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Cover Image: Ron Hood, The Woodsmaster, taken in 2010 while filming the Discovery Pilot TV Episode "Ultimate Survival" in Montana. He is wearing a Rifleman's Frock that his wife, Karen made for him and the knife on his hip is the *Hoodlum*, that Ron designed for Buck Knives.



From the Editors...

Owning Our Skills

Many people across the country, as well as overseas, are beginning to realize how important the everyday skills that were practiced in days gone by could become again. The skills that I am referring to go way beyond just that of simple things like starting fires, building rudimentary shelter, or basic navigation. I am speaking of true self reliance!

The skills I am speaking of are the ability to live off of the land as our forefathers did and to actually thrive. When I teach students the simple skills of surviving and emergency scenarios when stranded in the wilderness, I teach them to recreate the items that are most necessary to affect short term survivability. In a longer term situation of self reliance, whether during a natural emergency or a chosen off grid type lifestyle, the skills you will need become much more complicated and vast. The things we take for granted most, like disposing of human waste, become very important when the crisis goes from short to long term. Construction of a long term latrine or composting toilet can be a realistic skill needed for this situation. Preservation of available food whether it be harvested, grown, or a procured meat source would be another critical skill. Not to mention obtaining large amounts of water and creating a system to collect and disinfect it. In truth, the skills needed for long term use are not different in concept but more complicated in variation. We still need tools, heat, cover, containers, and cordages. We still need water, shelter, and food. The problem becomes how we accomplish these tasks in a longer term situation. Things like blacksmithing, gardening, canning, smoking, composting, managing livestock, and creating containers (like baskets or clay pots) could all be very useful skills to at least have a firm understanding of in their most basic forms.

Obviously, we need to become a “jack of all trades” so to speak. That is where the idea of owning these skills becomes the key. We need to practice these skills just as we would any others. You don’t have to live off the grid in the middle of nowhere in a complete solar powered home or log cabin to practice skills. Most of us could grow a small garden in a window sill and practice planting, growing, and harvesting techniques. We can buy fresh processed meat from a local butcher and practice preserving that meat on our next family camping trip. We can buy fresh vegetables and practice jarring and canning methods. The point of this discussion is that we must continuously practice any skill because most of them are perishable or forgotten over time. The other reason to practice until a skill is owned is so you have already gone through the trial and error phase of learning prior to dependency on the skill to live. By reading periodicals like this one and others you can get ideas from fellow survivalists about the skills that interest you most and get some insider information before starting out. This way you may acquire a basic handle on the concept before jumping in feet first. It is our aim with this periodical to showcase various self reliance skills in a way that has not been done before. We hope to provide you with a wide range of information and shared experiences so that we can all pass on the tribal knowledge.

Dave Canterbury



Mission Statement

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

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

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

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

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

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Ron Hood, Rest in Peace

By Steve Davis



On June 22nd a son lost a father, a wife lost a husband, and the world lost the Woodsmaster. Ron Hood departed this world after a battle with cancer and coronary artery disease, passing on after a heart attack. Ron was largely responsible for bringing the skills of our ancestors back to light through his award winning instructional Woodsmaster series. He further contributed with his numerous articles and television works. Some have referred to Ron as the “King” of the survival world and I would have to agree.

Ron was born on January 13, 1944 to Delos and Lucille Hood. He served in the U.S. Army ASA from 1964 to 1967, including two tours in Vietnam and a stint in a remote outpost in Turkey. After his service to our country he completed his MS and doctoral studies at Pepperdine University. He went on to teach the first accredited wilderness survival course at UCLA. For twenty years he taught the skills to hundreds of students. During this time he also met his wife Karen. He retired from “twenty years of bug eating at the university” to take a job in the L.A. county jails. Running a drug rehab program for maximum security inmates he says “The jails had a kind of noise that affronted my values” so he moved on. Ron took a job working for a magician where he managed his business, contracts and helped film their how-to videos.. Ron and Karen purchased a video camera and The Woodsmaster Volume 1, Spark Based Firemaking, was created. Twenty volumes of The Woodsmaster would follow as well as Cave Cooking and The Urban Master series. Soon

to follow would be survival.com, the Hoodlums forum, Survival Quarterly Magazine and his own survival line of knives at Buck Knives. Ron and Karen also have the light of their life, seven year old Jesse, and celebrated their twentieth anniversary in May.

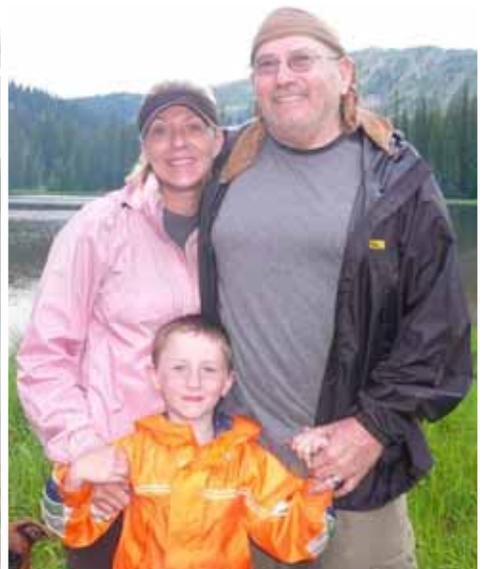
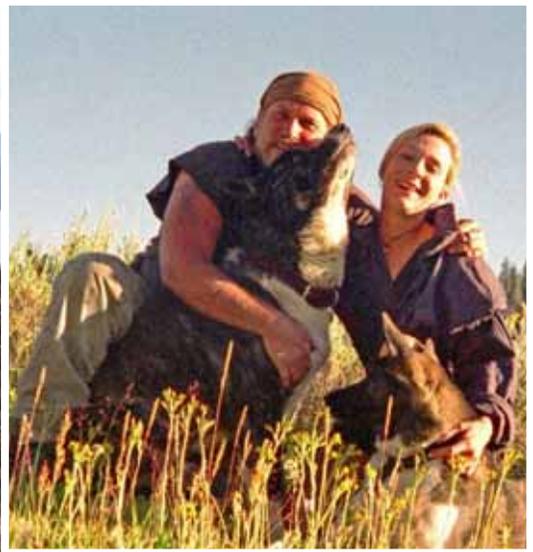
I met Ron in person for the first time at an event in California. We were introduced by a mutual friend and I was nervous. I couldn’t believe that I was actually talking with Ron Hood. Star struck, no. Meeting a man that I looked up to and admired, yes. Very quickly my nerves were put to rest by his down to earth, regular guy nature. Through the next week I would spend hours listening to his stories and wisdom. He was more than happy to sit and talk about life in general, not just survival. One of my favorite memories involves a piece of gear I was working on at the time. I asked Ron to check it out and give me his opinion. We grabbed my project and a couple Marines and headed to a secluded spot. After an hour of abuse my gear lay in ruins. Ron explained what I needed to do to fix the problems in a genuine and honest way. If you didn’t want an honest opinion, you didn’t ask Ron. This is what I really liked about the man, he was real. Not just a guy on the TV screen. Following this event we would talk by phone or e-mail on occasion. The last I talked with him was after the Blade Show in June. If I would have only known what was to come, I would have expressed what his friendship meant to me. I will miss you Ron Hood. Long live the King!

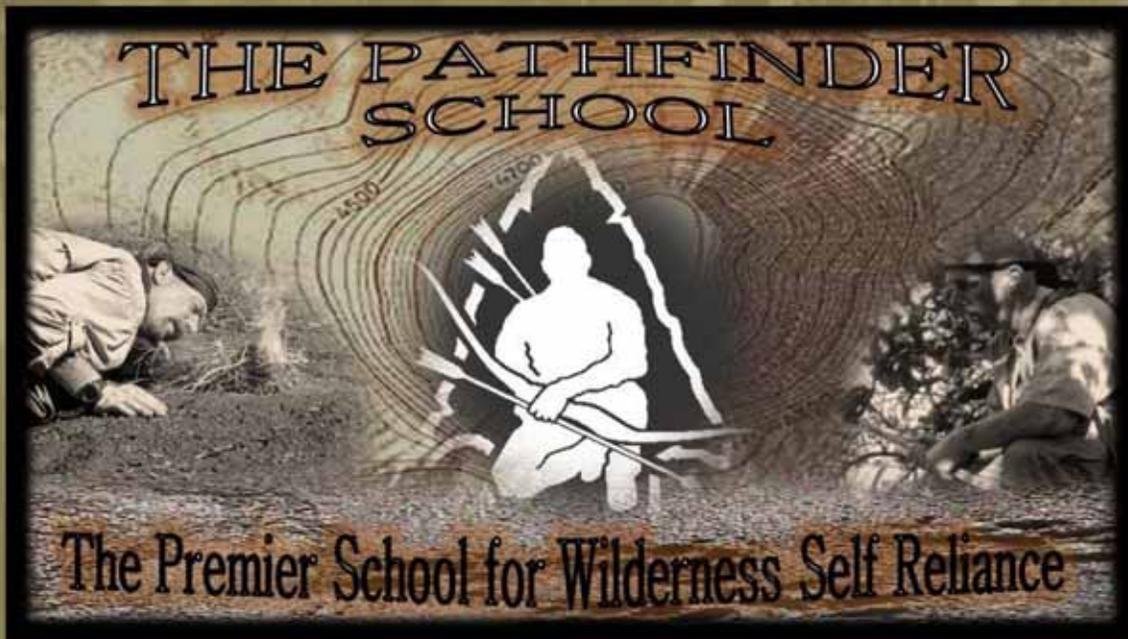


Everyone at SRI was deeply saddened by the news of Ron Hood’s passing. Ron was a huge inspiration to all of the staff and was the reason many of us went into the woods in the first place. We choose to dedicate this issue of Self Reliance Illustrated to not only Ron, but also his wife Karen and their son Jesse.

If you would like to help, please make a donation to the Ronald D. Hood Memorial Fund. Online donations are accepted at <http://survival.instantestore.net/pd-donation-ronald-d-hood-memorial-fund.cfm>. Any help you can give will be appreciated and will assist them as they deal with their loss.







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.

The Pathfinder Gathering: Great People, Teachers & Nature

By Payge McMahon



The Camp

If you haven't been to a Pathfinders' Gathering you need to find a way to go! It is a fun, family friendly event, full of learning, community, camping, and all around awesomeness!

Over five days in June, hundreds of people from all over the United States, Canada, and England attended Dave Canterbury's Pathfinders School Gathering held at Rocky Fork State Park in Hillsboro, Ohio. The intimate setting on a beautiful lake front cove that was surrounded by woods was the perfect place for everyone to set up camp, to learn, and be a kid again. There were lots of things to participate in each day. You had your pick of wilderness learning classes and workshops held under the main pavilion. Fun survival challenges for all ages included tomahawk, spear throwing, fire making, and scavenger hunts. Every night a Gathering family dinner was followed by campfire stories and music.

The Classes

Some of the best wilderness survival instructors in the world came to share and pass their

knowledge along. John McCann, owner of Survival Resources and author of "Build the Perfect Survival Kit" a must read for any outdoor enthusiast, taught multiple classes with his equally talented wife, Denise. Mixing knowledge with humor, he made it fun and easier to learn the complexities of compass navigation. His demonstrations on emergency signaling, showing decibel and visual penetrations of various whistles and mirrors, and setting up a smoke signal fire were enlightening.

