roll easier than say a convex grind. In the same instance, a convex edge isn't as easy to shave wood or make fuzz sticks with either. A knife with a primarily flat grind is great for chopping in most cases, and excels at batoning and splitting wood. Most well built



Above Left: A small ax, Fixed blade, and Multi Tool can take you far. Pictured here are the Pathfinder from BHK, the Wetterlings Large Hunters ax, and Swiss Tool from Victorinox.

Above Right: Pictured here we have the Becker BK7, now made by K-Bar, and the Swiss Tool in the sheath side pouch. A great combo for most any day in the bush.



Common Sense



With practice, a small axe and a smaller knife can be of great use. The Wetterlings large hunters axe, and the Mora SL2 pictured here can be used to process game and wood of most any size.

"survival" knives will have a flat grind with a shallow bevel to give overall decent use, and strength. But there is no perfect edge for total overall use in the woods.

Shape. Most if not all knives aimed at survival enthusiasts are built with a drop point blade. It's a good strong tip design that allows a decent amount of prying, and digging to be done without fear of popping the tip off. Another good option is a spear point design as it gives good tip strength and keeps the point in line with the centerline of the handle to allow the blade to be used as a drill for making holes in fire boards and such. Clip point knives are usually too weak for heavy use in the woods, and are designed more for penetration of soft tissue than wood. The one exception to this rule would be the K-Bar. It is a heavy blade with a clip

point that has seen many years of hard use in the hands of soldiers from many branches. Its thick carbon steel blade is easy to sharpen, and does a good job of most bush craft tasks.

Handle material. While bone and antler looks good on a blade, nothing could be worse for long term use in the woods. You want a material that will absorb some shock from chopping, and or batoning; not rot, or break up in the cold and the damp alike; and offer a good grip when wet with viscous fluids, or mud and muck. I prefer diamond-wood scales on most of my knives because it's a resin impregnated wood that offers great resistance to fluids, yet still retains great grip-ability. Another option would be micarta, or G10 scales. Both of these are a resin based material made of fiberglass, paper, linen, and/or canvas material.. They offer great resistance to



Ontario Knife Companies Rat5 is a good midsize knife with a great profile for splitting, and skinning. The sheath has a pouch that will fit most any multi-tool, or as pictured here, and small folder. Pictured is the BMG stag folder made for small game and bird.

some carbon steel blades. As long as the back of the knife is at a sharp angle to the blade, it will throw sparks from most, if not all ferro rods. The advances that have been made in metallurgy as of late have produced some stainless blades that rival the carbon bad boys in ease of sharpening, and edge holding. I own a few really amazing stainless blades, and don't hesitate to carry them with me in the woods when I hunt. BUT, and here is where I regain your trust, I prefer carbon steel over stainless for a few reasons. Remember, we are trying to remain the common man here. Carbon steel blades are usually cheaper than stainless of the same size and design. Carbon steels are easier to sharpen in the field should you lose your gear. I'm not saying you can't

sharpen a stainless blade on a rock, just that the results will be better with a carbon blade.

Now after all that, I still haven't answered the age-old question. What's the perfect knife for use in the woods? Nobody can answer that question but you. What you do, and how you do it will be the factor.

The pathfinder knife is one of the best knives I have had the pleasure to use in the woods. But even it isn't perfect. It has a good scandi grind, so its good at most wood working tasks. Its got

plenty of belly so it will do OK at skinning, and it has enough weight to be a decent chopper. Notice I didn't say it excelled at any of these tasks, just that it was OK at all of them.

The TBT1 (Tom Brown Tracker1) is another example of this situation. Mora knives are loved around the world for a lightweight and cheap option for woods use, but they lack the weight to do any chopping, and the strength to do heavy batoning. The above mentioned KBar is built for combat. But it's not as suited for drilling into wood as it is flesh. It makes a great knife for processing



The BK7 also has a storage pouch for a multi tool (pictured is the Swiss Tool), and comes with a full flat grind that is great for splitting wood.



The Author's preferred carry for woods time is the Pathfinder knife from BHK, along with the Large Tiger Knapp from the same. The tiger Knapp is great at detail work, cleaning small game, and small camp chores, and the Pathfinder with its carbon steel, scandi grind blade makes quick work of wood, and larger game.

game, but reaches limits when processing wood. One great option for a common man is to get a Mora knife, and either a small hand axe, or a small folding saw. With either combination you can process wood for shelter and or fire, and still clean fish, process game, and do other smaller camp chores with ease. I'm not saying this is the perfect end all setup, but for a common man's kit, you would be well suited for any adventure you may set out for.

As time and money permits, upgrade your knife to the KBar, or

if you want to save for something grand, the Pathfinder. Both knives, when paired with an axe or saw, will be more than capable of sustaining you for months on end should the need arise. Of course this is just the tip of the iceberg when talking about sharp tools, and entire books can, and have been written on the subject. Instead this is a sampling of things I have observed thought the years, and what has and hasn't worked for me.

No one can sell you a knife. The knife sells itself to you. Pick a

few up. Hang out with some buddies and ask them to let you use the knife they carry. The more knives you work with, the better you can answer the question of which is right for you. Until then, stay sharp, and stay safe.

Ken Seal was born in Sumter South Carolina, and Has lived in Florence South Carolina All of his 42 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 them from time to time.



Above: The BK7, Now made by K-Bar, is a good sized knife for splitting...while not being so long that its cumbersome for more detail work.



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Gear Review:

Exped Bivy-Poncho and Bivy-Poncho Extreme

By Matthias Bart



The author with his Bivy Poncho Extreme in Derborence, Switzerland.

When it comes to sleeping outdoors, a few pieces of equipment are really handy to bring with you, and a good poncho is one of them. Along with it, a poncho liner is nice to have too. One reason is that both of these pieces of equipment are versatile, thus they allow you to bring less gear outdoors.

Over the last decade, I have tried and tested several of those. But one brand gave me exactly what I wanted: Exped.

Exped is a Swiss firm specialized in outdoor equipment. They have built the Bivy Poncho (which I designate by “the standard version” or “the classic version” in this article) and the Bivy Poncho Extreme. I have used, abused and tested these for several years now. They also used to sell the Bivy Poncho Liner. Sadly, I’ve discovered while writing this article that the Exped poncho liner is not produced anymore, so I won’t discuss it a lot in this review.

A well designed poncho allows you to always have with you at least two things: rain gear and a tarp. Add to that a poncho liner and you have cold weather gear too and even, in that case, a bivi bag/sleeping bag solution.

In the field:

Both ponchos are designed to be used as... well... ponchos. But as the name suggests, it is designed to be used as a Bivy Poncho. What does it mean? It means that this very poncho can also be used as a bivy bag or even a hammock and a first aid stretcher.

They have a waist string to avoid the flapping with the first breeze and the hood can be tightened with a cinch cord or even totally closed when used as a tarp. The hood is really well designed so it does not restrict your angle of vision and follows your head movements.

If two individuals have the Exped Bivy-Poncho, they can connect them together to form a bigger tarp for more advanced shelters. You can snap together as many of them as you have at hand.

The Extreme version does not offer that

Mattias 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.

The specs:

The Exped Bivy-Poncho exists in two qualities: the standard and the Extreme, which is a lighter version. Needless to say I own both and have tested both of them. Most of the pictures in this article are shot with the Extreme version.

I have summed up the specifications for both ponchos in the following chart:

	Bivi Poncho	Bivi Poncho Extreme
Fabric	PU-coated ripstop nylon	Double silicone coated nylon
Dimensions*	240 cm by 155 cm / 90” by 62”	240 cm by 155 cm / 90” by 62”
Closure	Uses only double sided snap buttons	Uses only hook and loop pads (Velcro)
Packed size	Packed in the included chest pocket, about 30x25x2 cm / 12”x10”x1”	
Colour	Light olive green or terracotta	Olive green
Eyelets	Total of 8 eyelets, 1 at each corner and 1 in the middle of each side	
Stitches	Both double-stitched and fully taped	
Weight	560 g / 19.8 oz	395 g / 13.9 oz
*Both can be shortened by about 50 cm / 20” when worn to fit smaller persons.		

Below: General shape of the Bivi Poncho (Extreme), its color blending pretty well with its surrounding.





Above: A-Frame shelter achieved with a ridgeline, four guylines and four stakes.

Below: A trekking pole and three stakes turn the Bivy Poncho into a quick diamond shaped shelter.



possibility, due to the Velcro that does not secure the Ponchos as firmly as the snap buttons.

I use both versions equally and love them a lot. You can often find me while tracking, or on a short hike, with the Extreme Bivy Poncho. On bigger hikes, when my companions also have Bivy Ponchos, I bring my standard one for the reason mentioned above: extending the shelter possibilities.

I must say that I was impressed by the water resistance! I can walk in heavy rain for hours before feeling a bit of moisture, which might be sweat on the inside. With my Gore-Tex jacket, I would have been all sweaty long before, but as the poncho allows good ventilation and good water protection even when you don't have water resistant pants, that problem is minor.

The 8 eyelets are sufficient for any standard setup. They are really practical to stake the poncho to the ground or attach guylines to it, but also to attach the liner to the



The Author recommends the following gear for a flexible poncho/shelter system: 1 X 10 meters of 8 millimeters rope, 4 X 3 meters of 4 millimeters guylines (carabiners are an option), 4 X stakes.

poncho.

The standard version comes with four straps that can be easily placed on the numerous double-sided snap buttons. The addition of these double-sided snap buttons on the classic version are a real plus for the reason it allows you to set your peg-loops anywhere along the edges of the poncho, something you just cannot do with the Velcro pads on the Extreme version. This adds a lot more flexibility on the standard one.

They are pretty rugged and I've never torn one so far when walking in the bushes. They fold really small but offer a really large protection against the elements.

The advantage of using the chest pocket as its own pack is that you always can easily fold the poncho right away without having to look for a separate pouch. It's already there and won't be lost.

They are big enough to allow you to build several types of shelters and being leafy green for the standard and olive green for the extreme, you can keep a low profile and discretion out in the woods.

The waist cord can be used, when packed, as a sling to hold the pack and offers 3 m, which could be useful in a survival situation if you need readily available string to build a quick shelter.

I've tested several A-frame shelters, high or low, lean-to, diamond type and even succeeded in making a small semi-pyramidal shelter.

When you use one of those ponchos with the poncho liner, you can make a water resistant sleeping bag that holds up to 14°C, which is great for a light summer hike. But I've also used it a lot as a bivy bag over my sleeping bag and it works really well. You won't find more condensation on the inside of the Bivvy Poncho than inside my Gore-Tex bivy bag.

The Extreme Poncho may be a bit noisy when used as a poncho, which could get annoying



The poncho's pack sack turns into a nice, easily accessible, inside chest pocket. It's big enough to hold the stakes, ridgeline, guylines and the poncho itself. The 3-meter waist cord allows you to tighten the poncho in high winds and to carry the folded poncho diagonally.

when extreme discretion is wanted. The liner is really effective for those winter hikes when you feel cold and don't have any layers left to add or to protect you from the cold ground. The liner is sold in a tulle/super fine mosquito net and this, in my opinion, is a real asset

as you can use it as a mosquito net over the survival bivy sleeping bag to avoid getting stung and even bit by ticks.

The chest pocket is on the inside. This allows you to keep your small items or maps protected from the rain but can be easily

accessible.

My opinion:

I prefer the standard version as the snap buttons hold a lot more than the Velcro pads and offer the possibility to snap your stake-strap almost anywhere you want. It does also offer much more flexibility as you can connect several of them. It's also less noisy than the Extreme.

I prefer the dark green of the Extreme version, but both work great in general in the field. If total stealth is required, I would go for a camo version though or add a good layer of natural camo and vegetation.

As a personal advice, I would throw in the poncho's pocket four guylines with small carabiners, four aluminium tent pegs, (as it is hard to make thin tent pegs that would both be solid enough and pass through the eyelets) and a seven meters long ridge line. These do easily fit inside the poncho's pocket when not worn and do add a lot of flexibility to the kit. The price of the kit may vary but I've paid about \$95 and it's actually worth it!