Pathfinder School instructor Dave "Mitch" Mitchell, a guru on wild edibles, did a great presentation on pine and its nine edible components. White water rafting and rock climbing guide Kenneth Dingsor helped everyone learn about improvised repelling in his ropes demonstration. One of my favorite classes was Joel Kelam's class on

Payge McMahon is an adventure athlete, world traveler and journalist. She is the 'country girl-next-door' from Pennsylvania with five older brothers and only a few generations removed from being Amish! Like her FB fan page: www.facebook.com/paygemcmahon and follow her adventures at: www.turnthepayge.com





Campfire

tracking. In addition, Rob Simpson discussed water purification methods and canteen cooking, Deron Wilkes did wilderness first aid, Alan Halcon taught basic and advanced fire making. Sean Mulhall, from England and also known as the “Silver Fox”, built a debris shelter along with Steve Davis who discussed

natural camouflage. Jamie Burleigh had dozens of people all weekend making their own primitive bow and arrows. It’s a lot of work and well worth the effort seeing everyone’s big smile when they shot their first arrow.

As a guest instructor and an adventure athlete who has backpacked all over the world, I spoke about the importance of incorporating wilderness survival learning into my trips and life. I also discussed what it is like as a female and some of the challenges we may have out in the wilderness. In the end, all things are equal if you want to survive. Women, as in everyday life, need to make themselves strong, knowledgeable, and self reliant!

The Women

The PF Gathering isn’t just for boys! There were a bunch of women who came because they wanted to learn some new skills and NOT because they were tagging along to amuse a man in their life. These women rock!

Raven haired beauty, Maria De La Sierra, originally from Miami, was the one who suggested to her husband they go. A longtime outdoors woman and Girl Scout Leader, she may wear lipstick in the woods, but knows how to clean a gun and camp!

Then we have Michigan outdoor guide and

Left: Darren, Angel & Zion Hull





Dave Canterbury talking

hunter Kellie Nightlinger (upwideadventureguide.com) who came by herself to meet and learn with the PF family. She participated in everything and spent hours making her own long bow and arrows.

Karen Taylor, from Connecticut, came with her husband Matt. Five years ago when Matt got into the practice of wilderness survival it peaked her interest. Though not a fan of tent camping they compromised and bought a pop-up camper. Now they travel around the country attending various outdoor events and spend more time together.

The Kids

It was great to see so many kids running



Jake Hobbs, 11 years old, shooting a long bow.

around. Sharing and learning how to make fire with bow and drill, ferro rods, throw a tomahawk and build debris shelters, all in a safe and controlled environment. Some came with their parents, others with grandparents, aunts, and uncles.

Darren and Angel Hull from Chawsville, Virginia brought their sons six year old Zion and fourteen year old Cody. The loving couple beamed with pride as they watched their kids pick edible berries and take notes from John McCann's navigation class. This was Angel's first time at one of the Gatherings and it won't be her last. She initially got interested in learning wilderness skills from her husband, Darren, a big fan of Dual Survival. It made her think about our ancestors. Angel says, "*How did our great-grandparents do it?*" (Canning, hunting, trapping, building shelter, making



Randy Hankins with his granddaughters Casey and Lydia.



Left: Ryan "Tank" Davis and Payge McMahon discussing his new chair

Gathering. She likes camping out and meeting new people. Her favorite class was making fire with a hand drill. What was her biggest surprise? Meeting 'Dual Survival,' Dave Canterbury himself. *"He is so nice! I really didn't think he knew as much as he does, but he knows everything!"* She says with a smile. I had to laugh at that one. I love kids and their honesty!

Blake Glasgow, another 13 year old, came with his aunt and uncle Chance and Laura Sanders. Taking advantage of his newly minted fire making skills, I had him make a fire and boil some water for me to make my Mountain House Blueberry Cheesecake.

The Shopping

Another great thing about the Gathering was the shopping! Sponsoring vendors set up products selling all things camping and wilderness survival including; knives, bush tools, books, canteens, paracord belts, various fire making instruments, tarps and signaling devices.

Vendors included; Pathfinder School LLC, Self Reliance Illustrated Magazine, Blind Horse Knives, Canteen Shop, Survival Resources, Habilis Bush Tools, JRE Industries, Shark Tac, Blind Horse Outdoors and Forest Ridge Photography.

clothes, identifying nature's food and medicines) *We are two and three generations removed and the knowledge is almost extinct. We need to reintegrate these skills into our families.*" Darren laughs, and with pride, says *"friends are always telling us if anything ever happens, a natural disaster or whatever; we are coming over to your house!"*

13 year old Casey Barner and her sister Lydia came with their grandfather, Randy Hankins. Casey, going into eighth grade and who likes gym and history class, said she wanted to come to the



Kellie Nightlinger working on fire making techniques .



Left: John McCann & Smoke Signal Fire .

allow him to wonder into the woods. So Dave being Dave, contacted a company called Action Trackchair www.actiontrackchair.com, who specialize in making the “Ultimate, All-Terrain Off-Road Wheelchair.” He then set up a massive on-line fundraising campaign to help pay for the chair and afford Ryan the opportunity to play in the woods. Thanks to everyone’s support, Ryan was presented with his off-road wheelchair at this year’s PF Gathering. And like any kid with a new toy tested it out. He was able to roll over logs and even pull an eighty pound canoe out of the lake. I’m not sure who had

more fun seeing what the new chair could do Ryan or the rest of the guys!

Overview

Dave Canterbury’s PF Gathering is a fun, family friendly event in a great learning environment. It is a must attend for anyone interested in the outdoors. Whether you are a hardcore wilderness survivalist, hunter, backpacker, rock climber or mountaineer, learning bushcraft and survival skills is important. Like the saying goes, “It wasn’t raining when Noah built the ark.” Be prepared, be self reliant!



The Community

There were so many interesting and inspiring people at the Gathering. One of them was wilderness weight loss sensation, Steven Staten. Several years ago Steven weighed 364 lbs and was a Type 2 Diabetic. He decided one day he had had enough. Not one for the gym, he started hiking in the wilderness and like Forrest Gump, kept on hiking. A year and a half later, he had lost 120 lbs! Amazing! Steven then turned his passion for being in nature into a successful business and is now the proud owner of Habilis Bushtools.

Then we have Ryan “Tank” Davis, a fun loving full-time student at Memphis State University, with a kick-butt wheelchair Robocop would be proud to use. Ryan was born with a rare nerve disorder called CMT (Charcot-Marie-Tooth) which affects his ability to balance and walk. He hasn’t let that stop him from enjoying life and pursuing his passion for the outdoors. Skilled in all things bushcraft, he can start a fire with the best of them!

Ryan was one of Dave Canterbury’s loyal YouTube fans before Dual Survival and attended his first PF Gathering in 2010. At the time he only had your standard wheelchair. Great on everyday sidewalks and flat surfaces, it didn’t



Right: Sean "Silver Fox" Mulhall from England and his debris shelter.



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Personal Water Filters

By Michael Henninger



The Seychelle Water Straw Advanced provided by FlashlightOutlet.com.

As we all know, water is one of the most important aspects when it comes to a survival situation. But more importantly, you need water every day to live and be happy. As the world expands and the quality of our water supply diminishes, people are forced to deal with poor water quality everyday. Personal Water filters fill a very important need. Personal water filters come in a variety of styles and applications. A search of many of the advertisers in this magazine will net you more choices than you can sift through. We will be taking a closer look at the straw style that is great for everyday use, travel, and survival kits.

The great thing about straw style filters would also be considered to be one of their drawbacks by others. These are designed to be truly personal water filters. You can't share them with a friend or make a bottle of water to drink all day. The only way to get water out of the straw is to suck. But their portability lends to their convenience. They fit into a pack, purse, pocket or biner to a belt loop and are ready for action with a twist of the lid. The straw is food grade plastic, so no worries there.

The filter featured in this article is the Pure Water Straw Advanced by Seychelle, and was provided for review by Flashlight Outlet.com.

When Mike isn't running the best magazine in the world, he is hiking with his dogs or mountain biking with his wife. He loves being outdoors and would much rather be in a tent than just about any place. He is also a member of the Fort Pitt Land Rover Group and can eat with chopsticks.



Above: The straw is light enough to carry everywhere.

Below: Before and after using the Seychelle Water Straw Advanced..



Seychelle describes the Pure Water Straw as, “Compact, easy to use and truly versatile in its attractive carrying case; ideal for everyday use; put in your pocket, purse, briefcase or car glove compartment. Advanced filter removes virus and bacteria to four logs (99.99%).” The Seychelle Straw is a lightweight compact unit weighing in at 12.5 oz. I found it very easy to pull it out, use it, and stow it. One of the nicest features of the Advanced model is the pre-filter housed in the small canister biner’d to the filter. It can be added to the system by unscrewing the bottom end and inserting it for really dirty water or heavy particulates. It is not needed for every day use.

A little research on the company found me equally as pleased as the water filter. To date, Seychelle has sold over four million filters. They are in use by people everywhere - campers, hikers, bikers, police, UK Supreme Commandos, U.S. Marines, missionaries, disaster relief and aid workers, humanitarian groups, and just every-day people who want to insure that the water they drink is great-tasting, clean, and fresh!

I have to admit the directions that came with the unit were helpful for installing the pre-filter but that was about it. The straw is not difficult to use and can quickly be sorted. After a use or two, the loose carbon was flushed out and the taste was gone. You just pull open the spout on the bottom, unscrew the cover to expose the bite valve and drink. Seychelle claims that you can drink up to 25 gallons of water before needing to replace the straw. At a price of \$16.95, you won’t be hurting your wallet either.

My only other complaint was the filter cover that came with the unit. I pretty much destroyed mine within two uses. I ripped the bottom pulling it off and ripped the top off putting the filter back in the case. Aside from the case and the directions I was genuinely impressed with the filter. Anytime I found dirty stagnant water, I took a sample and drank it through the straw. Every time the water came out clear and tasted chemical free. After two weeks of constant use, I can say that the water still tastes fine and I am pretty close to the 25-gallon limit.

According to Seychelle, they utilize a 4-step filtration process that begins with attacking the dissolved solids. This includes the heavy metals, asbestos, copper, lead, and mercury. The next level of filtration removes chemical components, which are a bunch of scary sounding abbreviations like VOC, PCB, THM, SOC and DDT. None of which I



The Seychelle Water Straw Advanced from Flashlight Outlet.



The business end.



The Pre-filter installed.



The Seychelle Advanced with pre-filter and cover.



The bite valve with its water proof cover.

want in my water! Moving up the filtration scale is the microbiological, the pathogens. The fourth and final level handles the aesthetics like taste and odor. All Seychelle filters feature a media called BIOSAFE and they are the only filtration company permitted to use it. BIOSAFE is an effective antimicrobial polymer that physically disrupts the target organism's cell membrane. It basically pops the bad stuff in the water making it safe to drink.

Most of my previous experience with water purification has been with the tablets, which gave a nasty chemical taste, the pump filters, which take time and have to have a specific depth of water to work, or boiling which leaves you with warm water. All three methods take time and planning. Your water source has to be planned and your water prepared. When using the Seychelle Straw I would grab a bottle of water when I found it and when I was ready I would get the straw out and have a drink. Simple and easy! I was even able to drink directly out of a puddle on the trail and as they suggested on YouTube... the toilet.