All in all, those Bivy Ponchos are tough, versatile, efficient and a really good choice for us bushcrafters and outdoorsmen.

Pictures on page 46 (clockwise from top left): 1) Tough eyelets for an easy setup. 2) Hood cinch cord with an ultralight cord lock and "glow in dark" cord end. 3) Double sided snap buttons all around the rims of the Standard Bivy poncho and snap-on webbing loop. The green of the Standard version is a bit lighter. 4) On the Exped Bivy Poncho Extreme, hooks and loops replace the double-sided snap buttons of the Standard Poncho. 5) Size comparison between a standard "candy-bar" cellphone and the Bivy Poncho Extreme with ridgeline, guylines and stakes inside. Even smaller when compressed.







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Q: My wife is going backpacking with me for the first time. I want to get her a sleeping bag which will keep her warm at night and light-weight to carry in her pack. What do you recommend? – John, TN

We hate being cold!! For a variety of reasons, women always seem to be colder in ambient temperatures than men.

I recommend getting her a sleeping bag rated at least 10F lower than the coldest possible night expected. Throw in a cozy silk sleep liner for her and you'll add virtually no weight and 10F.

If you want light, and can keep it dry, a down versus synthetic sleeping bag is the way to go. The warmth, weight and compression advantages will cost you a little more, but she will be happy camper!

Q: When you go on a long distance backpacking trip, how many miles a day do you hike? – Peter, PA

A: That's a great question and depends on a number of variables including; altitude, elevation gains/losses, pack weight, terrain, weather etc.

In general, I like to backpack 15-20 miles a day. Including short breaks, I average 2.25 miles an hour. If I am going up in elevation, my pace can drop to 1 mile or less per hour.

Q: What is a WAG bag? – Sara, MS

Anyone who has ever used a WAG bag is laughing right now. Not at you, but at their first experience! It's like picking up after your dog.

WAG stands for 'Waste Alleviation and Gelling' bag and is used to coincide with the "Leave No Trace" rules when climbing popular mountains such as Mt. Whitney in CA and Mt. Rainier in WA.

You squat over this light weight, plastic bag. A urine-activated powder to encapsulate and deodorize solid waste is already inside. Once you've done your 'business,' close the bag up and place it inside the zip-lock style bag provided. The waste is now contained and you are ready to pack it down the mountain.

Q: How do you shower and take care of yourself when out in the wilderness? - Melissa, TX

Before bunking down for the night in my tent, I like to clean up as well as possible. If there is water nearby, I will take my bandana and scrub away the dirt.

To minimize impact on the environment, I use only bio-degradable soap and then only 100 feet away from whatever stream, lake or river I happen to be near. I rinse off using a liter bottle.

If water is scarce, and I have wet-wipes available, I will use a couple sparingly.

Hygiene is important in the wilderness! Most of us get blisters, scrapes or cuts and you need to keep them clean.

Q: What do you eat out on the trail or mountain and how long do you go without re-supply?

If you are going for ultra-light weight, Gatorade powder packs, granola and protein bars are the way to go!

However, if you are like me, you will sacrifice carrying more weight for good food. In addition to my gear, I will carry up to 10 days worth of food. Figure on 1.5 – 2 lbs of food per person per day.

I like a hot meal at the end of the day. Mountain House has some amazing freeze dried dinners including spaghetti & meatballs, lasagna and beef stew.

Some of my other favorite food items include:

- Pop Tarts
- Natural Fruit Roll-Ups
- Trail Mix with M&Ms
- Granola Bars
- Gatorade Powder Packs
- Whole Wheat Tortilla Shells
- PB&J (its heavy, but I love it!)

Remember, bring and eat whatever you want as long as you are comfortable carrying it!

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

Payge McMahon is an accomplished adventure athlete and all around country girl next door. You can follow her adventures at: www.paygemcmahon.com.



Grub it up!

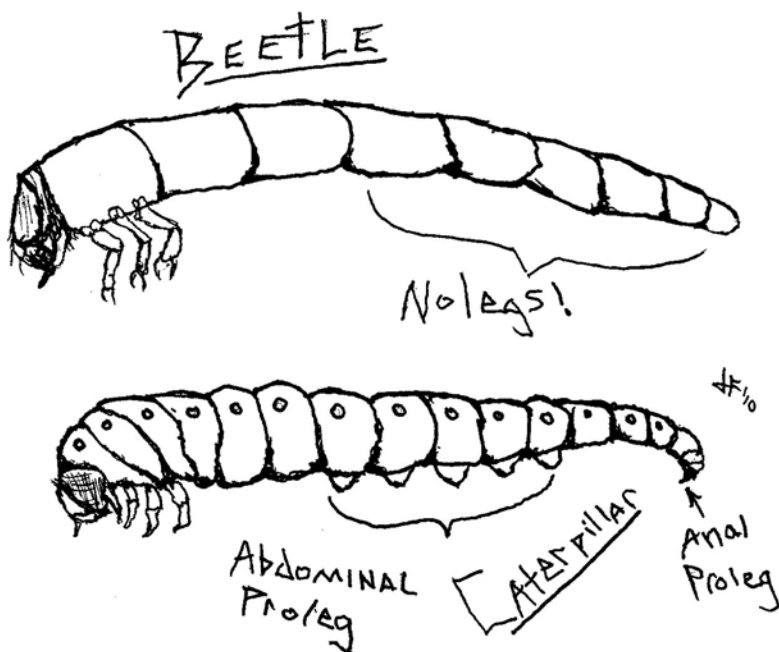
By Joe Flowers

Disclaimer: Your appendages are your own responsibility! When looking for the enigmatic critters in the following paragraphs, the bush wanderer must be aware that other animal friends can be using the same habitat, be it venomous snakes, spiders, stinging insects and all sorts of other hazards your fragile human body could stumble upon. Be careful! The views here, though entertaining and even sometimes well thought out, by no means express the views or opinions of Dave Canterbury or anyone else affiliated with the magazine. Watch your hands, you only have two!

Welcome!

Congratulations all you woods dwellers, you have found yourself in the column dedicated to the creepy and crawly wonders of the world, and with a little swamp luck, you'll have a blast learning about common (and uncommon) critters you may not have known about before. Hopefully this little area of the magazine will help open your eyes, maybe even re-direct them, to appreciate those that live close to the ground, under the ground, and in hidden spaces all around us. Be it survival food, a chance for a new discovery, or just a bit of critter-trivia, you are sure to hop away with the belly of your mind full.

Beetle Babies



This drawing depicts a typical body style of a grub. There are many other types of grub body styles out there, but they more or less have the same rules. Caterpillars have abdominal prolegs, and beetle larvae do not.



Large Bess beetle (*Odontotaenius disjunctus*) grubs are common throughout the US and can be found in many rotting hardwoods.

Grubs; this is perhaps one of the more general labels to describe a billion different critters. Perhaps the word is similar in function to Kleenex, a general term to describe all the disposable snot rags out there. A grub is a general term, albeit commonly misused, for the larval stage of a beetle. Of course one can go out to get some grub (food), maybe go grubbing (digging) for grub (food), but in most cases, such as "I

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.



These beetle larvae were found while peeling back bark off of a rotting log. You can find grubs in all types of rotting wood material.

found a grub!” it is referring to the small white worm-ish like larvae commonly found in the dirt. For you, oh reader, the secrets of the larval forms of the beetle are about to be revealed!

A grub can also be a mealworm, lunch worm, grub worm or all of the above. Consequently, despite the name, this little critter isn’t normally labeled as a staple diet for humans, at least in North America. The practice of eating insects, called Entomophagy, is widely practiced just about everywhere else except for some European countries and North America. The Yukpa tribe of Columbia and Venezuela even prefer insects to fresh meat! And you guessed it; grubs are normally at the top of the list, including mine. Besides the random munching of this small critter, through dares and outright curiosity after feeding my various reptiles, I learned the importance of these little bugs in the insect food chain. At Bugfest, an annual event



You don't necessarily have to eat a grub to reap the benefits, as they make great fishing bait and will take to hooks readily. This is an improvised gorge hook.

held at the Museum Of Natural Science in Raleigh, NC, I got to munch on specially spiced Tenebrionid beetles (black beetles, commonly used in the pet trade as a food source), and small Dermestid beetle larvae specially spiced for human consumption, not just ripped out of a log, and they were fantastic. But where does one find grubs and what is the big deal about them?

Catergrubbers?

First, you may wonder what the heck the difference is between caterpillars and grubs. Quite a



This eyed click beetle (*Alaus oculatus*) is a handsome insect indeed. The adults can get even larger than this!



Photo By Anders Moller. In the shopping area of Iquitos, Peru, you can dine on the delicious palm weevil larvae *Rhynchophorus palmarum*, a delicacy that should be tried by everyone!



Nom Nom Nom! These Bess Beetle larvae have a peanut like flavor. When they are roasted well, they dont have any mushy texture like one would think.

grubbing!

Location Location Location!

Grab your grubbing hoe ye gents and ladies, it is time to flip logs! The age old practice of log flipping is a part of my woods walking behavior; I'll bring my stump ripper (modified hoe generally used for snake hunting) with me to find and explore logs. With careful and watchful eyes, you'll be able to predict good beetle larvae habitat too. Signs include bird damage to the top of horizontal and vertical logs, an accumulation of saw dust along the bottom portion of wood material near the ground, and dry rotten logs

that are isolated and act as a beacon. Old rotten logs work best, but tearing them apart does destroy habitat so please remember to try to either roughly reassemble or roll a log back once you unroll it. There is nothing worse than coming upon upturned habitat that someone else carelessly left (and it does happen often, especially with snake and salamander hunting *herpers*). Pine bark can also be flipped too, as you can sometimes find very elongated larvae of the eastern two eyed click beetle rolling around frequently among other beetles. Time of year is important, though if you become savvy enough or know which logs to look in, you can find hibernating grubs and pupae with some work and prying.

Logs, nuts, and moss

Areas where there are logs everywhere may be sparse in bug content or a buffet, but one log per area may be prime real estate for our arthropod buddies. You don't have to look just for logs either, as some large rocks can hold a whole

lot actually, though many can look much like one another. Beetles and Lepidoptera (that's Moths and Butterflies), flies, bees, ants and wasps, have a cycle of development called complete metamorphosis. Unlike Humans, puppies, and snakes, the baby version of insects undergoing complete metamorphosis do not look like cute versions of the parents. They have a distinct stage where their body style is different. Other types of insects undergo an incomplete metamorphosis where there are miniature insects such as crickets and grasshoppers; they look like little versions of the bigger hoppers. Beetles though, have a larval stage, and are normally called grubs, worms, or borers.

The difference between beetle and caterpillar larvae, be it moth or butterfly-- caterpillars have a set of abdominal leg-like appendages called prolegs at the back. The humble beetle grub does not. These beetle grubs vary in a myriad of body forms, and can feed

on plant matter (dead or alive), animal matter (mostly dead or...um...digested), stored food and grains. Or, in many cases, a beetle larvae can be predacious. In the interest of article length, I'll keep it simple and focus on the wood decomposers and how to find them.

When in Rome

I've had skunks sniff around my bee hives many times. As a matter of fact, bears are a nuisance to bee hives for the same reason. Sorry all you Poo-Bear lovers, it isn't because of honey. These predators are going after the protein packed brood larvae inside the hive. You can see evidence of boars ripping apart logs, woodpeckers hacking holes into vertical trees, and skunks ripping apart yellow jacket hives for the same reason. They are going after the protein found in the insect larvae. Without a hard exoskeleton, our body doesn't need to work hard to digest these free pieces of arthropod meat. Time to go



These grubs were all found in the same log in a matter of two short minutes. It didn't take much energy to pry apart the log to catch these grubbers.

the same texture but taste way different. Beetle grubs remind me of Chinese dumplings. They have a different texture on the outside than on the inside. It is important to boil, cook, or fry your meals if you are going to eat them, as some can carry parasites that can hitchhike into the human body. You'll want to remove the

though). Suri grubs are a sustainable resource that the native Peruvians have adhered to them as a staple diet due to the fact that they are a great protein source, a good source for vitamin A and vitamin E as well.

At the very least, the readily available source of insect larvae can insure a good fishing trip to gain even more protein. We have grubs of many different sizes in North America. Perhaps the more common types are Bess beetles, a large beetle that lives in decaying hardwoods. They are a more social type of beetle, so you can find many in just one small log once you start ripping it apart.

You can catch large fish using these grubs, or just roast them yourself. Many other types of beetle larvae also dwell in logs, from click beetle larvae all the way to glow worms. Even the act of grubbing itself can be an absolute adventure, and a chance to bond with kids. Go out and explore the wide world of the beetle larvae! Take a look at the pictures accompanying this article and have fun grubbing!

basketful of grubs for your sizzler. Underneath sod and moss, stumps, and old boards and even tin are also good spots. If there is an older acorn or other type of nut or seed on the ground, open them up too. Girdlers are a type of beetle that cut pieces of wood off in certain spots, and weevils (those cute beetles with the long nose) also commonly attack trees and the nuts and fruits they make. With that being said, an area with a large amount of rotten nuts might deliver other types of delectable treats. You have a plethora of options with the found grubs after that, but I highly suggest trying to cook and eat them at least once.

Munching

It is a God given miracle that I don't have a tape worm from all the things I've tried. With a little help from fire, you too can safely fry, boil, chew, or steam an arthropod. The first question may be if beetle larvae taste good. For the most part, it depends on what they have been eating (avoid eating dung beetle larvae if you can). Grubs have a nutty greasy taste. Taste is one thing, texture is another. Potatoes and radishes have

hard heads of larger grubs too. In a survival situation where each day counts as you are trying to get out of an area, you may not have the option of fire. You can deal with the tape worm later on with proper medicine, but that protein and energy may be important during that scenario. North Americans eat insects pretty often anyway, and just don't know it because of cultural taboo: we don't want to know what is in our packaged foods.

Grubs are a sustainable resource, and I came to find that out in a trip to the Amazon jungle with Jeff Randall's Adventure training (ESEE). A type of beetle, call the Palm weevil or Suri Grub, are a large weevil found in decaying palm trees, and the grubs are larger than our common Bess beetle found here in the states. They are a delicacy fried, and tend to be parasite free so you can eat them raw (they squirt



A pointed stick serves well to cook the larvae. You could use green or dead wood, but you don't want to completely charcoal the food. You can roast them much in the same way one cooks smores.

Woodsmen's Trauma Kit

By Luke Causey

It goes without saying, or it should, that every outdoorsman who ventures out should be prepared. While preparedness minded outdoorsmen often focus on survival and emergency equipment, often overlooked are the first aid and trauma supplies that may become necessary. Even though the outdoor community has done an excellent job of both promoting and training first aid in the last decade, the trauma side of first aid still deserves more attention. This article will cover my personal choice for trauma kit supplies and their use. Competent training and medical advice will round out the total package of preparedness.

To understand the difference between first aid and trauma, it is necessary that we define both. For our use here, we will define “first aid” as *initial care for injuries or illness*, and “trauma” as *potential life threatening or debilitating injury or illness*. What the trauma kit seeks to accomplish is simple, preservation

of life. We’re not concerned with bandaging up that scraped knee or the fish hook injury to the hand. Uncomfortable as they may be, neither will likely result in death or debilitating injury. What we will focus on in the components of our trauma kit are those major injuries that interrupt the ABC’s; Airway, Breathing, and Circulation, or that result in the X injury; Excessive bleeding. The remaining medical attention falls under first aid, and will be addressed at a later date.

My trauma kit is designed to attend to one patient, and be lightweight and compact. If you normally spend time in the outdoors with large groups, multiple family members, especially children, add multiples of some components as you see necessary.

The Tourniquet: If I were to only have one trauma-specific piece of equipment, the tourniquet would be it. While it is possible to improvise from belts, ropes, and webbing, a quality, purpose-built

Contents of Woodsmen's Trauma Kit.





Above: EMT Shears, Medical Tape, and Gauze pads.

tourniquet is not only faster but more effective. Supported by advances in medical technology at the hospital, tourniquet use in emergency medicine is seeing a comeback. The treatments available at the hospital emergency room, and the skill of many surgeons today support the use of tourniquets when the 'X' bleeding occurs. While they used to be frowned upon, today's advanced tourniquets are back saving lives, without the loss of limbs or even serious tissue damage. Keeping blood in the body, to support the heart and brain, is the sole purpose of any good tourniquet.

I've selected the MAT (Mechanical Advantage Tourniquet) for my personal trauma kit. I've been trained on the MAT with some extremely talented trauma surgeons, and in my opinion, it is heads and shoulders faster and easier to operate under stress than other tourniquets on the market. The MAT is easily applied one-handed to any limb on the body, even the strong side using only the weak hand. The MAT uses a mechanical windlass system to ratchet up pressure continually, making it possible to apply the tourniquet and increase the pressure to the necessary level in less than ten seconds. If you have ever seen the type of injury an errant axe can cause to a limb, you'll understand why a tourniquet can save lives in the outdoors. You can do a lot with duct-tape and bandannas, but stopping bleeding has to work, and it's just not something you can risk to improvisation.

The Israeli Bandage: I'm not sure who came up with this bandage, but the Israelis know good stuff when they see it, and quickly adapted it for military use. The Israeli bandage is essentially a large elastic wrap, with a massive gauze pad sewn into one end, and a plastic pressure applicator on the back. Think of it as an Ace bandage, gauze pad, and compression bandage all in one. The Israeli bandage is used for stopping

Below: Coflex sterile wrap.



Above & Below: Dynamed CPR mask with carrying case.



Top to Bottom:

- 1) Initially wrapping the Israeli Bandage.
- 2) Inserting the elastic wrap into the plastic pressure applicator.
- 3) Reversing wrapping directions to apply pressure to wound.
- 4) Securing tail end of Israeli Bandage with built in retention clip.



blood loss from large lacerations to sizeable abrasions, and protecting burns and impact wounds. The Israeli bandage is often seen as one step below a tourniquet for blood loss and useful for other injuries as well.

Available in 4 and 6-inch widths and vacuum packed in plastic wrapping, the Israeli bandage (sometimes called The Emergency Bandage) keeps the user from having to cut, place, and secure gauze or bandages in the field. Stretchable to over two and half yards in length, the bandage can be wrapped around any of the limbs, the hands or feet, the torso, and the head. The Israeli bandage can also be wrapped around the neck, but care must be taken to avoid excessive pressure for obvious reasons. I carry a minimum of one in the outdoors, and prefer two or more when weight and space is available. For kids and adults alike in the backwoods, the Israeli bandage can treat those traumatic debilitating injuries long enough to get the patient to where ambulance access is practical, or into an emergency room.

CPR Face Shield: CPR (Cardio Pulmonary Resuscitation) is the one crucial aspect of first aid and trauma treatment you absolutely must receive training in. While I've witnessed emergency 911 dispatches talk folks through CPR over the phone, when your loved one's life is on the line is not the time to learn. The American Red Cross, and your local Fire and EMS personnel are the best resources for you so bend their ear and get into training! While not necessary for effective CPR, the face shield makes CPR easier, faster, and safer for the caregiver. It also increases safety for the individual receiving treatment,

Top to Bottom:

- 1) Increasing pressure with windlass ratchet system on the MAT tourniquet. Note that this is easily done on the strong side, using only the weak hand.
- 2) MAT properly applied and tensioned.
- 3) MAT tourniquet, showing quick attach buckle system and lengthy webbing strap.
- 4) Location to write application time of Tourniquet. Do this only after properly applying the MAT and contacting emergency services.





The Author's Trauma Kit, packed away with clearly visible home-made markings. Everyone in your group should be able to recognize this kit, and know where it is stored.

preventing their mouth and tongue from getting in the way of the caregiver.

There are numerous CPR face shields available, and you often receive one with your training class, so there's no excuse not to have one. The one I choose to carry is the DynaMed Microshield. The Microshield is about the dimensions of a business card, and thinner than most pocket knives. It can be carried on a key ring, on the zipper pull of your pack, or in a pocket. Since fast and effective Rescue Breathing (administered with the presence of a heartbeat, i.e. no chest compressions) and CPR (administered with chest compressions, when no heartbeat is present) is the best field treatment for problems with the ABC's, there's no excuse to not have at least one CPR face shield. I have four or five scattered through all my gear to ensure one is constantly available. I recommend that each

adult in a family or group have one available, and know how to use it.

Other items to consider including in your trauma kit are EMT shears and burn dressings. I once had the task of cutting off the leg of Carhartt pants from a friend who severely cut his leg on a backpacking trip. While I was able to accomplish the task with a pocket knife, EMT shears would have been more effective and made us both more comfortable. Burn dressing is another item to consider. Burns destroy the only barrier between our inner workings and the rest of the world around us, our skin. Even minor burns leave us vulnerable to infection, and cause severe pain for long durations. Some type of burn dressing should be in your trauma kit. I carry and have used WaterJel burn dressing with great effect. WaterJel is a non-adhesive, sterile, gel soaked pad that can be held on with the Israeli bandage, tape, or virtually anything else.

Lastly, my trauma kit contains several items to help me protect injuries and prevent infection and blood loss. I include Coflex sterile wrap, basically a giant stretchy band aid, to cover injuries like poison ivy, insect stings, or minor cuts or abrasions. Also in my kit are several 4x4-inch squares of gauze, and a roll of medical tape. These items help me keep dressings in place, and supplement the first aid side of treatment.

As you can see, a simple but effective trauma kit can be put together without spending a fortune, and can fit in a sandwich-size bag. I carry a few extra items in a heavy canvas pouch, and my kit still weighs under a pound. Slimmed down to half a pound, you could carry the tourniquet, Israeli bandage, and CPR shield in a cargo pocket. Even with the extra items I carry, my entire trauma kit cost less than \$100. In a time where most of us spend more than that on knives, boots, and backpacks, it makes good sense to invest in the safety of yourself and everyone you spend time with. Get the training, carry the supplies, and you'll be in a place to save your own life, or the life of someone you love.

Luke Causey is a full time Police Officer, Special Operations Unit Sniper/Observer, and an active outdoorsman living in the central Colorado Rockies. Luke spends his free time doing everything from hiking and camping, to fishing and hunting. Outdoor and self sufficiency skills have been central to Luke's lifestyle since growing up in South Louisiana. Luke continues to train and improve his skills in a constant effort to better himself and enjoy his time in the outdoors.

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Wild Edible Plants: The Cattail (*Typha*)

By Robert Considine

Safety first! Always identify every plant with 100% certainty before eating or handling. In some cases wild edible plants grow next to the poisonous ones. Until you are comfortable and confident with the identification, always use reference books or seek a professional plant expert. Remember to learn not only the common name but also the scientific, universal name as well. If possible, pick plants that are in a safe area, away from traffic and bad water. However, in a survival situation this may not be possible. When foraging look for the most common and easily identified plants in the area

The cattail (*Typha* species) is said to be the supermarket of the wild. From early spring through the harsh winter months, the cattail plant is a good choice. Being one of the “Big Four Wild Edibles”, it is easy to identify and has many uses.

Worldwide, cattails are generally found around marshes, lakes, streams, ditches and some inland waterways. They are easily spotted even in winter by last season’s stalks and sword-like leaves. Some brown fluff may still remain on the upper woody stalks. In the early spring, traveling down the old stalk, below the water line and into the mud, a platform stem begins to form just above the root, called a “rhizome”. At this point begins the upward growth of the new, young cattail shoot. This base or rhizome is where the plant’s starch is found and is best used from fall to early spring.