The straw performed admirably in all situations and other than the cover I have no complaints. The pre-filter was easy to use and store. I chose not to keep the pre-filter on the biner provided. I kept it in my bag but kept the filter on my shoulder strap so it was easy to get to. I found I could just unscrew the cover, use the straw, and return it.

I would suggest a personal water filter to anyone for a number of reasons. They are great for anyone who travels, as much as I enjoy using the

excuse of drinking beer because the water is not safe. Every survival pack and bug out bag should have one without question. Finally for a personal reason, I like being able to reduce my dependence on bottled water when I am away from home.



Above: The pre-filter is ready for use for the really dirty water.

Below: Dirty water is no match for the Seychelle Straw.





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Q: We are getting too reliant on GPS. What are the easiest ways to tell direction without using a GPS or compass? – Greg, NJ

A: I totally agree! Even driving, when was the last time anyone looked at a map versus plugging in directions on their GPS or reading what they printed out on MapQuest? While it may be easier in the short term, these modern conveniences are making our society dependent and ignorant.

Now that I am done venting... there are four basic ways to identify direction.

Daytime:

1. The Sun = Rises in the EAST & sets in the WEST

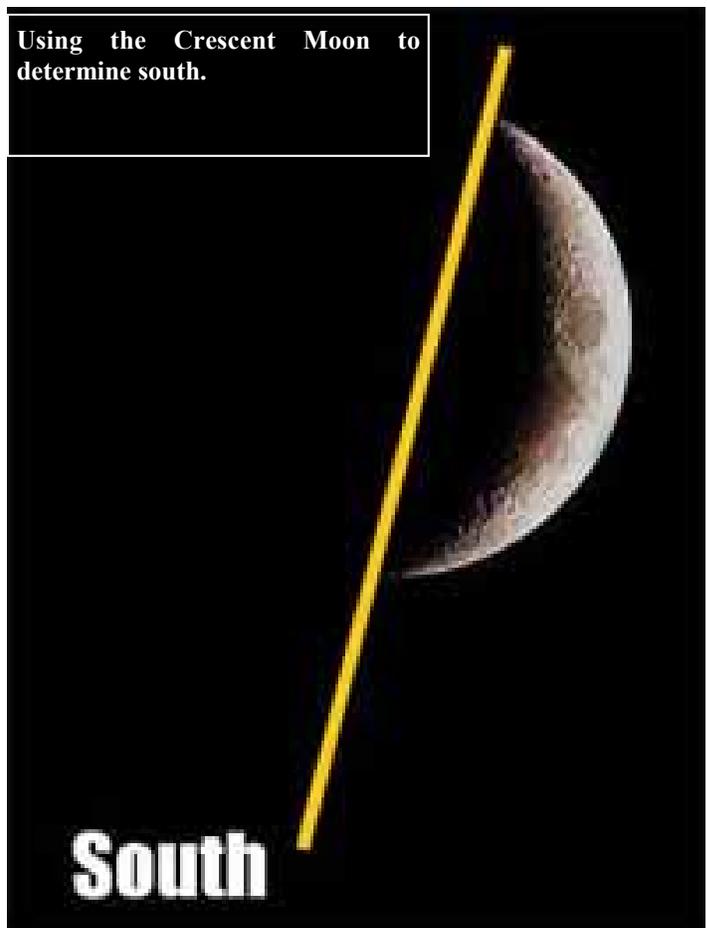
2. Shadow-stick method (Sun Compass): = Place a two foot or longer straight stick in the ground. Locate the shadow. Place a rock, or something distinctive, at the tip of where the shadow lands. Every half hour or hour, place another rock/marker at the tip of the shadow. After several hours, draw a line connecting the markers. You have now identified your East-West line. Draw a vertical line down the middle and you now have your North-South Axis.

Nighttime:

3. The North Star (Polaris) = It is the handle of the Little Dipper. Note: contrary to childhood belief, it is NOT the brightest star in the sky. The

easiest way to find the North Star is to look for the Big Dipper. Identify and line up the two vertical stars on the right side of the Big Dipper's bowl and look up. They will line up and with the handle of the Little Dipper. This will give you True North and NOT magnetic North. On the ground, make an arrow with sticks pointing towards the North Star. It will help you in daylight.

4. Crescent Moon = When you have a Crescent Moon in the sky, draw an imaginary straight line from the upper to the bottom tip and keep going down to the horizon. This will indicate south.



Using the Crescent Moon to determine south.

South

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

Payge McMahon is an adventure athlete, world traveler and journalist. She is the 'country girl-next-door' from Pennsylvania with five older brothers and only a few generations removed from being Amish! Like her FB fan page: www.facebook.com/paygemcmahon and follow her adventures at: www.turnthepayge.com



Q: What is the best way to handle my period when backpacking? – Mary, TN

A: Ya’ll are big boys so don’t cringe. How many of you have daughters, girlfriends or wives? This is a good question friends.

The monthly bill, Aunt Flow, moon-cycle, or whatever you call it, ‘it’ is something you can count on anywhere and anytime.

It is generally agreed that pads, while multifunctional in the first-aid department for lacerations, are bulky and messy. In sticking with ‘Leave No Trace’ rules, like pads, tampons should be carried out with the rest of your trash. Tampons are less bulky and messy while being effective. That being said, you must be sure to change them at least every six hours to avoid Toxic Shock Syndrome.

Another alternative to the above is the reusable Keeper menstrual cup. It is a rubber gum cup with a tiny stem and when inserted properly, fits on your cervix and gathers menstrual blood. The easiest way to insert it is to bunch it up and hold the stem with your fore finger and thumb. The cup holds one ounce of liquid and can be emptied and rinsed as required. Most women release two to four ounces of menstrual fluid over the course of their entire cycle therefore the cup can be safely inserted for a longer time than a tampon. The Keeper can be used over and over again for up to ten years. It retails for \$112. Sure it seems like a lot more money than buying a \$6 box of tampons every month, but over the course of 10 years, that’s \$720. Plus, you are having less of an environmental impact without using all those cotton tampons with applicators.

If you DON’T have any of the



Keeper menstrual cup.

aforementioned, you will understand completely where they came up with the term, “on the rag.” That is what they did back in the good old days before pads and tampons. I would recommend cutting a bandana in half (or a cotton shirt to the same size equivalent), fold it up and use one half as either a pad or insert it like a tampon, or do both. You will have to wash them out frequently.

Q: How do you identify venomous snakes? – Steve, CA

A: I am going to answer your question focusing just on North America as there are over 2400 different kinds of snakes in the world, with 400 of them classified as venomous.

According to the CDC (Center for Disease Control), there are four venomous snakes in the United States; rattlesnakes, copperheads, cottonmouths/water moccasins, and coral snakes.

The most common features of these snakes (excluding the coral snake) are: a triangular-arrowhead shaped head, a sensory pit, or hole,



Above: Coral Snake

Below: Scarlet King Snake



between the snake's eyes and nostrils, catlike, vertical-elliptical shaped pupils and a single row of scales on the underside of the tail.

The coral snake is known for its distinct color pattern of red, yellow, black, yellow. In addition, it varies from the above rules of thumb because its pupils are round, lacks sensory pits, its underside has two rows of scales and its body is much smaller around and in length.

Non-venomous snakes like the scarlet milk snake and other king snakes are often confused with the venomous coral snake because of their similar color and patterns. The easiest way to remember the difference is the old saying: "Red touch yellow will kill a fellow; red touch black won't hurt Jack."

For more information check out: <http://www.cdc.gov/niosh/topics/snakes/>

Q: What is backcountry etiquette?

A: There are many rules to follow. Please be sure to review them with all hiking partners before you leave on your adventure.

- Pack it in, pack it out!
- Use existing sites and tracks, minimizing damage to the natural environment
- Never take wood from standing trees
- Respect fire bans
- Build campfires where possible in designated areas
- Always make sure fires are extinguished before leaving your site
- Don't drop cigarette butts, burn them or take them with you
- Only burn materials that will leave no trace, no bottle tops and plastic
- Respect local wildlife, do not feed or intimidate the animals, remember it is their home, not yours
- Stay on the trail. Do not cut switchbacks or take shortcuts
- Stay to the right on wider paths
- Pass on the left
- When overtaking someone, let them know you are approaching and will be passing on their left. You may hear a biker call out, "On your Left!" as he comes up from behind. That means you should stay to your right.
- Whenever you take a break, move off the trail to free it up for others. When possible, get off on a used area or a durable surface such as a rock or downed log. Don't just trample off the trail into a nice soft field of grass and flowers.
- Hikers going uphill have the right of way.
- Greet people you meet. A simple "Hi" or "Nice Day" is fine.
- If hiking in a group, yield to single or pair hikers. It's harder for a group to get off the trail so often times singles will stop and let you all pass, but it's their call.
- When hiking in a group, review backcountry etiquette. Hike single file or take no more than half of a wide trail.
- When hiking in a group and you are moving at different pacing, one person or persons going ahead of the others, agree on a meet-up place. NEVER leave the trail to get water or use the bathroom without those behind you knowing you are doing so. Drop your pack by the trail to indicate you have stopped.
- When using the bathroom, do it at least 100 feet away from any water source and pack out your toilet paper.
- If you are going #2, dig a hole at least 6 inches deep and bury your waste. If a park service requires a WAG back, pack it out!
- If the park required a bear canister, buy or rent one. Use it! Keep all food, trash and toiletries (even toothpaste & deodorant) inside it at night. Hide canister 100 feet away from tent.



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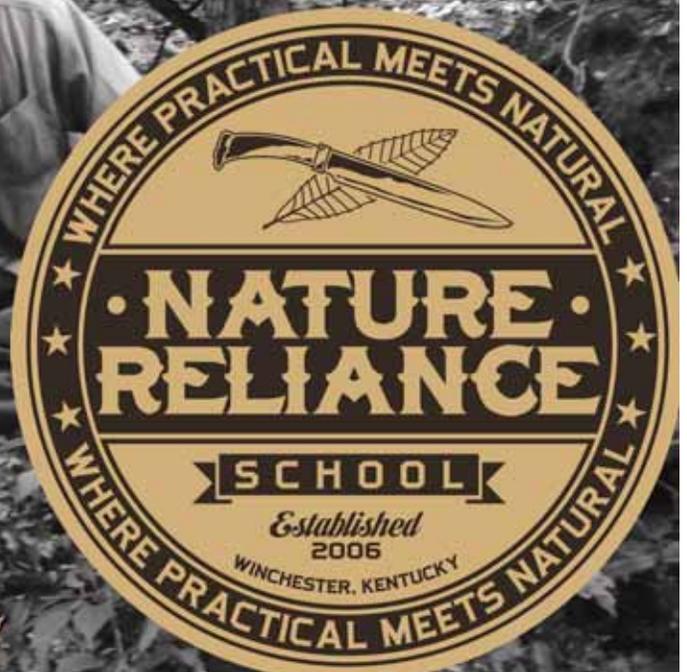
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Flint and Steel Fire Makin'

By Craig Caudill



Above: Photo 1, Flint piece with an edge that is too thin.

Below: Photo 2, Flint piece with an edge that is too dull.



Photo 3, Flint piece, "just right".

One of the easiest and fun ways of getting semi-primitive fire is to utilize the flint and steel method that was so commonly utilized by the frontiersman and pioneering families of early America. There are three main pieces of this fire making puzzle and we are going to cover the materials of each as well as the various methods of working them together to obtain fire.

The first piece to this fire making puzzle that we will discuss is the flint and other useful rock material such as chert. Flint can be found throughout the world but obviously some places are better than others. As for locating and or finding it, one of the best places to go looking is in a creek or river bed or along other drainages where most, if not all, of the

earth has been washed away and there is ample amount of rock exposed. The actual names of the types of flint are varied and by talking to any good flint knapper you will find they have a wealth of knowledge to educate you on the subject. Do not expect to go out and find copious amounts of ready-to-strike flint. This is where it pays off to have some basic skills in flint knapping yourself or to have a good flint knapping buddy that gives you plenty of leftover rock. If you intend on doing it yourself, which is what I recommend, this invaluable skill will allow you to be more self-reliant. To make a good piece of flint for striking, you must first break off a smaller piece of flint. You will break this off from a large flint rock which is otherwise known as a flint spall. Do this by "hammering" the spall with another rock that causes the larger rock to break. You will often have pieces of flint when doing this that range in size from tiny fragments, up to pieces nearly the size of the flint spall itself. What you are looking to obtain with this process is a piece of flint that fits in

Craig Caudill is director of Nature Reliance School located in Central Kentucky. NRS specializes in helping people learn basic self-reliant skills including survival, land navigation, tracking and edible/medicinal plants. Craig's good flint knapping friend, and director of primitivearts.org, Jon Moore was an invaluable resource for this article on all topics related to flint, chert and other related material.





Photo 4, Pathfinder Blanket pin striker on the left, basic striker on the right.

the palm of your hand and is in the neighborhood of one-half of an inch thick. What you also are looking for is a piece that has an edge to it but is not too sharp. (See photo 1). A piece of flint that has an edge too thin and sharp will often times simply break away when it is struck with the striker. On the other hand, a piece of flint that is too “dull” will not give you the needed edge to “slice” off tiny slivers from the steel striker. Once you do this you can get the piece you want and carry it with you. Personally I try to keep an almost finished spear point in the flint and steel kit that I carry, so that it can easily be knapped into something useful such as a cutting tool if the need arises.

The next piece of this puzzle that you need is the flint striker itself. You will need to utilize a piece of high carbon “tool steel”. You will most certainly not get the desired results from stainless steel. Steel strikers come in all shapes and sizes and are basically left up to the imagination of the blacksmith who makes it as to how they appear. Photo 2 depicts two basic kinds of strikers. The one on the left is one that we purchased from the Pathfinder store and are really fond of, mainly because it serves more than one purpose in our kit. It

is blanket pin, a leather/material awl, even a belt buckle if you choose, and the obvious usefulness for our purpose here, a flint striker (check out Dave Canterbury’s YouTube video on the subject to see him demonstrating its many uses). The flint striker on the right is another very basic model that is very common. Also keep in mind the need to “use what you have” and use what you can find at the time. Any kind of high carbon steel will do including something as simple as the back of your knife or a



Photo 5, Tins for making char cloth in the fire.



Photo 6, striking with char in tinder bundle.

steel tool that may be around at the time such as a file or center punch.

The last piece of this fire making puzzle is not a required piece to get sparks, however it will prove to be an invaluable tool to take those sparks to a tinder bundle and get the beginnings of your fire. This last piece we are speaking of here is char cloth or other char material. An in-the-field natural option for this, but an unreliable one, is to find an old fire pit or a tree struck by lightning and pull out or off of it a piece of burnt, natural material and make sure it is completely dry. Again this is unreliable and we recommend you make your own. You are in essence



Photo 7, striking with char on piece of flint.

going to take material and burn it until it is nearly consumed by fire and/or heat, but not entirely. Think of this material as being an extremely thin piece of charcoal. It is important when making char cloth that you only use natural materials such as cotton, hemp or even dried grasses or tree bark. Typical material that you can find around the house that seem to work well are cotton t-shirt, denim from worn out blue jeans, or old flannel shirts. No need to buy material for this purpose, simply use those old clothes that have already found their complete usefulness and are about to find their way to the trash. Again, it is worth emphasizing it, you should not use material that is man-made. Only use natural materials. Man-made materials have synthetics in them (think polyester) and will simply burn and melt in the next process we will describe.

To make char cloth you need to have a metal container to hold some of this material. Photo 3 depicts a metal container on the left that is made for this purpose and another version on the right that you can make from common household trash. Put your natural material into the container and place the container into an already made fire that has plenty of coals. Yes, this is one of those pieces of your kit that must be made before you need it and carried with you. Make sure that this metal container has a way



Photo 8, Author's son preparing to start a fire with flint and steel.

of allowing oxygen into the container but not much. The easiest way to do this is to punch a small hole in the container. What you are trying to achieve is to put this container in the fire and allow it to get extremely hot so that the material in it almost ignites. You can watch this process closely while your container is in the fire. If a flame is coming from the container then the material will be consumed and you will only be left with ash. However, if there is not enough oxygen in the container the material will not be able to be completely consumed. It will turn it to this entirely useful stuff we are calling char cloth. When you open the tin the material should be black and not turned completely to ash.

Now we will discuss the process of putting it all together. We have found that there are two basic methods for this next step and people get kind of particular as to which one they think is the better of the two. What we suggest you do is practice both and any others not depicted and find the one that works best for you.

Method 1 (see photo 4) involves striking the striker against your flint such that sparks that are created and fly off into a piece of char cloth that is lying in an already-made tinder bundle. Method 2

(see photo 5) is where you take a piece of char cloth and place it on top of the flint. You then strike the striker against the flint so that sparks come off and land on the char cloth. You then transfer this piece of char into an already made tinder bundle. Expect your char to glow in the area where it catches the spark but it will not burst into flame. If you have not done this before you will probably be surprised at how fast the char actually “takes off” after catching a spark. Please note that what you are actually doing is knocking off tiny pieces of very hot steel. It is those pieces that make the sparks you will be seeing. If you are having trouble producing sparks then simply change the angle by which you are striking the pieces together. A steeper angle is better whereas a 90 degree doesn’t serve to “cut off” the tiny slivers of steel well enough.

There you have it. From tinder bundle to a full fire is another process worthy of an article in and of itself. Suffice it to say you must slowly blow and nurture the bundle until it makes flame and utilize it to get a fire started with small, then larger woody material. You can then warm up that core body temperature or roast you some nice venison over the fire.



Understanding Fire

By Jim Miller

You know of fire as one of the 4 essential Earth elements. We depend on it to cook our food, boil our water and keep us warm and dry. It is one of the most critical tools to have at our disposal in a wilderness environment, yet not everyone really understands how it works.

In this article, we will discuss some of the science and principles of fire, and how that pertains to constructing and maintaining a fire.

Simply put, fire is a chemical reaction that converts fuel (potential energy) into kinetic energy in the form of heat and light.

What is needed to make fire?

Four things are needed to start and maintain fire; heat, fuel, an oxidizing agent (normally oxygen), and a self sustaining chemical reaction.

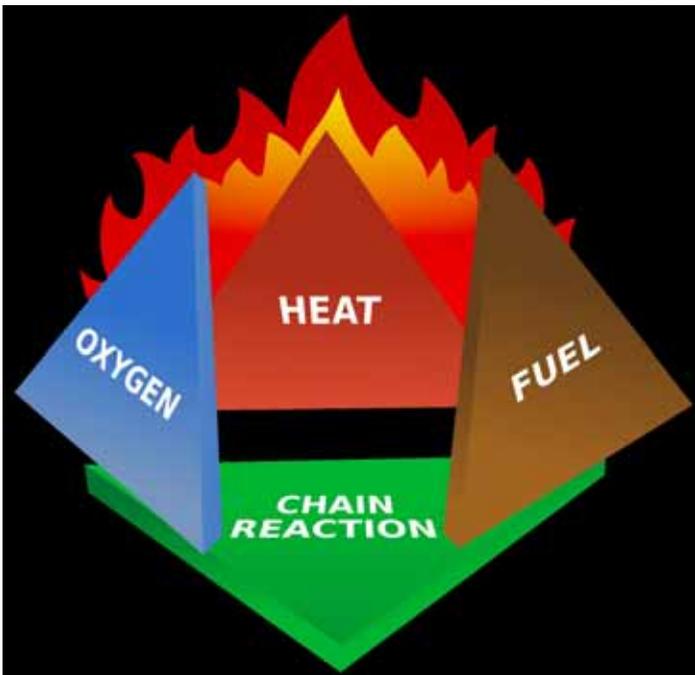


Fig. 1: (Above) Fire tetrahedron. (Courtesy of Wikipedia)



Figure 2: Two photos to illustrate wood being broken down to show increasing surface area. (Photos by the author)



Figure 3: Two tepee fire lays. The one on the left is set up to provide more oxygen. The example on the right is more dense and will lack sufficient oxygen. (Photo by the author)

Together these make up a model in fire science known as the fire tetrahedron. Heat can be generated in a number of ways including spark, friction, light, chemical reaction, etc. The fuel is what is burned. For this discussion we will limit fuel to “Class A” fuels, or ordinary combustibles such as wood, leaves,

paper, etc. The chemical reaction must produce enough energy to keep the fire going. The oxygen is provided by the air that surrounds us.

When heat and oxygen are combined with a fuel in the proper ratios, it is possible to start a fire. Once the fuel adequately ignites, the chemical



Figure 4: A densely laid fire lay that is not getting sufficient oxygen. (Photo by the author)



Figure 5: The author adding supplemental oxygen by blowing into the fire. (Photo by Rhonda Miller)

reaction takes over and either maintains the current fire, or causes it to grow by spreading to other nearby fuel. Solid fuels such as wood are heated by the fire, which causes them to chemically decompose and release flammable gases. The flammable gas is what actually burns. In Fire Science this process is known as pyrolysis. The burning gas releases more heat, which continues the chemical reaction.

Why won't it burn?

If you are having trouble getting a fire started or keeping it going, you do not have enough of at least one of the essential components of fire. Wet fuel has trouble reaching its ignition temperature. This is how insufficient heat will keep your fire from thriving. An overly dense fire lay will rob your fire of precious oxygen. We've all seen the know-it-all that manages to get his tinder burning, only to add so much kindling to the tinder so fast that he completely smothers the fire and puts it out.

If you cannot get the fire started initially or can't maintain the fire that did start, you will need to do a little troubleshooting and take some corrective action.

If you get tinder started but the kindling or fuel will not catch, there could be numerous things wrong. A classic mistake is to try to ignite fuel wood

without getting enough kindling burning to catch it. If this is the problem, the fuel is too big to ignite from the available flames. You can remedy this by adding surface area (the amount of exposed surface) to the fuel by cutting it into smaller pieces. This will increase the "surface to mass ratio". (Photo 1) Consider a 10 lb log. Undoubtedly, you would have real trouble trying to get a 10 lb solid piece of wood to light with a match. That is because it is made up of one solid piece of fuel. The amount of surface area for that amount of wood is very low. Now split that log into smaller pieces, and it would be easier to light. Split the wood again and it would get even easier. In fact, the more surface area you can create for the fuel that you have, the easier it will be to get the fuel to burn. That is the whole premise of starting with tinder (high surface to mass ratio), then moving to kindling and fuel wood, which have decreasing surface to mass ratios. Note that the lower the surface to mass ratio, the slower the fuel will burn.