The best way to harvest the rhizome is to work your hands down through the mud around the roots and pull upward. Sometimes you may need to cut away the ends with your knife. Clean the mud off and peel back, scrape or cut the casing off the rhizome. Find the white center core. This core is where the edible starch is found. Prepare it by roasting on hot coals, or chew until soft, then spit out the white pulp. If you’re going to be there for a while longer, flour can be made by drying and then pounding this inner section. However, this can take some time and may not be worth the effort in a short survival situation. Remember, it’s a starchy root base and you may not be accustomed to eating wild edibles.

Moving up from the rhizome base, our young cattail shoot is starting to form. These young stalks, no more than two or three feet in height, are best harvested by gently pulling upward from the rhizome base. Once harvested, remove the outer layers of leaves until you reach the innermost section. Preparation can be as easy as peeling back to the inner core and eating raw. If you have the time, boil the shoots for soup or roast on an open fire. Hot coals will also work. (Note: if you cannot pull or cut easily with a knife, it may be too late to harvest.) While harvesting the shoots you may notice a sticky, jelly-like substance on your hands. This sticky material may be used on wounds and burns. If enough is collected, it can be used to thicken soup and also contains vitamin C.

At the top of the stalk, we come upon two pods or heads. Depending on the time of year, they will be used for different survival issues. The section closest to the ground is the female

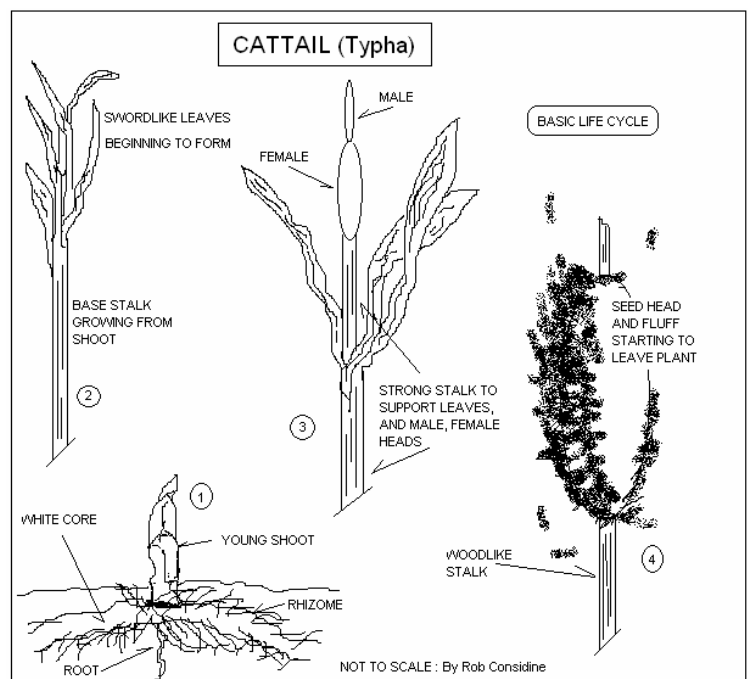
pod and on top sits the male. When the male pod flowers are green the pod may be ripe. Harvest and steam or simmer in boiling water like corn for 15 to 20 minutes. Likewise, check the female section for edibility and prepare like the male. For example, as an apple ripens it flows through different stages. So do the cattail’s pods.

While checking the condition of the male and female sections, please be aware that there may be some useable pollen. If there is pollen, collect it by putting the heads into a bag-like container and gently shake. Once the pollen has been collected, sift through to remove unwanted debris. This pollen has multiple uses. It can be eaten raw or sprinkled over food. You may want to use some on that newly caught fish. Making flour is also an option.

As fall becomes winter, the above ground portion of our wild edible returns back to the beginning of its life cycle and rhizome. The cold, wet, sometimes frozen water leads to new challenges but rhizomes are still there to be harvested.

The cattail is truly one of our most important plant brothers. When winter comes, and summer is gone the cattail lives on. The dried shafts make wonderful arrows and hand drill parts. The leaves can be woven into beautiful baskets or made into mats and cordage. The female portion makes wonderful insulation as well as tinder for starting our fire. Bound together, a shelter can be constructed from the stalks to protect us from the elements. Our options are endless with the cattail. In today’s society, we look for the one-stop shopping store. In the wild, it’s a beautiful patch of cattails.

After a Vison Quest at age 16, Rob became an avid student of the Earth. He was a student and volunteer instructor at Tracker School in the early 1990's. In 2006, he released the DVD "Emergency Awareness: The First Three Days". Presently, Rob is a retired fire Lieutenant and Arson Investigator and spends his time teaching urban and wilderness skills in north central Illinois.



Hail to the Bail

Back when I was young (a long time ago), most pots for camping seemed to have bails on them. It made them easy to hang over a fire, and lift out of a fire. However, in today's world of ultra-light gear, bails are often deleted from smaller pots, and replaced (sometimes) with small folding handles. But I still like bails.

I often see bails added to smaller pots by drilling holes in the side and adding some flexible wire (often snare wire) in order to hang and lift a pot. However, I prefer a free standing bail. These are bails that stay standing upright by using holes and rounded grooves, but can be removed when not in use.

I usually use stiff metal rod, 3/32" piano wire, which is available at most hardware stores. I mark the hole in the side of the cup or pot using an auto-punch. When drilling, I keep a length of 2 inch and 3 inch PVC pipe handy. I use the one best for the size of the container, place it in a vice, and slip the container over the pipe. It helps to keep you from flattening the side of the container when punching and drilling.

You should be careful here to make sure the holes are directly across from each other, or the cup or pot won't hang straight. I drill holes into the side of the cup or pot, just below the lip (See Photo #1). I then mark a line on the lip directly above the hole. I file a small groove on this line using a 3-corner jewelers file (See Photo #2). This groove is used to keep a round jewelers file on line with the hole. The

John D. McCann is the author of *Build the Perfect Survival Kit* and the owner of Survival Resources, a company that specializes in survival kits, survival kit components, and outdoor skills courses. You can contact John through his website: www.BePreparedToSurvive.com.



round file is used to make a half-round hole in the lip (See Photo #3). A bail is made from the 3/32" piano wire making a 90-degree bend inwards. The bail is placed onto the cup or pot by inserting the inward bends into the holes. As the bail stands up, the pressure of the bail against the cup locks the bail into the half round holes (See Photo #4).

One of the advantages of a free-standing bail is the ability to lift a hot pot or cup out of a fire. I usually use a lifting stick made by placing a notch into the end of a stick (See Photo #5). The notch can grab the bail without the bail sliding off the end of the stick





(see Photo #6).

Some of the new stainless steel bottles are great for boiling water in, but are difficult to add bails to, as drilling holes into the mouth of the bottle ruins the watertight seal when the lid is screwed on. For these type of bottles, in particular the Guyot Bottle, I drill the holes into the lower rim of the bottle (see photo #7). I then place small split rings into the holes. This allows me to make a bail with loops that are placed through the split rings (See Photo #8). The bottle can then be hung over a fire, or lifted out of a fire using a lifting stick.

The bottle bail worked, but unfortunately, like I indicated above, I like a free standing bail. So, it was back to the drawing board. After bending some piano wire in various configurations, I finally got what I was looking for. A bail for a Guyot bottle that was free standing, with the added benefit that it could be attached to the bottle if it was still in the fire, and could then be used to lift it out of the fire.

The new bail uses only the hole drilled in the lower lip, and the split rings are not required (simple is better). The following photos will show, and hopefully explain, how the wire is bent. Photo #9 shows the entire bail. Photo #10 shows a close-up of the bends in the wire.

The following photos show how the bail is attached to the Guyot bottle. The bail is slid under the lower lip (the one with the bail holes) and the two short upright ends are inserted up into the holes on the lip (see Photo #11). As you start to lift



the bail, it slides up through the holes until it is caught by the "U" shape of the bail (see Photo #12). Once the bail is upright, the side pressure of the bail locked it in an upright position (see Photos #13 for a close-up and #14 showing the entire bail with bottle).

As you can see, I now have a free standing bail for a stainless steel Guyot bottle. The bail can be carried in the container you carry the bottle. Bails are easy to make and give a lot of versatility to cups, pots, and bottles. Hope you enjoyed this article and it's time for you to go make a bail!



Self Reliance...

Begins with Self Honesty

By Rev. Joe Classen

“Need a helping hand? Look to the end of your wrist!” This is a bold, empowering statement that’s been embedded in my mind for many years. In our age of massive personal and societal irresponsibility, the concept of being solely accountable and in charge of both the activities of our daily lives, as well as our future destiny, is very appealing. However, while contemplating the truth of another old saying, “No man is an island,” one comes to realize that being

100% self reliant in all things, and at all times, is pure fantasy, and a good recipe for a life of misery.

The brutally honest truth, admit it or not, is that most of us are dependent (to varying degrees) on other people as we go through life. Our financial stability rests in the hands of an employer or a healthy customer base. Many of us are at least somewhat dependent upon a spouse, a parent, a doctor, and a host of other individuals (depending on the situation) in order to keep life flowing

smoothly. In fact, we often forget that we are also dependent upon the educators and mentors who provide us with the know-how to be self reliant in the first place.

In the midst of our necessary dependence though, more and more good folks across the land are indeed experiencing an awakening to embrace a “do it yourself” lifestyle and a mindset of much needed personal responsibility and accountability. I’d be willing to bet, however, that for many of us, our desire for self



Rev. Joe Classen and the end result of a 10 day do-it-yourself hunt in the Alaskan Yukon Delta.



Proof positive that knowledge + hard word = success. It's a good recipe for self reliance in any endeavor!

reliance was born out of a great deal of disappointment in our fellow man. It's a sad reality, but quite often, if we want something done right in life, then we end up doing it ourselves. I have no doubt that many of you reading these words have learned a plethora of skills ranging from auto maintenance, basic plumbing, and carpentry, to bow tuning, gunsmithing, and taxidermy, simply because the individuals that you depended on for those services have let you down on a regular basis. Thus, you took the time to learn and practice those skills and began your journey to a more self reliant life.

I'm such an individual myself. Like many of you, I've experienced that in the process of learning various aptitudes, my frustration with the undependable work of others has given way to a

great joy in realizing that one can genuinely accomplish virtually anything one puts their mind to, thus, totally eliminating the middle man. Like you, I've discovered a healthy satisfaction and a genuine excitement in knowing good and well that my own two hands, and the desire to learn and practice, are all I need in the face of many challenges of life, either in the woods or around town. And really, that's the true nature of freedom, combining wisdom, knowledge, and determination with a heaping dose of responsibility in order to do something good!

"Do-it-yourself" has become a motto that I and countless other fine Americans live by. Over the years, I've created an arsenal of homemade outdoor gear that I use every hunting season, and wouldn't be without, simply because the stuff at the store was

"made in China" junk, didn't do the job, or was a poor design. I've meticulously planned and carried out successful "do-it-yourself" big game hunts for such critters as the behemoth, Yukon moose in the wilds of Alaska, and the mightily majestic Rocky Mountain elk in the unforgiving, kick-your-butt terrain of Northern Idaho, all on a very reasonable budget. I certainly don't make such statements to toot my own horn, but rather, to testify to the fact that again, all it takes to embrace a more successful, independent way of living is a strong will to be self-reliant, an unquenchable desire for knowledge, good old fashioned hard work, and the fortitude to carry out a plan.

All that being said though, while on the journey to embrace a do-it-yourself lifestyle, one can quickly venture into dangerous

territory and drown in the deep, turbulent waters of selfish pride and inflated ego. One can easily begin to experience deadly, deceiving mirages in regard to one's true ability. While hypothermia kills countless outdoor aficionados, I dare say that pride (the bad kind of pride) is even a bigger killer! An extremely serious reality to be aware of while practicing a "self reliant, do-it-yourself, self-help" way of life, is that the "self" is quite often the person we can trust the least! The "self" can be our greatest deceiver and most dangerous threat. And again, this is because of the crafty, stealthy, infectious disease of pride!