If you cannot get the fire to spread to other perfectly dry fuel, change the position of the fuel. Heat rises, therefore fire will spread faster when the available fuel is in a vertical position. This is why the tepee fire lay is so effective. The more vertical your fuel supply, the faster and easier the fire will spread. Horizontal wood will burn slower than vertical



Figure 6: The same fire lay, now with enough oxygen. (Photo by Rhonda Miller)

wood.

If you have a good fire lay set up but you cannot get it to catch, you may not have enough heat to support the ignition. This is often what stands in your way while trying to start a fire through friction or concentrating sunlight through a magnifying glass. You may need to try harder or a different method to produce the required heat through friction, spark, light, etc.

If you have enough heat, but the tinder won't catch, you might need to try some different tinder. Tinder has to not only catch a spark, but it also has to burn long enough to ignite the kindling. This is why something as simple as petroleum jelly saturated cotton balls work so well. The cotton catches the spark or other heat source, and acts like the wick of a candle while the petroleum jelly burns long enough to spread the fire. If the tinder isn't your problem, it may be the fuel itself. For example, wet wood does not burn well because it is hard to get to its ignition temperature while it is wet.

If you get the fire going but it just seems to smolder and put off a lot of smoke, you might not have enough oxygen. The best way to ensure enough oxygen is to build your fire properly in the first place. Try to position your fire lay so that you have

adequate wind blowing into it. Don't build your fire lay so that it is so dense that your fire can't breathe. You want your tinder/kindling/fuel close enough together so that the fire can spread, but not so close together that the fire suffocates. If your fire is smoldering or needs more oxygen, you need to either get down on all fours and blow into the fire or wave something in a fanning motion to create wind to provide the additional oxygen. Be sure to take a deep breath before you get your face down next to the fire so you don't get a lung full of smoke or other fire gases. This should help fan the flames and spread the fire.

Remember, it is best to think of your fire as a living thing. It needs to breathe (oxygen), eat (fuel) and stay warm and dry, just like you. By remembering the four essential components to support combustion, you will be able to troubleshoot a distressed fire, and it will even help you prepare by building a proper fire lay in the first place.



Depending on the day, Jim Miller can be found working as a Firefighter/EMT, or securing computer networks. While not working either job, he can be found spending time with family or doing outdoor activities such as mountain biking, fishing, kayaking, or just about anything else outdoors

A Common Man's Look at What's in my Pack!

By Ken Seal III



Some band-aids for the minor nicks, a bottle of Iodine for treatment of scratches, and water make up a good SAK with a bandanna and some duct tape.

Welcome to another great issue of SRI and the returning section of "What's in my pack!" When I started to think of what I wanted to put in this, and what pack I was going to show, I had visions of showing some of the cool gear I have acquired over the years. I am a self-diagnosed GEAR NUT! But after writing a couple of paragraphs on the subject, it occurred to me that I am first and foremost a common man. Sure, I have some items that were pricey. That is especially true when it comes to my knives and firearms. However, 99% of the time when I venture out in the woods I am carrying the gear that most people can afford to use. So follow along with me as I lay my gear out for you, and maybe give you some ideas on how to practice being self-reliant on the cheap.

The first thing we will be looking at is the pack itself. I have about eight packs that I use. They range from three hundred dollar UL packs to one of my favorites, and the pack we will see today. It's a

pack made for hunters and branded with the Remington name, but you can find them under many different labels. It was picked up at a big box store for the common man's price of NINE DOLLARS! It's a small pack on the body but is more than capable of carrying a ten piece kit and even more. The pack has padded shoulder straps, a bladder section (if you are into that sort of thing), and waterproof enough for a good hard rain. It has four outside pockets and two inside with easy to grab zippers and compression straps. The main thing I like about it is that its narrow profile makes it easy to slip through the thick South Carolina woods without getting snagged on all the briars we seem to have.

So what do I carry? First and foremost is my fire kit. Hands down, no matter what, I have a way to start fire with me at all times. The container I keep it in is a big box store waterproof box that I got for a birthday some years ago. It holds plenty of tinder and is super water tight so I don't have to worry about anything getting soaked. Inside it I keep

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





A large side zipper on the pack allows access to the tarp and hammock in the dry bag without needing to open the pack's top.



A good pair of gloves and a brush mirror combo stay in the top of the pack for quick access. The mirror brush is good for keeping the bugs out of your hair and doubles for signaling.

a small amount of river birch bark, small pieces of fat wood, some waxed jute twine, trioxane, gel fuel, spare ferro rod, and a small lighter. On some trips I throw a Mora or my BK11 in just to make sure I have a way to process wood. This may all sound like overkill, but in the south the humidity is atrocious, so having good dry dependable tinder is an absolute MUST. Leave home without it and you may be without fire, which could also mean no food, water, or even heat depending on the time of year.

I have enough fat on my body to keep me alive for a year ... lol... so the next thing I always want to know is that I have water. Now I could show you the fancy titanium pot and stove to match, but

from a common mans point of view, those are overkill. I take two items with me at all times for water and cooking and both are easily affordable. First item is a sugar canister sent to me by my brother Harley from Texas. It's a stainless steel canister like you would keep sugar in on your counter, and holds almost one gallon of water. Inside I keep some alcohol, Spirit burner, a gsi cup, tea, coffee, sugar, as well as a small chain to hang it over a fire. The chain has hooks on the end and a carabineer attaching them together. It allows me to boil water without fear of a string melting and the water cascading down over the fire I worked so hard



A roll of heavy bank line and some duct tape come in handy for traps and securing poles together should the need for a stronger shelter arise.



A small set of figure 9's with a short length of cordage makes for a fast hang of the tarp, should the weather turn south.



A complete canteen kit from Canteenshop.com makes for easy access to drinking water and secondary cook system.

to build. It's a little large and somewhat heavy, but it boils enough water fast enough to fill my second container and still have plenty to use for my meals and coffee or tea. Shop around at the second-hand stores and I bet you can find one for a buck or two. Then drill the holes for the hooks or add a wire bail, and you're set! The second container I use is a good ole US canteen and cup/stove set from Canteenshop.com. I wear it on the waist strap of the pack so I can get to it fast from drinking. The stove is great for grilling small game or frogs. It also works well with the gel fuel or fuel tabs for boiling on the down low. Sometimes we have fire bans and it helps to be able to have a very small contained fire so as to not be caught. Of course if things are real dry I also have the small spirit burner which works great with the canteen stove.

One of the worst feelings in the world is heat exhaustion. You feel like the world is fading away,



A small meths burner like the triangia and a grill top stove stand provide the author with safe drinking water during burn bans in the south.



Above: A stainless steel sugar canister holds all the author's needs for boiling large amounts of water. Everything nests inside neatly and it keeps things from shaking around on scouts.

Right: River Birch bark, gel fuel, some fat-wood, a spare lighter, and Ferro rod round out a well stocked fire kit. Small waterproof boxes can be bought cheap at big box stores, like Wal-mart, and provide ample dry storage for tinder and fire making supplies.



your heart is pounding, and everything is going dark and bright all at once. One of the best ways to prevent that is to seek shade and stay hydrated at all times. So to give me some shelter from the summer heat and occasional showers, I keep a small five by eight tarp with me at all times. I have a dry bag, again bought from the big box store. Inside it I have a hammock, tarp, and all lines and straps needed to hang them. The tarp is made from a Gortex fabric that I bought online from a discount bin. Just four dollars worth of material, grommets, a little stitching

on the sewing machine, and I have a tarp. It is heavy enough to carry leaves and debris for shelter making, as waterproof as it can be, and big enough to use as a poncho. It still packs down to a five by eight inch size, just a little thicker than a pack of smokes. The hammock is made from one ounce nylon, again from a discount store. If I remember correctly I paid \$1.50 a yard for three yards total. I sewed the sides and ends up to keep them from unraveling and tied a knot in each end. To hang it, I take the mule tape (nylon webbing used to pull cables through pipes) and tie it around the knots then wrap it around a tree at the



A folding saw, and good axe such as the Wetterlings large hunters ax handle all the cutting chores while in the woods.

height and tension needed. I have other hammocks but I go back to this one time after time. The color is not what I wanted but it's one of the most comfortable sleeps I have ever had. On the bottom of the pack I have lashed a small horse blanket that I made into a poncho and an Italian waterproof bivy cover. It is similar to the US Issue, but it has a reflective surface inside so while it will keep you dry it also reflects your body heat back at you. This is perfect for the cool nights we have way up into winter. The horse blanket poncho works great as a pillow or as a sun block when you're walking in the open. Once we get closer to the middle of winter here I will throw a cheap wool moving blanket in for added warmth. These are a 70/30 blend blanket used by movers as padding and can be found for eight bucks at most discount tool stores.

For cordage, along with the cordage I have in the stuff sack for my hammock system, I carry a roll of heavy bank line. This is larger than most people use and has a rating of 550 pounds. So it's like paracord without the stretch and it knots better. It can be broken down into three strands that are strong enough for snares and I use it to make bow strings all of the time. I keep the roll nested inside of a roll of digital camo duct tape that I can use to repair the tarp and as a bandage dressing in a hurry. I keep the cordage right next to a first aid kit that I picked up for free at a local pharmacy. I bought a couple of packs of bandages and they gave me a case. It's marked for easy ID and semi-water proof. I keep

smaller band-aids, a bandana to use for larger wounds, a couple of pairs of rubber gloves, a scalpel, small sewing kit, and some iodine (which can also be used to treat water in a pinch).

Getting to the end of the road, I have a few smaller items that I keep close by in the top pouch of the pack. Field guides to plants and animals, a good bright flashlight for signaling and night travels, and a good pair of work gloves. Now to the hard part of being a common man, I have a Corona folding saw that I dearly love. It cuts through large pieces of wood with ease and is easy to replace the blades when they break. Trust me, I have broken two so far. I am going to upgrade to a Bahco folding saw in the near future and could have bought one already with the money I spent on the Corona and two extra blades. Which leads me to my main cutting tool that I carry, 99% of the time I go into my woods with NO KNIFE other than the Swiss tool and the pocket knife. I have some great knives like the Pathfinder, BK7, BHK Outdoors Machete; the list goes on and on. I take my Wetterlings large hunters axe with me on just about every trip and do everything I need to do with it. You may need a knife and an axe, or maybe you're not a fan of axes at all. For me, and the skill level I am at, I can do what I need to do with the axe alone. Now for the tough part, I am a common man and for the most part everything I have mentioned here can be picked up really cheap. That makes it easy for people to get out and enjoy this life even faster. But if you're going to carry ONE blade for processing wood you need to make sure it is a quality piece that can take the abuse you're going to give it. I love Mora knives and I have plenty of cheaper knives and axes that seem to be doing the job for now. If you are going to splurge on anything at all for your kit make it the knife or axe. I have had cheap axes that took a ton of abuse. If you're going somewhere public and KNOW you're not going to depend on that tool for your life, take them and have fun. I for one am going to take something I KNOW will work and will not let me down when I need it most. Besides, is \$70 for an axe really a big deal? It's about the same price you would pay for a decent knife and it's built to last.