What exactly is the nature of this pride I'm talking about? For starters, let me mention that there is a "good" kind of pride. Being proud of one's country, one's family, a job well done, etc., is a good thing. We can define *good* pride as a reasonable, justified, and balanced sense of joy, respect, and satisfaction in one's (or another's) accomplishments and abilities. Good pride brings about a sense of value and contentment and it is rooted in gratitude. This positive pride enables us to cherish and be thankful for the many gifts, and the knowledge we have been given, to bring about those accomplishments and to develop our skills/abilities.

But of course, there is a very fine line between *good* pride and *bad* pride which is exceptionally easy to cross. *Bad* pride (the vice of *hubris*) is an unreasonable, unjustified, and terribly unbalanced sense of joy and satisfaction in one's abilities or accomplishments. It fosters an attitude of selfishness, arrogance, restlessness, ingratitude, and an over-inflated sense of worth. It

leads to excessive ambition, a need to be idolized and unceasingly praised by others, and it also brings about a great overestimation of one's own ability, which in certain situations, can be deadly!

Pride affects us in a lot of other ways besides just turning us into dangerously overly-confident, egotistical braggarts. It's pride that blinds us from seeing the reality of our weaknesses and our failings. And in the wake of our weaknesses, failures, and defeats, we pridefully make up ridiculous excuses and put the blame on some one or some thing else, thus, personal responsibility and accountability go right down the toilet! Disguised as strength and dignity, a nasty case of hubris keeps us from asking for the help or assistance we need to be more informed, to grow in true wisdom, and to get out of life-threatening jams of all kinds.

For those of us who continue to strive for a more self reliant life, we have to be brutally honest with ourselves and take a good, hard look in the mirror. Before venturing out into no-man's-land with the bare minimum, before attempting to valiantly live off the bounty of the earth, or before one attempts to do something as simple as change the oil in the truck, one must ask some stone-cold, dead serious questions of one's self and make some merciless, pride-less observations.

Ask yourself, "Do I have the proper skills and the working knowledge for what I'm about to attempt? Have I thoroughly practiced these skills and knowledge in safe environment? Am I in sound, physical, mental, emotional, and perhaps even spiritual shape, to handle a savage beating from Mother Earth, who could care less if I live or die? Or,

have I been just sitting on the couch, growing fat and dumb, yet all the while convincing myself I've got what it takes to....(fill in the blank)?" On and on, one must face the music and play it loud before one can do the dance of true self reliance.

One must combat the deception of pride by ravenously eating a big huge slice of humble pie! Genuine humility is the ability to clearly recognize truth, and this can come about in many ways...sometimes in some pretty humiliating ways. But that is a good thing ultimately. The self reliant individual must have the self honesty and the profound humility to know when he/she has more work to be done, more to learn, or when he/she has been defeated or failed. We must know good and well that it is often only in defeat that we realize what kind of person we truly are. In failure, we are confronted with the objective, absolute truth of our shortcomings, faults, failings, etc.

The practitioner of self reliant living learns from his/her mistakes and is ultimately strengthened by one's weaknesses. So when you look to that "helping hand" at the end of your wrist, be good and darn sure to humbly and honestly admit what that hand is, and is not, capable of doing. After all, it just might be needed to reach out to someone else for help.

Rev. Joe Classen is a passionate, lifelong outdoorsman, and a Catholic priest of the Archdiocese of St. Louis, MO. He's written several books and articles on subjects including the Christian faith, spirituality, and the outdoors. He has appeared on several TV programs and also is currently the host of a Christian, outdoors themed radio show. For more information, please visit HuntingForGod.com



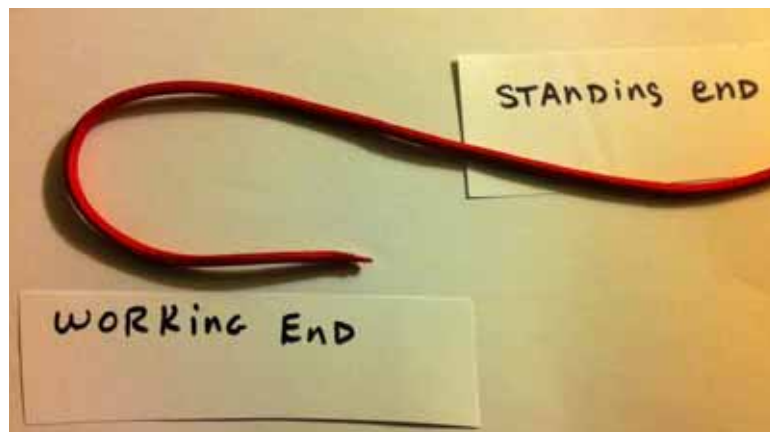
Knots

Welcome folks to the premier issue of Self Reliance Illustrated! This will hopefully become a place where we can all learn about useful knots, some history about each knot, and why you should have it in your repertoire of memorized knots. This premier issue will explain nomenclature and how to better understand the coming articles and include one knot. The rest of the articles might just be sidebar articles and cover one knot, or grow into more, we'll see. At the end of next year though, you should have a catalog of 7 very useful knots that you can use in your everyday life or at the very least, on the next camping adventure.

First off, we all need to know some nomenclature about tying knots so when reading about how to tie a new knot, whether it's here, in a book, or online, you know what the author is talking about. Knot know-how is less used today of course, but invaluable to us outdoors folk. Not only is it something quite handy to know, this is an inexpensive hobby you can play with for years. There are an abundance of different styles of bends, hitches, loops, stoppers, etc. to keep you busy for a lifetime. So, let's get started.

We have Bends, the action of tying two ropes together by their ends. We have Hitches, which are knots made to secure a rope to a ring, rail, post, or also on occasion join one rope to another or even back onto itself. Loops are often used as hitches in climbing or SAR situations but can be confused with hitches, so I'll lump them together but basically a loop is just part of a rope that is bent so that it comes together across itself. We have lashings and coils, where a lashing knot refers to binding two or more crossed poles with the rope (like making a tripod for a cooking stand). A coil refers to a rope put into a bunch of loops to ready it for storage or deployment like when used in an alpine coil. Lastly we have stopper knots. That is any

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Above: The working end is where you'll tie the knot.
Below: Loop and Bight are sometimes interchangeable.



Below: Here is your starting point.





Above: The first move is just the beginning of an over hand knot.



**Above: And the finish of the over hand knot.
Below: Pull it tight.**



Above: Now begin the other over hand knot.

terminal knot used to bind the end of a cord, rope, or line to prevent it from unraveling or pulling through a hole. It is also used as a decorative end to a rope or cord. These would all be types of knots.

The different names for the section of rope you are using are as follows. The standing part is the part of the rope that is fixed and under tension, as opposed to the free working end with which the knot is tied. The working end is the part of the rope used actively in tying a knot, the opposite of the standing end. The bight is the slack section of the rope between the standing end and the working end. The term is used mainly when this section of the rope is formed into a loop to turn back on itself. Knots tied "in the bight" or "on the bight" do not require you to use the ends in the tying process and are the only way to tie knots while each end is still attached as in two climbers tied off to one another and you need a knot tied in the bight for something (such as a repair to the line). The tag end is the short part of the rope which is after the knot. This could be made a bit longer on purpose to add a small back up knot to another finished knot. A turn refers to one complete revolution of one rope around another.

Everyone seems to call all the above-mentioned categories just "knots." That's like calling everything with four wheels and an engine a car: close but not exact. There are many different knots for different purposes. A "bend", as used in a nautical sense, refers to the joining of the ends of two ropes. There are various types of bends that have their unique application. The bend I'll be covering here is called a Double Fisherman's Knot. It is in fact a bend as it joins two ropes of similar size and is used in rock climbing, SAR, and even in making a necklace and having it be adjustable. Within one knot, you will probably have lots of these bends, loops, bights, etc. and once you learn the basics, more knots will fall into your realm of easy to do. It can be easily tied when your hands are wet and cold, hence the fisherman name. History: In the early nineteenth century, fishermen referred to this knot as the water knot. It has also been known as the angler's knot, the true lover's knot, the Englishman's knot, the grapevine (when tied as a double fisherman's) and the waterman's knot.

The Fisherman's knot is a very strong way of joining two ropes of similar size. It can be easily tied when your hands are wet and cold, hence the fisherman name. The ease of tying it is hidden by the complex look and beauty of it when tied properly and pulled together. Often though, this knot is doubled or even tripled for an even greater hold or if the rope is



Above: Same as the other one.



Above: And now pull this one tight.



Above: Now grab your standing ends and pull the knots together.

extremely slippery. I personally prefer the double fisherman's as it has more strength over the single but doesn't use as much rope as the triple.

So, all this knot is made up of is an overhand knot. The first knot you tie when tying your shoe laces, the simple overhand. You just lay the two working parts alongside and parallel to one another. Tie an identical overhand knot around each standing part with the other working end. Pull them together. That's it in a nutshell. The only difference for the double fisherman's is when you loop the bottom rope over the top, instead of pushing the working end through the loop you just made, simply make another loop and then push the working end through. For

the triple Fisherman's you'd make three loops.

Another reason I like the double the best, is that when you make the second loop, you can either make that loop to the right of the first OR cross over and make it to the left. I prefer the latter. It seems stronger to me but I have not done any testing on this theory. You'll know you have crossed it over the left when it resembles a clove hitch with that X pattern to it. For the first timer, I suggest tying the regular fisherman's knot to get the hang of it.

It might also be easier to tie in this manner: take the end of a piece of practice rope and tie a loose overhand knot in it. Then slip the working end of the 2nd piece through the loop you just

made. Turn the two ropes together counter clock wise and then tie the 2nd overhand knot. Pretend you are facing someone and you're tying one knot and they're tying the other. Now snug up the two knots separately and then pull on the standing ends to pull the two knots together. You did it. Do that a few times and then incorporate the 2nd loop for the double fisherman's knot. And try that one with the 2nd loop either to the left or the right of the first and see how different it looks.

Usage for this knot in a camping situation could be joining two pieces of paracord for a ridge line in a shelter. You're going to tie a trucker's hitch in the ridge line somewhere and this is a huge mechanical advantage so you do not want your joining of the two pieces coming apart in the middle of the night. Now lets say you're rigging up a fishing pole and using the inner strands from a 10' piece of paracord. I'd use the triple fisherman's knot here because the inner strands can be quite smooth nylon, depending on the brand, so you want this to hold tight when you have a fish on the line. With two of these knots joining your para cord inner strands, you now have one good 30' piece for casting into the middle of the creek. Also, you have just taught yourself a stopper knot. Just use one piece of rope, through a hole in your knife handle for a quick lanyard or grommet on a poncho hooch, tie a double overhand knot and you have a great stopper knot. We will get into the trucker's hitch and the stopper knots later though. You practice the double fisherman's knot and (use two different colored cords to practice) I'll teach you more later.

Scooter, your man on the inside!

The Leather Sheath:

More than Just a Handy Place to Store Your Knife!

By Glen "Spen" Stelzer



Figure 1: Nicely polished and finished edge.

Campfire conversation in my circle often turns towards gear and the many uses you can get out of a single object. As a sheath maker it's natural that the topic eventually turns to sheaths and what all you can do with them; and what to do when something goes wrong in the field. Let's take a look at a couple of alternative uses for that sheath you're carrying anyway, and some ways to keep it working when Murphy's Law hits while you're in the bush.

First off, the main concept of a leather sheath is to protect the knife from damage, and to protect the user from accidental injury. This can be accomplished with something as simple as a basic blade cover, or can end up being an elaborate work of art. In order to keep both the knife and user safe, a good sheath needs to keep the knife secure and that can be done with the use of a basic friction fit, or through the use of snaps and straps for retention. Secondly, the sheath can provide a means of carrying the knife. Depending on the type of sheath, the user can wear it on their belt, on a cord around their neck, or strapped to a pack. Ask one hundred knife and tool users and you will probably get one hundred different answers as to which method they think is the best. Our customers have come up with

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Figure 2: The same edge from Figure 1 with black sharpening compound.

many unique and highly functional methods of carry over the years!

Most people already know the basic uses for a knife sheath though, so the real meat and potatoes of this article is what *else* can a sheath be used for, and how can you repair it should the need arise? Regardless of the style of sheath, one thing that they all have in common is the edge. This is where the front and back pieces of the sheath, and the welt (or spacer) are sewn together. The exposed edges of the leather in this area are typically buffed to a finish ranging from rough to highly polished. One thing that this edge can be used



Figure 3: Using the edge as a strop to bring back the hair popping sharpness.



Figure 4: The beltloop is another area that can be used as a strop.

for is stropping your knife. You can use it as is or, for those who don't mind it, you can rub some honing or polishing compound on the edge and it now becomes a nice strop. It's not perfect, but in a pinch it will certainly bring your slightly used knife back to hair popping sharp. Anybody that has used a strop before knows that if the edge is too far gone it's not going to get the edge back to razor sharp, but it will help keep your knife from getting that way if used frequently. The rough side (or flesh side) on the belt loop can be used in the same way.

What else is a common feature among sheath types? The stitching! A good sheath will not only be sewn together, but it will also be glued. Therefore, you can remove the stitching and can still use the sheath for protecting your knife as long as you are careful! A typical sheath will have two pieces of thread that can be six feet long each. As with paracord, you can carefully unravel the thread and have very fine strands.

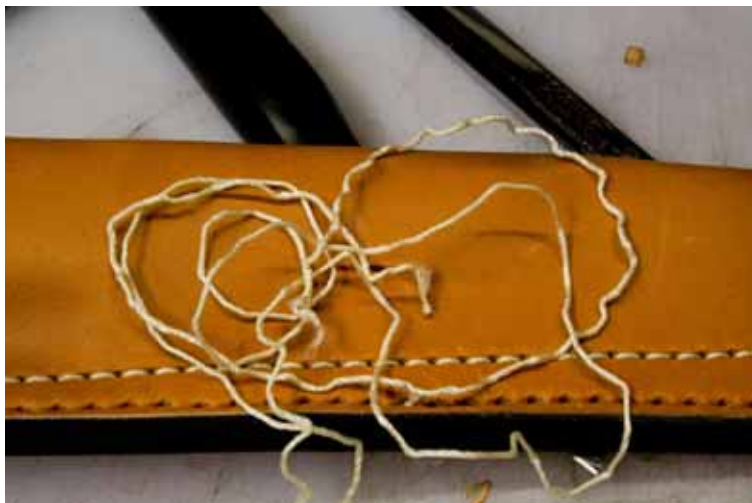


Figure 5: Unstitching a sheath can provide some essential cordage in a pinch.

These can be used for a suture if the need arises. If you don't unravel the thread, it can be used for snares, lashing, or a fishing line. Volumes have been written on the uses of cordage so use your imagination! This is cordage for those times when you don't have anything else, and it doesn't involve carrying anything else with you. It may not be your first choice, but it's something to keep in mind if you get stuck and don't have anything else available.

Now, what happens when you run into a problem with your sheath while you're in the field? Even the best made piece of equipment can fall prey to unforeseen circumstances and user error. Let's say that something happened when resheathing your knife and you slice through the sheath. Even a heavy sheath of the best grade of leather can be cut through if the knife is jammed into it at the wrong angle. One option is to



Figure 6: Further unraveling the thread will give you hair thickness strands.

repair the sheath with some of that duct tape we all have in our packs. Duct tape is a fast and easy fix for most problems and in this case it will hold the cut leather in place and should help keep the knife from slipping through the same hole again. Another option would be to wrap the cut section with paracord or some other sort of cordage. The trick here is not to wrap it too tight. This will cause the sheath to buckle and could make the cut even worse. Just wrap it tight enough to hold the cordage in place and keep the slice in the sheath closed.

Another possible wardrobe malfunction is having the belt loop come undone from the sheath. This can happen when the sheath is snagged on a tree or rock during a fall or some other scenario where the sheath is pulled violently away from the belt or pack. A quick repair for this problem is to push some paracord through the hole at the bottom of the belt loop



Figure 7: OOPS! It just happens sometimes...

and wrap the cordage around the sheath and tie it off. Depending on how your belt loop is secured there may not already be a hole present. If there isn't then you'll need to make one with the tip of your knife, or the awl on your multitool or Swiss Army knife. The sheath is already going to need to be repaired or replaced, so don't worry about adding the extra hole. The most important thing is not losing your knife right now while you're in the field! You can even undo some of the sheath's stitching and use that if you don't have any other cordage available. If you have a gear repair kit with a heavy enough needle and can grab the needle inside the sheath, you can even re-stitch it. Another option is to use some thin wire such as the type used for snares if you have any of that handy!

Another danger to your knife in the field is water and dampness. If you happen to get the leather sheath soaked from falling in the water don't dry it by the fire! This will dry the leather out and could potentially destroy the sheath. Dry the sheath off with anything absorbent as best as possible. Then allow the sheath to dry naturally. Just remember that a knife will rust in a wet sheath. So if possible keep the knife out of the sheath until it is completely dry.



Figure 8: A quick duct tape fix for the wound.



Figure 9 (above): Some paracord wrap for the slit.

Figure 10 (below): Quick fix for a busted rivet on the beltloop.



Figure 11 (above): Or some of the thread for the same fix.

Figure 12 (below): Restitching the sheath with some paracord strands.



Pathfinder Youth Organization



Joe Kellam demonstrates how to build a sustainable fire.

The Pathfinder Youth Organization (PYO) is the realization of a dream that Dave Canterbury had, to give underprivileged young people the opportunity to learn the wilderness self-reliance skills offered at the Pathfinder School, LLC. Although the PYO is not exclusive to those who are underprivileged, it is set up to provide kits and supplies at no cost to parents or others, so that all can participate.

The first sustained group was started in Cecil County Maryland by Allen Tharp. Allen gathered a group of eager kids and began to teach them the basics of survival and wilderness self-reliance. When I heard what Allen was doing I contacted him to see if I could get involved. With his encouragement, I started a PYO group of my own. Shortly thereafter Dave invited Bill Sigler to serve as president of the PYO. Ken Seal, who had a group in Florence, South Carolina, was also invited to join the core group.

Dave charged the four of us with building an organization to provide the necessary structure for such an endeavor. Although the task was daunting, we didn't have to wonder about how to begin. Dave immediately announced, on his newly formed Facebook page, an auction to raise money to purchase kits for all participants. This would allow each Chapter to have the same equipment. What occurred during that

By Dan Moore

auction brought tears to the eyes of many who witnessed it.

The items to be auctioned were things that those of us who had been following Dave on YouTube, were familiar with. These were Dave's personal items that he wore, carried or made on video. They included his Pathfinder Fleece coat, wilderness quiver, watch cap, paracord bracelet, original sling bow, BK2 knife "The Becker Train Wrecker" as he called it, and the first laser engraved Pathfinder Knife by Blind Horse Knives. Some of these items were near and dear to Dave, but none closer to his heart than the PYO. And then another item was added.

Having just won by Herculean effort, the second Pathfinder Challenge and awaiting delivery of the prize, Chris Cooper donated that prize for auction. It was a bamboo backed

hickory bow, custom made and autographed by Dave Canterbury. But the giving didn't end there. Being moved by such unselfishness, an anonymous group of Pathfinders made a valiant but unsuccessful bid to secure the bow and return it to Chris. Hearing of this, Dave offered to make another bow for Chris if the group would donate the amount they bid. They agreed and Chris received the Osage bow that Dave made in the six part series on YouTube. Other unsuccessful bids were donated as well, and it was clear that "passing on the tribal knowledge" was dear to the hearts of all.

From the time of the Facebook auction forward, the PYO has become the beloved child of the Pathfinder family at large. Many more stories of generosity and participation can be told. Some have donated personal items to be used by the kids while others have offered professional services from web design to legal consulting. Individuals with little to spare, and companies both small and large, have stepped up to offer support. Sonj Canterbury, with her wealth of knowledge and experience with charitable organizations came on board and serves a vice president. In Michigan, Joe Kellam started a new Chapter and offered to help us develop the curriculum. We welcomed his help and it soon became apparent to all that his experience, commitment and character were

a perfect fit. By unanimous consent, he was added to the Staff, which includes Bill Sigler, Sonj Canterbury, Allen Tharp, Ken Seal, Dave Canterbury, Joe Kellam and me, Dan Moore.

In order to maintain consistency and accountability throughout the organization, a PYO Curriculum and a Mentoring Program have been implemented. The curriculum begins with the basics of surviving and being found by rescuers in case someone is lost in the wilds. Signaling, shelter, fire, water, staying put and maintaining core temperature, are emphasized in Lessons 1-10. Other skills from mental attitude, obtaining food, tools and cordage are also covered. Lessons 11-30 build on these and expand into more advanced wilderness self reliance skills.

This curriculum mirrors the Pathfinder E Course, but is adapted to be taught in groups and be palatable to young kids. The pace at which a group moves through these lessons will vary. Teens and more experienced students will move quickly through the early lessons, but will soon be challenged by the more advanced skills. This curriculum is a great primer for those who want to continue on to the Pathfinder Certification course. Beyond wilderness self reliance and survival skills, participants will also learn such things as teamwork, prioritization, self confidence, awareness and many more valuable life skills.

Basic 10-piece Kits are also provided by the PYO to sanctioned Chapters. This is made possible by generous donations and periodic auctions to raise the necessary funds. Canteenshop.com has been with us from the start, providing deep discounts and donations



Joel Benn and his first campfire.

to the cause. Other companies such as Survival Resources, Habilis Bush Tools and Blind Horse Knives have also stepped up to offer their assistance.

We continue to receive inquiries from people who might be interested in starting new Chapters. There are certain things that we are looking for in candidates to start new Chapters. First of all you must have completed Pathfinder Phase One Certification. The Pathfinder Youth Curriculum mirrors the Pathfinder Phase One Course and it only stands to reason that if you are going to teach youngsters this material you would need to be certified to do so. Background checks will be required of all candidates. If you have the desire and are willing to make the commitment, a complete list of the qualifications can be obtained by contacting the PYO online at pathfinderyouth.org.

Once a candidate is accepted a mentor will be assigned. Mentors work one on one with Chapter Leaders to ensure that each group gets the full support of the PYO. Chapter Leaders are responsible to keep Mentors up to date on the activities of their Chapters. In this manner we are able to provide for the specific needs of each group, while maintaining adherence to the Pathfinder System.

We look forward to continued growth and are greatly appreciative of the enthusiastic support that we have received. You can follow the activities of the PYO on Facebook at Pathfinder Youth Organization and at our website, pathfinderyouth.org.



Dads help out as the boys make emergency shelters from heavy duty trash bags.

Dan Moore is a Military Veteran, a lifelong outdoor enthusiast, an avid canoeist and loves to teach.

The Circle of Life

By L.T. Wright

What makes this publication different? The fact that when we decided to create this magazine, our first thought was how can we do something that will bring the consumer, the advertiser and the magazine all together on the same page. Naturally, in order to bring you an informative magazine such as this, it takes both plenty of time and money to pull it off. How can we create a medium that benefits everyone involved?

The Advertisers:

As far as advertisers go, we only allow advertisers that we deal with personally or that have been recommended to us by our friends and family. We started by asking these advertisers to take a chance on a brand new magazine. They would be required to step out in faith with us, believe that we can do what we say we will do, and stand behind their decision to spend advertising dollars with an unknown publication that hopes to help put their product in front of the consumer. We also asked them to give the subscribers of this magazine, you guys, an advantage over the general public by offering you a discount on any of their products. As business owners ourselves, we know full well the hardships of running and maintaining a small business, financially as well as physically and mentally. It is always a roll of the dice when advertising, whether or not your ad will pay off for you or you were just wasting money. It is our goal to help our advertisers see reward for their risk. We in turn will do reviews on their products and ask you to support them. For this we thank all of our advertisers and friends.