Like I said at the start, this is MY PACK. Yours is probably a little different and that's what makes this such a great community. No ONE person is an expert. We are all only as smart or dumb as our members and TOGETHER we are all learning. Until next time, happy reading, get off the couch and into the woods, and take a kid camping!



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Survival Shelter: The Wickiup

By Dave “Mitch” Mitchell



The Wickiup is a simple debris shelter consisting of a tripod, cone roof, circle footprint, ribs, lattice, and debris. However, before construction of a shelter is started, some variables need to be briefly addressed.

Location Concepts

A good shelter in a bad location is a bad shelter. This is a fundamental concept to understand. If you build a fantastic shelter in a flood zone and it rains you're going to get washed out. Thus that fantastic shelter is still a bad shelter. The south side of a ridge will get sun throughout the day and be warmer than the north side which will be in the shade as the day progresses. This can be used to your advantage, depending on the season you might prefer one or the other. In the middle of summer the north facing ridge will keep you cooler, in winter you would prefer the south ridge. The next thing to consider is if the building materials needed to

construct the shelter are at or near the chosen location, as well as a water source and game trails. Lastly, is it a safe location? Some things to consider are whether it's a flood zone, windblown with many dead standing trees and limbs that will suddenly fall in high winds, poison ivy, bee hives, red ants etc.

Design Concepts

For design we'll ask three questions;

1. How long do you plan on using the Wickiup?
2. Expected weather? Rain? Season?
3. Fire inside or out?

Mitch is an Instructor at The Pathfinder School, a Graduate of the First Northeast Advanced Class, and Certified in Phase I and Phase II of The Pathfinder System. You can find Mitch on his YouTube channel NativeSurvival and his Website <http://nativesurvival.com/>



Length of expected stay has an overall effect on the building process, even on the location selection. If I know I'm only staying one night I'll spend less calories and time building a shelter I'll only sleep in for a few hours. I'll also spend less time looking for the "perfect" spot and I'll make do with a "good enough" spot. When there's no chance of rain, less debris is necessary as you're not looking to shed water. On the flipside if it is late in the year an arm's length deep of debris is in order to retain your heat inside of the shelter. A fire can be inside or outside a Wickiup; it all depends on its size.

Ok let's get started!

The order of steps:

1. Find a flat area suitable for the Wickiup.
2. Clear the debris and make a clean work space.
3. Fashion a tripod.
4. Lean ribs on the tripod to create the cone roof. To shed water effectively, keep the ribs no more than 2" above the tripod's height.
5. Use springy branches with attached twigs or "lattice" to bridge the ribs.
6. Starting at the bottom, add the first layer of debris.
7. Add more layers of debris until the roof is complete.
8. Make a bed of debris to lift you off the cold ground.



Lean ribs on the tripod making its circle footprint.



Add lattice to bridge the gap between ribs.



Tripod with forked branches interlocked.



Debris is layered from the bottom to create a tight shingle effect.



Debris roof is complete.



The making of a warm radiant fire keeps the insects away and throws cheery light into the Wickiup.



A bed of debris finishes the shelter!

In total this shelter took 90 minutes to complete. As a survival shelter it excels, allowing you an additional 90 minutes before you reach your three hour mark to complete other tasks like gathering firewood, foraging, setting traps, collecting water etc. I encourage everyone to master this simple woodland shelter, you'll be glad you did!



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Knots

The Prusik Knot

The next knot I'd like to teach you all is not really a knot, per se, but a slide and grip hitch (everyone calls it a knot though). Dr. Karl Prusik first came up with this knot as a way to repair broken musical instrument strings, way back during WWI. In 1931 he published the knot as a way for mountaineers to self-rescue. This knot is mainly to be used as a way of self-rescue and climbing out of a crevasse or cave. You use two of them, tied into endless loops, and use those as the Prusiks and stand in one loop, slide one up, stand in that one, slide the first, on and on, until you are out. I personally have never done that but this is the knot for such activities. I use this knot differently for camping.

It can be used as a tensioning knot along a ridge line to pull a tarp tight or if you have a clothes line rigged and want to hang something from it, like a spool of paracord lets say, you can use it to tension that secondary string onto the clothes line. When using the endless loops mentioned above for tensioning the tarp, you can clip in some carabiners also if you choose.

A taught line hitch is a close relative and can be used in some instances. That's your homework, if you can tie the Prusik, you can tie the taught line.

Now pull that loop you just made around the ridge line snug, and bring the working end around over the face of the now standing line.



Back up over, staying to the right.



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



Over and back behind, keeping the working end to the right.



One the other end of the orange line, toss the working end over the ridge line.



I start off with a bowline loop at the grommet end.



Here we will start off the Prusik knot being used to pull a poncho tarp taunt.



Up and under the ridge line and down through the loop you just made.



Pull it a little snug but, see the gap I left?



Wrap the working end around the ridge line again, and put it down right where you left that gap. It's important that this working end is parallel with the original loop over the ridge line.



When pulled tight, it should look straight and uniform just like this.



The Prusik holds tight when tension is applied at a right angle to the knot so as we slide the knot down the ridge line...



...the tension comes up and we are now pulling the tarp where we want it to stay.



Now let's do the other end. Start with a bowline.



Same as the other side, pulled tight. Notice the end with the tension on it is closest to the tarp.



Tight on both ends, now we can stake it out.



You can also tie a Prusik knot in an endless loop.



Go around and pull one end of the loop through itself.



Go around one more time and through the same loop as before.



Pulled snug, it will start to look like this. Keep the lines straight.



This is easy to add a carabiner to.



If you leave small loops tied into the grommet holes all the time, just clip into them. Makes for faster setup.



Completely tight. Looks just like the first way we tied it but it joins at the ends.



Here it is tight with the carabiner. That's it for the Prusik knot. I hope you learned how to use this knot in a new way. If you try the taught line hitch, you can tie that through the grommet hole and tie off the other end. One more pic...

You can see that with tension pulled either left...



Here is the Prusik knot holding up my spools of paracord in the shop.

...or right, it'll hold fast.



Cultivating E.D.C. Habits

By Shane Hillard

I recall my first EDC YouTube video and have to say it makes me smile. I had all manner of things stashed here and there but it was that jumping off point that has led me to refine and develop my personal EDC. In this article I intend to share with you the basics of my EDC and the philosophy behind it with the hope of having you develop both your own EDC and good habits as far as your EDC is concerned.

E.D.C. as I am sure you know stands for Every Day Carry. It's that very simple phrase that I'd like to start by analyzing a little as an EDC tends to take on many forms, but I think the simplest incarnation is the most important. Every day carry – stuff that you will have on you every single day, in every single activity; regardless of location or task. Now, while swimming and a few other select activities simply can't be helped, my EDC is developed to be very simple, and by simple I don't mean a lack of gadgets and bulky items, but simple by habit.

I have watched my share of EDC videos. Bug out bags are great, car kits should be a must, and having a grab bag for a hike is a wonderful idea. However, when I see someone with their multicam tactical fanny pack, I wonder whether that really is an every day carry. Now if you want to strap on your whole system to go to church, wear a suit, go to dinner and dancing then kudos to you. I personally find large pouches, bags, and overburdened carabiners to be cumbersome and entirely impractical.

It's my philosophy that a good EDC will be something that is no more difficult than grabbing your keys and is entirely reasonable in all occasions i.e.: isn't cumbersome or simply odd looking. Now not wanting to look odd might seem a bit vain but I personally would not have people thinking I was a liability because I have some sans-military "who knows what" on my belt while at a white collar job.

Now with that in mind, consider what it is

Shane Hillard is an Australian native currently residing in the Pacific Northwest. Having passed phase 1, he aspires to be a Pathfinder Instructor one day. He has an innate curiosity for the outdoors, bushcraft and animals – particularly dangerous ones.



What the author always leaves the house with.

you always remember in the morning or before you head out the door. Things that you so rarely go without that you have them with you as a matter of habit – that is the perfect foundation for an EDC. If you take a gander at Picture 1 you will see my EDC packaged and ready to roll out the door: A watch, a bracelet, my keys, and my wallet. This might not seem like a great deal to work with, but if you also look at Picture 2, you will see the items that I consider to be tools and the basis of my EDC. I always have at the bare minimum my wallet and keys with me.

My EDC covers a few of the Cs, namely as follows:

Compass: My pathfinder watch has a digital compass amongst its many functions; I also have a Silva keychain compass.

Cordage: That paracord bracelet could come in quite handy. There's a reason we all wear one.

Combustion: Ferro rod. Bic lighter. Book of



The more useful contents of my must haves (cash not included.).

matches. Alcohol wipe. 2 wet dry fire starters.

Cutting tool: My trusty Leatherman Wave. I also have a razor blade as it takes up negligible space.

Container: I am almost always within range of a bottle. Here I have a condom as well as 4 Potable Aqua water purification tabs.

Extras: A very loud whistle for signaling, a couple of rubber bands, a small roll of duct tape and

more often than not, an ever changing collection of odds and ends.

It might not seem like a large collection of items but it's quite a diverse selection of odds and ends that are no more of a burden to carry than your usual keys and wallet. The inspiration for this compact system came from my Leatherman pouch. I have tried other, flashier, and often larger pouches

for carrying an EDC but always return to my multi-tool pouch. I came upon this idea years ago when my wife bought me the very last display model for Christmas and I didn't get the interchangeable drivers. That left me with some room and sure enough, I got to playing with it. The duct tape behind the Velcro, the ferro rod and quickfire slips into the elastic bands on the side of the pouch and even let me clip my keys there. Any number of useful items can slip in the back pouch and a couple of safety pins ride on the carry strap. I've even carried a nail wrapped in fine steel wire in the past. The condom, water tablets, razor and book of matches ride in the wallet in one of the back folds usually filled with old photos. Anything that clips on a key ring goes with the keys while keeping it to a minimum. I hate a large set of keys. The watch and bracelet are self explanatory.

But with these small, unused, and often overlooked areas, it's quite amazing just what the average Joe can carry. Even a signal mirror will fit in your wallet quite well but tends to make it a bit thick for my tastes. However, we cannot neglect one very important C and that would be cover. Now personally I don't much like the idea of carrying a trash liner or tarp on my actual person and that means that my cover is my clothing. It's very easy to slap on some comfortable clothes to take a drive but I assure you of this one solemn fact: anybody in a survival situation wishes that they were better prepared. With that mindset put towards our clothing, we should try to consider possible weather changes, where we are going, and what clothing best suits that environment. In my neck of the woods that is pretty much all synthetic with a fleece on or off because the weather is changing every five minutes. Solid, waterproof low boots and decent wool socks are useful. If I am even thinking about spending time outdoors I will also pack a hat that suits the weather.