The Consumer:

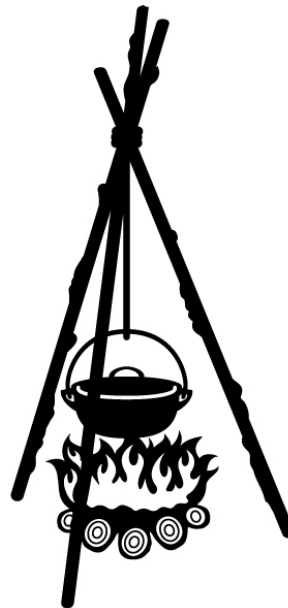
We know that we all like to get the best deal possible when we purchase anything. We are going to do our best to bring you the best magazine with the most useful tips, reviews, information, articles and advertisements that we possibly can. We realize that all of us are searching out that next piece of gear that we can't live without. Please, when making your next gear purchases, we hope that you will support the advertisers that are supporting the magazine that is

bringing you the information that you dearly love.

The Magazine:

Our goal with this magazine is to create a circle bringing us all together in one big family. It is no secret that friends take care of each other and that is what we want to create here. We would like nothing better than to share a campfire with each one of you because we know that we couldn't do this without all of you. We hope to give every one of you the opportunity to write for this magazine. There are no guarantees that it will be published, however, you have a fair shot that it will be. We will do our best to fill these pages with both informative, entertaining and useful information as well as the best gear we can get from the best companies out there. Advertisers, consumers, and the magazine; by helping each other we will all thrive and help pass on the knowledge. Thank you all for being with us.

God Bless.
L.T. Wright



L.T. Wright is co-owner of Blind Horse Knives and comes from a very diverse background and has a strong passion for knife making. L.T., along with Dan Coppins formed Blind Horse Knives five years ago. L.T. is also one of the Co-Founders of *Self Reliance Illustrated*.

The Wonderful Thing About Chiggers

By Shane Hillard



Image Courtesy Dr. W. Calvin Webourn and the Ohio State University Acarology Laboratory.

As a boy, I braved the bush with little more than board shorts and bare feet. Danger was an ever present reality but rarely registered past my boyish enthusiasm – why, I’d tangled with Taipans, fiddled with Funnel Webs and thrown myself headlong into in-numerous reckless encounters with Mother Nature. I’d consider myself more than comfortable in some of the roughest outdoors on the planet, so what could bring me, a veteran adventurer; to my knees whimpering like a babe?

Chiggers

The first day, I registered an unusual and persistent – though not bothersome itch. I thought I’d brought some sand-flies back from Ohio and laughed about it. The second day – well I awoke to a labyrinth of red welts and lumps and the itching – well the itching was enough to drive a crazy man quite mad. A visit to the ‘doctor’ left me prescribed with medication for the ‘hives’ I was diagnosed with and NOTHING that helped with the unending itch. Two days later I was ready to reduce my legs to bloody stumps, I had my shoes and socks off at work and was quite frantically scratching with reckless abandon. I thought I might lose my mind if no cure was found, and NOW. I had no clue how to solve this problem – I didn’t even

know what the problem was at first – so you can only imagine my concern when I was told I had thousands of mites burying into my flesh just to drink my blood. Turns out, the reality of chiggers is not quite so gruesome – though the itching is just as bad as you may have heard.

Facts About Chiggers

The chigger is something of a troubled teenager in that it is the larval stage of a specific family of mites, the Trombiculidae. These mites are quite similar to your average tick in terms of both their habitat and their eating habits, but their size is vastly different. Your chigger is only 1/150th of an inch in diameter which makes them invisible to the naked eye. The chigger lives in woodlands and typically low vegetation areas, waiting with its voracious appetite for a unwitting host to come along. The North American chigger has not evolved to see humans as their favored host but that doesn’t prevent the little blighters from eagerly hitching a ride and turning you into lunch. They’re quick too – a chigger can crawl from your ankles to your waist in about 15 minutes, which is quite the feat for such a small bug. Once on board they search for a tender area which makes for perfect dining and it is not unusual to find them having settled where your clothing may be somewhat restrictive – like your socks and underwear. Turns out chiggers can’t be bothered navigating such obstacles.

However, there are a few rather common and entirely disturbing chigger myths. Chiggers do NOT bury themselves into your skin. They also do NOT lay their young in your skin, die there, or drink your blood until you find some elaborate cure. Chiggers are particular about their dinner. They prefer soft, easy to bite skin for their delicate mouth parts. Once he settles on a location for dinner, the chigger bites his victim and begins injecting a digestive enzyme. This enzyme breaks down human skin and the chigger then in turn eats up the resulting human protein shake. The average human won’t notice any chigger symptoms for 1 or 2

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hours after the initial bite, but the itching symptoms progressively get worse until peaking between the 24 – 48 hours mark.

The most unusual thing? That maddening itch isn't actually caused by the chiggers themselves – it is in fact your body's reaction to their bite. When the chigger bites its human prey the body produces a stylostome, a tube formed by hardened skin cells which walls off the corrosive saliva but then serves (unfortunately) as a milkshake straw for your new pet chigger. It is the stylostome which causes the itching, reddening of the area and the lumpiness of the bite. In fact, the itching will last long after the chigger has gone on about its business, lasting until the body manages to break down the stylostome. The marks may last longer still.

Treating Chigger Bites

Here's the good news. Left untreated, chiggers will solve themselves. An eating chigger will stay with its host for 3 – 5 days until they're quite full. Then they drop off their host and grow into adulthood (they aren't parasitic after their larval stage.). They are also quite easy to remove. Because a chigger is not buried in your skin but is instead sitting on top of it, they can be removed by brushing them away with a cloth, taking a vigorous shower and scrubbing them off, or even by the hard-to-resist scratching.

Smothering yourself in vaseline, turpentine or nail polish is not recommended as you cannot suffocate them, and scratching, whilst effective; is surely the best way to get a secondary infection. In all likelihood, at the time your chigger issue is full blown, you have probably already removed the offending critters. A chigger who is removed prematurely will die and will not have a second go at you. They also do not move about your body and bite a new place. If you are absolutely insistent on treating your chiggers, you can try a number of over the counter medications though I cannot speak for the effectiveness of any.

With chiggers removed, your only hope is in treating the symptoms of the aftermath and that's actually quite simple. In my experience, however, its effectiveness is questionable. The medications prescribed for chiggers are the same as those used for treating hives – antihistamines and corticosteroids. Calamine anti-itch lotion is strongly suggested. A quick search of the internet will lead to a confusing myriad of home remedies, many of which should be avoided at all costs. It is my experience that you are in for a lot of itching regardless and you'll simply have to put up with it. Chigger itch can last up to 7 days, plenty

of time to wear down the toughest person's resolve.

Just know this – just as suddenly as they came, the itching will be gone and save for a few (hundred) red spots, you won't feel any worse for wear. There is no threat of disease from the chigger (except the East Asian and South Pacific variants), unlike its cousin the tick.

Preventing Chigger Bites.

Prevention is far better than cure in this regard and is actually quite simple. Firstly, be careful of where you venture in the outdoors. Even in their typical woods/grassland area, the local chigger population may be very hard to stumble upon. You may be beset upon by a hungry horde of chiggers whilst someone 5 feet away is left unscathed. Wearing your typical bug spray will deter chiggers and full length pants and shirts are a good idea. Once done with a day in the woods you should be sure to shower in order to not only get clean but also remove any pesky chiggers. Any gear left in their habitat for any period of time will be susceptible to wandering chiggers, so be sure to spray any packs and equipment you may have set in their home. Learn from my mistake and keep your footwear inside your shelter and far away from nomadic chiggers looking for a new home.

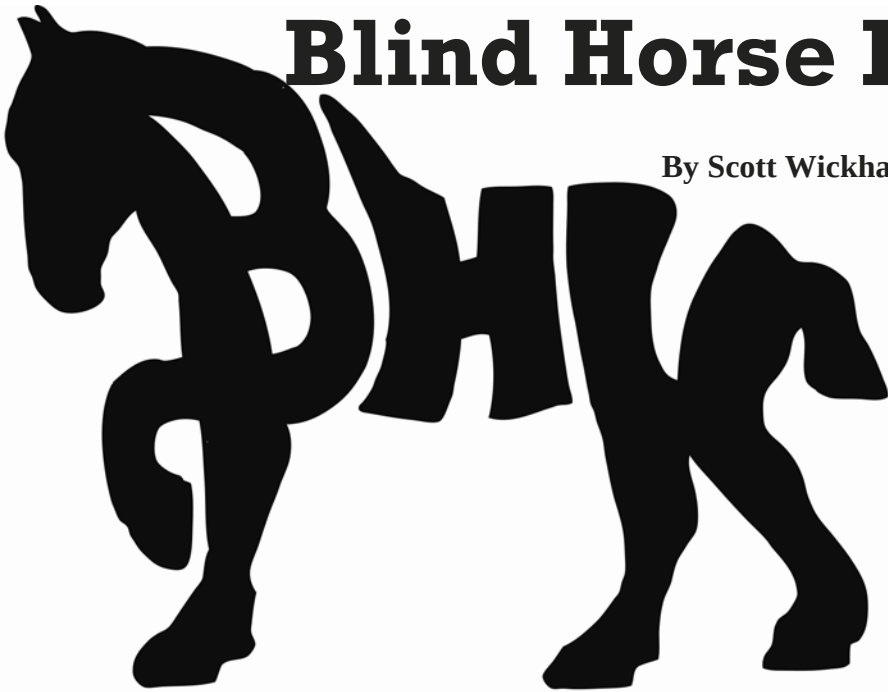
If you have found your bug spray somewhat ineffective in the past, know that chiggers detest sulphur and avoid it at all costs. Powdered sulphur is quite simple to come by and can be mixed with your favorite talcum powder to soften its pungent aroma/. Whilst smelling terrible may not be the most pleasant way to enjoy the outdoors, know that sulphur lasts much longer than your bug spray will.

I personally have found that knowledge is key in the battle against chiggers. Simply knowing that the horrible affliction would end soon enough helped ease both my frustration and unending need to scratch. It could be said there is some pity to be felt for the chigger who bites a human – they only get one meal in their larval stage and biting a human surely ends in their untimely demise. In fact, the North American chigger would much rather prey on birds and lizards and has not evolved to feed on humans. Chiggers in Asia and the Pacific Islands prefer people and there is no reaction to their bite. Most likely though you will find that a proper dose of outdoor preparation will prevent any chigger woes – full length pants and adequate footwear should always be worn and bug spray wards off all manner of pests.

I, for one, do not plan to be made a meal of again.

What's New at Blind Horse Knives

By Scott Wickham Jr.



we offered three grinds, three colors, and 2 sheaths. That was a lot of work but very successful. We hope to have another one like that in the future.

Another knife we are really excited about is the Work Horse XL. It's basically an over sized Work Horse, one of our original designs. There have only been 5 made to date but one of them is going to Iraq for testing with someone in the armed services. This could be an exciting development if they OK it for their team, we'll have some of our custom knives being used in a professional manner and really being put to the test.

Over at our Cambridge

We're always super busy here at Blind Horse Knives. There are usually a multitude of projects going on at any one time. That does give us some variety and keeps the day chugging along with different stuff to work on and build all the time. Recent projects have included special Frontier Firsts and Frontier Valley knives for some of the Western Pennsylvania friends of the NRA banquets. They are laser etched with the Minute Man logo and for what state they are going to. We also have the leather sheaths etched with the Minute Man logo. Makes for a nice little package.

We have some knives going together right now for a survival school in which Mr. Laskowski is the owner. These are a collaborative design with Tom and BHK and incorporate dual lanyard holes, big fish eye bolts, and some nice thumb jimping. Some of the knives are

getting liners to denote instructor status, others are not, indicating a student knife. Some of them are coming with one of our in-house Kydex sheath setups in a scout carry style while others are going with our hand made leather pouch style sheath. This is a fun package to work on and a very cool knife.