Another item that I feel is entirely underrated and in my opinion should be another C is cell phone. Now I am not going to try and convince you that getting lost in the cascades is not an issue if you just use your cell phone. Technology is unreliable, unpredictable, and at times; entirely frustrating. However, when you consider your daily threat matrix (i.e.: likelihood of what might go wrong) your cell phone is an invaluable tool. You are locked out of your car at the store and the lot is empty. Fancy a walk home? You witness an accident as you're driving. You injure yourself and no one is in earshot. A cell phone can be a life saver as well as a

convenience and SHOULD it work when you're lost in the middle of nowhere, you have most likely saved yourself a great deal of grief and misery. I personally can't stand cell phones but refuse to go without one if I am going to put myself in a potentially dangerous situation.

Above and beyond your assortment of tools though are three more Cs and these are a must have in an S.H.T.F. situation. They are calm, collective, and common sense. I'd really like to squeeze education or training in there but simply couldn't think of a C for those. But a couple of things go without saying:

- You're defeating yourself if you cannot keep calm and controlled in a stressful situation and act accordingly and thoughtfully. Your multi-tool could be a light saber but unless you can come to terms with the situation and act in a purposeful manner, you are diminishing your chances of a favorable outcome. Panic happens and it might be hard to react, but you may have little choice. Think it through and don't act rashly. It is better that you respond in a correct manner rather than in a hurried one.
- Tools are no replacement for training. If nothing else, you should be familiar with the items you carry in your EDC. You may not have mastered friction fire but if you cannot operate your lighter, you're in real trouble. Do not rest on your laurels when it comes to your gear instead better yourself and make your intellect the tool. If you are caught without any tools, then you still stand a chance at coming out on top.

In all honesty, I could discuss this subject for quite some time. It's a huge topic and every person will have their own take on the matter of Every Day Carry. This is simply some insight into my approach and I personally find that a minimal, non obtrusive approach works better for me and is far more practical in the day to day of life. Your approach should be catered to your priorities and your needs. Your EDC should be complemented by other safety nets, many far more useful to you than a handful of items. It is not my intention to tell you what you should carry and how, I simply hope to encourage you to look over or start an EDC of your own.

After all, once it becomes a daily habit, you'll all but forget it's even there.





Mountain House Wraps

By Tim Stetzer



Mountain House makes a variety of Wraps including Buffalo Style Chicken, Mexican Style Beef, Breakfast Skillet and Barbeque Sauce with beef.

I like to eat. I don't, however, like to cook all that much. Especially in the outdoors where cleanup can sometimes be a hassle. Sure I know a lot of folks like to do campfire cooking, and I love to camp with those folks, but I'm not one of them. I like simple, lightweight, and easy to clean up meals. If it involves more than boiling water I usually pass and look for something else to pack. Based on those criteria I've become a fan of dehydrated meals that don't require anything more than boiling some water and dumping it in a pouch, so when Mountain House contacted us here at the Monkey and asked us if

we'd like to try out their new Wraps I jumped at the chance.

I'm no stranger to Mountain House foods and have used them a good bit over the years

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



To complete the Wrap you just need some tortillas from your local grocery store. We picked up the large size and they seemed to work out well.

backpacking and car camping but the Wraps were new to me. The concept is a great one. They're basically filling designed to be put into tortilla wraps that you purchase at your local grocery store. Now, I'd used tortillas in the field before and they're great. They pack flat, aren't easily smashed and they make for a great way to eat your meals without the need for silverware or dishes. As you eat the tortilla you

eat your plate! No washing dishes afterwards. Just my kind of meal! Mountain House currently has four varieties of Wraps available: Buffalo Style Chicken, Barbeque Sauce with Beef, Mexican Style Beef, and Breakfast Skillet. REI actually lists a Chicken Salad Wrap as well although we didn't get one of those for testing and I don't see them listed on Mountain House's website at the moment. Either way, all of



The Buffalo Style Chicken was a favorite with our reviewers. It had big, hearty chunks of chicken in it and a spicy Buffalo wing sauce.



Preparation for the Mountain House Wraps is extremely simple. All you really need is a method to boil water.



Once the meal is ready simply dole it out onto a tortilla of your choosing. The amount of tortillas you get depends on the portion size you dish out.

those sounded pretty appealing to me. Rather than horde them all to myself I took them on a March camping trip with some of the SRI/BHK crew down to the farm where the original Pout House stands in West Virginia (see the BHK story for what the Pout House was!). Despite leaving snow and ice in Pittsburgh, the short drive South provided a major temperature upswing and we ended up with a pretty balmy weekend in the 50's and 60's with not a lick of snow to be found. Perfect weather for some camping and some food testing!

Before leaving for the trip my wife picked up some tortillas for me from the grocery store and she had selected large sized wraps in the 12 inch range. Basically what size you pick is up to you but we thought the big wraps would be easier to handle. To make the Wraps in the field all you need is boiling



Be careful when you open up the meal pouch after it's been sitting. The contents are hot and steaming! Mix everything up thoroughly before serving.

water so preparation is extremely minimal. Whatever your method of boiling water is works just fine. Over the course of the weekend we boiled water over backpacking stoves, in a billy over the fire, and in a Kelly Kettle. As long as the water comes out boiling you're good to go. Once boiled just tear open the pouch and add the appropriate amount of water to the package. Remember to remove the oxygen absorber pouch from the meal first. It is not a seasoning packet! Stir thoroughly, reseal the pouch, and then wait the recommended time period on the bag. Once finished you just dole out the filling onto a tortilla, wrap it up, and eat. You can't get much simpler than



We made two big tortillas with the Buffalo Style Chicken. They were pretty filling portions when you split them into two burritos.



The Breakfast Skillet was a mix of eggs, sausage, hash browns and peppers. It was good as is, but even better with Sriracha sauce added!



You can adjust the portions in the tortillas to meet your individual or group needs. 3 to 5 wraps per package seemed about right though.

that. The large tortillas allowed us to make burrito style wraps which made for less mess when eating than simply folding smaller tortillas over soft taco style. Cleanup is super easy too. The pot only had water in it so no washing there. You can lick the spoon clean, or quickly hose it off and wipe and it down, and you're pretty much done with the dishes. You eat the tortilla so the "plate" is gone and all you're left with is the empty meal pouch, which is compact and easy to pack out with you when you leave. Fast easy prep, and almost no cleanup afterwards. That's exactly my kind of hot meal in the field.

So, we know the Wraps are easy to make but how do they actually taste? That's the key. Convenience only buys you so much, if food doesn't taste good it isn't going to see a return trip to the woods. As stated above we had four of the wraps to try out. By far the hands down favorite was the Buffalo Style Chicken Wrap. The Buffalo Style

Chicken consisted of big, hearty chunks of chicken in a tasty and spicy Buffalo wing sauce. This wasn't just good by camping standards, it was downright excellent. I've had Buffalo chicken in restaurants that wasn't as good as this. John McQuain from BHK was so enamored with this one that he said he was going to buy a case of them just to use for lunch at work! He and I made two giant burritos with our tortilla wraps with this one and greedily devoured them before everyone else could try it. Scott Wickham, also from BHK, actually had his own package of Buffalo Style Chicken Wrap too though and he also gave it a big thumbs up when he tried it. Second place was probably a tie between the Breakfast Skillet and the Mexican Style Beef. The Breakfast Skillet is a mix of hash browns, scrambled eggs, pork sausage, peppers, and onions. I'll admit the visual appeal of this one isn't quite what some of the others are but it has a great smell that gets the stomach grumbling in the morning. It was quite tasty



The Barbeque Sauce with Beef was a mix of beef and peppers in a sweet tangy sauce. Think Sloppy Joe mix in a tortilla.

as it comes from the pack but we found that when we added some Sriracha hot sauce to the wrap it really made it pop. Great stuff. It makes for a super easy breakfast that was tasty and filling. The Mexican Beef makes for a more traditional burrito style meal and was pretty good as well. It consists of a mix of beef, onions, peppers, and tomatoes in a Mexican style chili sauce. This one had a little zip to it and if you aren't really into spicy food may be hot for you. It's tasty as is, but for those of us more inclined to some heat, we found that once again some Sriracha balanced this out nicely. The last meal we tried was the Barbeque Sauce with Beef and this one left us with mixed opinions. It's listed as "beef mixed with peppers and tomatoes in a tangy sweet sauce." We discovered two things with the BBQ and Beef. First, it comes out a little soupy and is pretty messy to eat. Second, it's more of a Sloppy Joe mix than anything else. If you like Sloppy Joe's that's awesome, if you don't this probably won't be one of your favorites. The sauce is a pretty sweet BBQ sauce too so it seems to be one that folks either like or not depending on your personal food tastes. Personally, I liked it even though it was kind of messy to eat.

As to serving size, Mountain House actually lists these as one serving which we found quite

surprising. Usually when you see suggested serving sizes they're over estimated, at least in the case of normal adult males. In this case I think Mountain House greatly underestimated how much food you get! Depending on how much of a serving you use, and what size wrap you're using, we got anywhere from two giant burritos to five smaller ones from a pouch. Scott was using smaller tortillas with his bag of Wraps and ended up with even more using those. Personally I felt that you could easily get four healthy sized burritos using the large tortillas out of one Wrap package. Two of these burritos a piece make for a good meal for an adult, or one supplemented with something else if you're doing a group meal and sharing other food. There was plenty of food in the pouch for four or five of us to try and not be hungry afterwards. If you do plan on using these as a solo meal it's a pretty big portion and you sure won't go hungry. If you run out of tortillas and still have

food left don't fret. The meals are tasty enough to just eat with a spoon straight out of the bag too.

Overall I have to say that the Mountain House Wraps were a big hit with our group. We had a great time trying them on that trip and a number of us have subsequently bought more for some follow up trips we made since then. They're definitely going into regular rotation for me. The food itself was very good and the wrap concept is excellent. I've even taken to stuffing other Mountain House entrees into tortillas now too since it worked out so well with the actual Wrap meals! I've heard some folks say that dehydrated meals are expensive for camping but the MSRP on the Wraps is only \$6.40. Honestly, you'd spend that much at a fast food restaurant for lunch and for the amount of food you get, the taste, quality, and the convenience of easy preparation and cleanup, I think that's a pretty darn good deal.

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



Mountain House Ice Cream

By Tim Stetzer



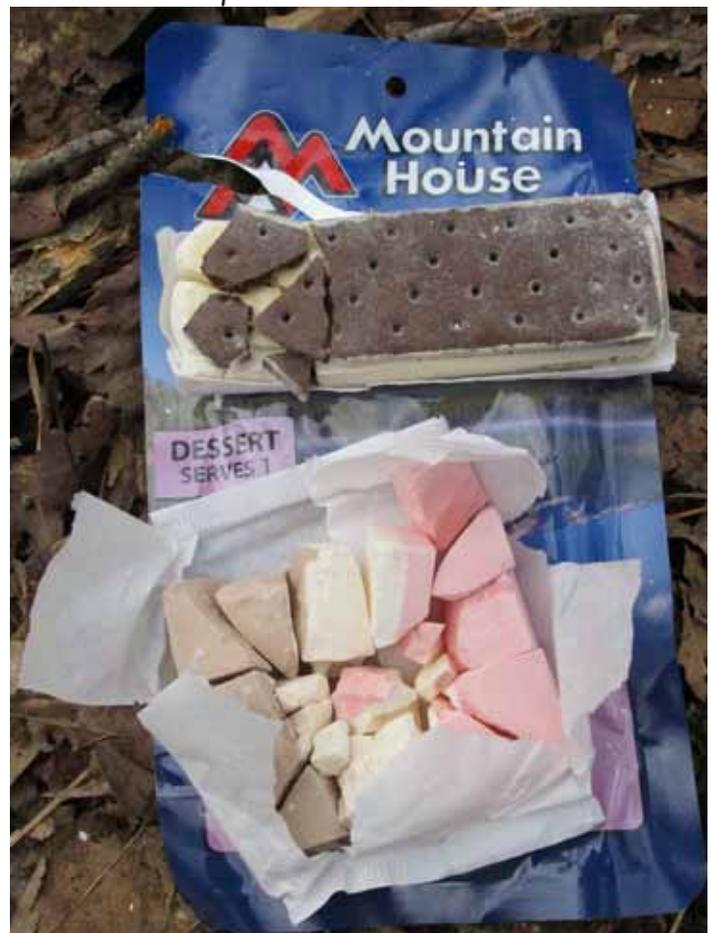
Mountain House currently makes two varieties of freeze dried ice cream, a classic strawberry, vanilla and chocolate Neapolitan style, and an Ice Cream Sandwich.