The monthly specials keep both shops busy a lot, too. These can be anything from a custom carver to a hunter special. We vary the design a good bit so there is always something fresh to check out. There is always a cool handmade sheath to go along with it. Lots of times we offer choices in scale color, sheath color and design. Sometimes, like the October Special were



Above: Matt Smith working up a fire steel loop.



shop they are up to their eyeballs with orders and specials and regular production knives as well. They have become so busy that two additional employees have been brought on to help out. Lon Humphrey, a knife maker in his own right, and Matt Smith have been helping make a difference and we welcome their services.

Dan Coppins, one of the owners, could have his own side business JUST making the PLSK 1 & 2 knives. These are HOT right now and demand is out weighing supply for these heavy duty bush knives. Dan's wife Judy is working 12 hour days making ALL of our leather sheaths. She is the one doing it all on these simple but beautiful sheaths and we are lucky to have her! There are others in the mix filling in and doing

above and beyond to help grow this company and they know who they are. Thanks to all our customers too: without you there would be no BHK.



Photos Clockwise from top left: John McQuain stamping the horse logo; Lon Humphrey flattening a knife; Scooter showing off again; Judy Coppins working on a sheath.

SELF RELIANCE

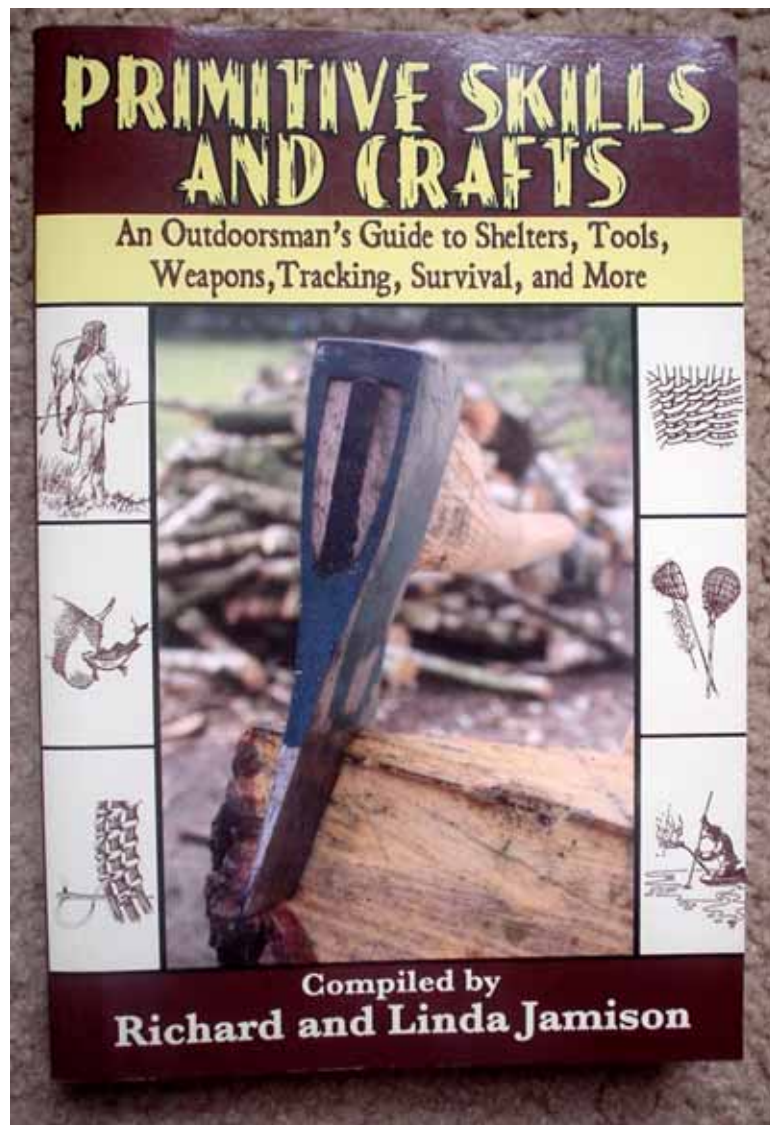
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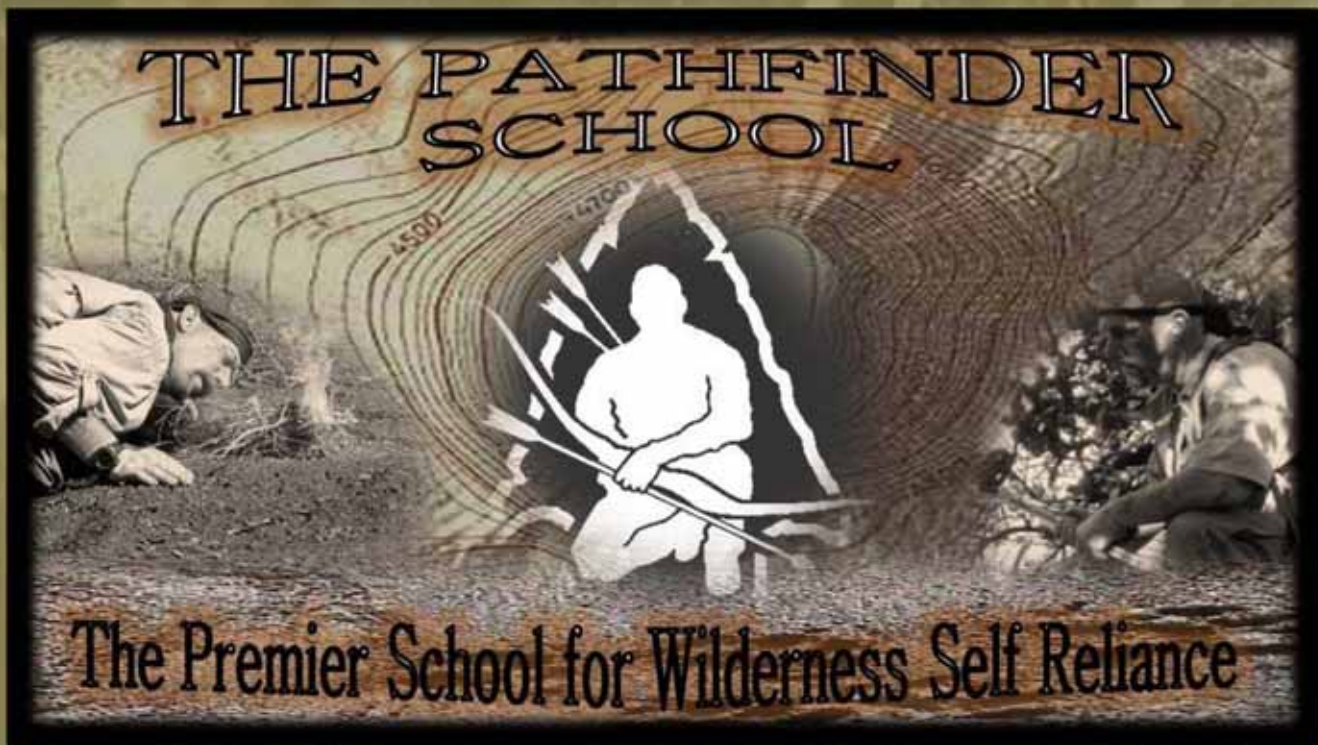
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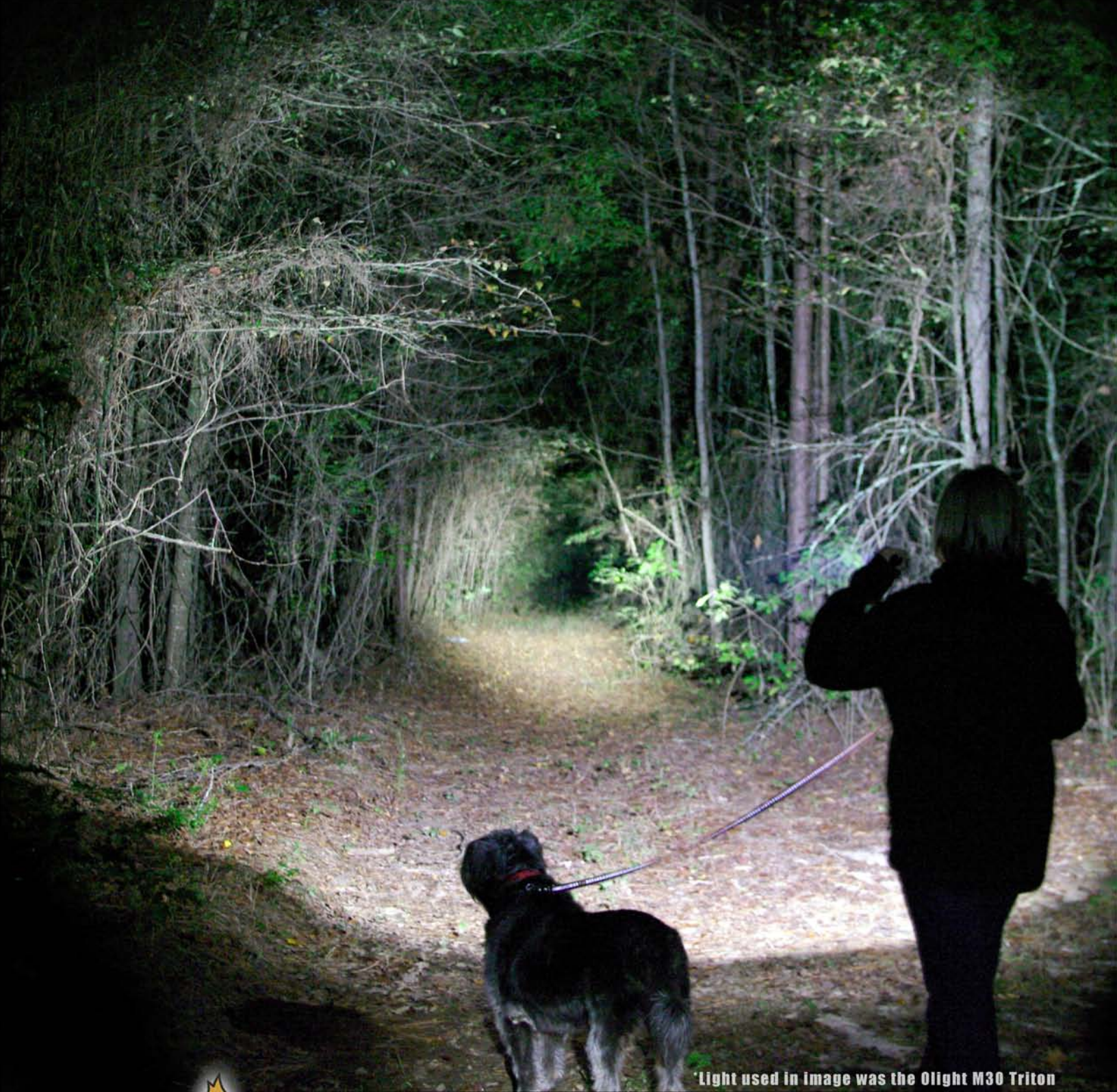
Primitive Skills & Crafts *An Outdoorsman's Guide to Shelters, Tools Weapons,* *Tracking, Survival and Much More* Compiled by Richard and Linda Jamison Book Review by Bill Bernard

In this book, Richard and Linda Jamison have both written and compiled chapters on some of the more advanced skills and crafts for the outdoors person. Much of the book talks about the philosophy and proper attitude toward living with nature. There are chapters on flint knapping, ancient fishing techniques, primitive cooking, shelter, hunting using ancient weapons, tracking, different types of basketry and pottery making, trapping techniques and a slew of uses for the yucca plant. The book is very well written, and the instruction is quite easy to follow. Despite the fact that just about all the skills are of the native American/paleo American type, don't be fooled: they are quite advanced and will take much patience and dedication to get down. The only thing I didn't see in this book was much info on water collection or purification and the only reference to fire making was the use of the fire piston. Obviously this book is one for the more advanced student of outdoor and wilderness living. It is still in print, so you can ask for it at your local bookstore.

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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.



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