Sometimes the sweet tooth hits you no matter where you're at. When you're in the backwoods though you can't exactly run out for an ice cream cone when it hits ... or can you? Thanks to Mountain House you can get pretty close with their freeze dried Neapolitan Ice Cream Bar and Ice Cream Sandwich. Yep that's right, freeze dried ice cream, the same stuff that the astronauts took into orbit on the Apollo 7 mission back in 1968 and that you can find in the gift shops of science centers everywhere. There's a certain novelty factor to the concept that makes it worth trying, but we wanted to see if it was actually any good too.

Once you get past the gimmick factor of freeze dried ice cream it starts to look pretty practical for a nice snack in the field. It doesn't require refrigeration, and its super lightweight to carry (only 1.13 ounces). Even chocolate and other candies can melt and otherwise be affected by temperature but the vacuum sealed Mountain House is shelf stable and will last for years, let alone a weekend in your pack. The Neapolitan Ice Cream is a solid bar around the size of a Klondike with the traditional layered mix of strawberry, vanilla, and chocolate flavors. When you open the sealed pouch you find the wrapped ice cream bar which may or may not be in one piece depending on how you packed your bag. The consistency of the ice cream is sort of a stiff, foam board kind of material that snaps when you go to break a piece off. I know that doesn't sound too appealing, and it's a little strange to handle, but when you pop it in your mouth you get true ice cream flavor and it begins to melt in your mouth as your saliva hits the freeze dried cream. It's a neat mix of crunch as you bite the creamy as you eat. The Ice Cream Sandwich is similarly packaged and when you open it up you see what looks to be a regular ice cream

sandwich like you'd pull from the freezer section of your grocery store except that it's too light in weight and it has that same snap to it as the Neapolitan when you break a piece off. Once again though, when you take a bite it tastes like a real ice cream sandwich should.

We had the freeze dried ice cream along on the same trip where we tested out the Mountain House Wraps. They made for a nice diversion in the field from the salty trail mix and jerky and were a good follow up to our Sriracha hot sauce laced tortilla wraps. With MSRP's of just over \$2.00 each the Neapolitan Ice Cream Bar and Ice Cream Sandwich are a pretty inexpensive luxury to take with you in the woods. The weight is such that they really aren't going to bother anyone short of a truly hardcore ultra-light fanatic and they're a fun addition to a woods meal plan that can otherwise get kind of boring. Besides, sometimes you just have to give in to that ice cream craving no matter how far you are from the nearest soft serve stand!

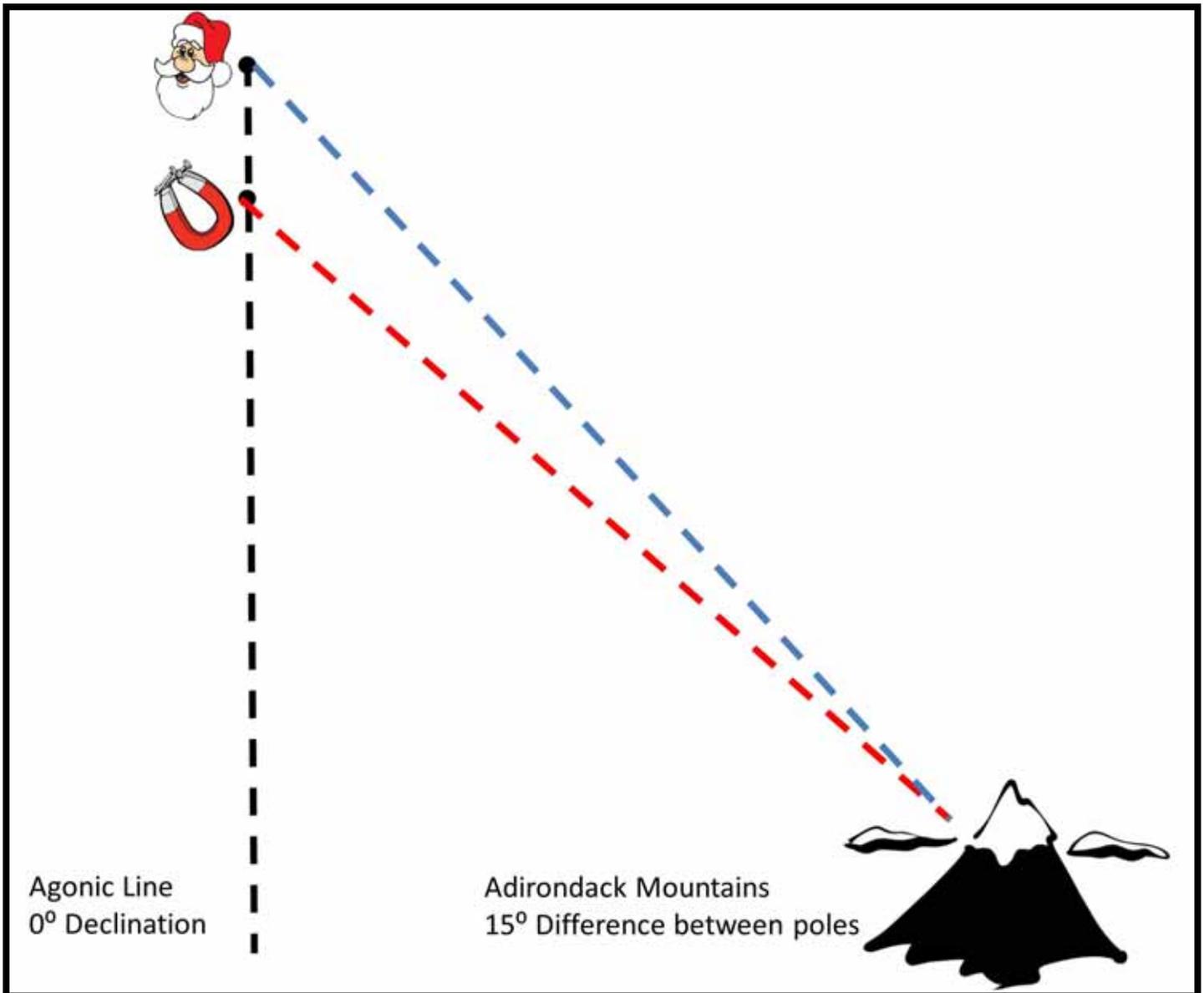


The Freeze dried ice cream has a brittle, crunchy Styrofoam sort of consistency. That may not sound appealing but it sure tastes like ice cream once you pop it in your mouth!



Dealing with Declination

By Brian Andrews



Intro

During the time that I have taught land navigation, and just generally been in the woods with other outdoor enthusiasts, I have noticed that it is rare for people to dedicate time to land navigation skills. It is easy to understand. We all go to the woods for different reasons and occupying our minds with land navigation can get in the way of the enjoyment we went to seek in the first place. Until you need it!

Another observation is that declination seems to be the most highly avoided topic among people learning land navigation. I too was that way once in

my life. I took the “ostrich” approach to declination. Meaning if I stuck my head in the sand and neglected to acknowledge it that it would go away and not interfere. Sorry to say that in most cases we all should be compensating for declination. It does not have to be a daunting task and that is what I would like to show here. I will show the most common approaches for dealing with declination. I certainly have my favorite, but my intentions are to show the

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.



different methods available. I will show the pros and cons for each method and then leave it up to you to choose what works best for you personally.

First, I want to define declination. I will try and keep it as simple as possible. While you can discuss the nuance and science behind the whole process, just understanding the concept is enough for someone wanting to do precise navigation. Basically, true north (or geographic north) is defined as a point in the northern hemisphere where the Earth's axis of rotation meets its surface. This direction is indicated on most maps with an arrow and the N symbol. On USGS maps, it is indicated with an arrow and a five-pointed star. Easy enough, but your compass works on the Earth's magnetic fields and points to a different pole called the magnetic north pole. Magnetic north is generally noted on maps with an arrow and an MN symbol for magnetic north. This diagram on the map is known as the declination diagram. The problem now becomes that your map indicates North as one direction and your compass indicates it as something different. We are calling that difference declination.

We can represent the True North pole as a point and the Magnetic North pole as a different point. If you remember from high school geometry it takes only two points to define a line. Somewhere on the Earth's surface a line is created that goes all the way around the globe in which the True North pole and the Magnetic North pole are aligned. In fact, the line is given a fancy name called the Agonic Line. If you happen to be fortunate enough to be on or near the Agonic line you can forget about correcting for declination! However, you are bound to leave your back yard some day so you might as well learn it with the rest of us.

If you are a decent distance away from the Agonic line then those two poles become separated as you travel around the globe. You can look up declination diagrams online to see what it looks like in various places, but that is getting beyond the scope of this article. I simply wanted to provide enough background so you can realize for what issue we are correcting.

Since you will hear it, it is also important to quickly define East and West Declination. If I were to simply tell you that your declination was 10 degrees you wouldn't know what to do with that number. We state that it is 10 degrees East declination or 10 degrees West declination instead. Currently, the Agonic line runs approximately from the North Pole, through Western Wisconsin, through

Illinois, between Mississippi and Alabama, and into the Gulf of Mexico. If you travel east of this line, because of the discrepancy in poles, your compass is going to want to point west of the True North Pole. In that region it is called west declination. If you were to travel west of the Agonic line, your compass will want to point east of the True North pole, and it is called East declination. A quick example is in the Adirondack Mountains (East of the Agonic line) your compass will point 15 degrees west of True North. The declination in that area is approximately 15 degrees west declination.

Now that I have convinced you that you cannot ignore declination and it is something that you need to deal with in your navigation, let's look at the most popular ways of dealing with it. The most common ways for dealing with declination include 1) Math, 2) Making your Map Speak Compass, 3) Making your Compass Speak Map, and 4) Sliding the Scale.

Even though I listed it first, I want to save math for last. If my goal were to complicate things and frustrate you I would jump right into math. Even though I am trying to be objective, I am going to clearly state that this is my least favorite method. It can be confusing enough while sitting in a comfy chair with pen and paper and your brain is relatively at ease. Add the stress of bad weather, fatigue, nightfall approaching quickly, and your desire to just make it to camp, and then numbers in my brain are not something I want to deal with. Still, the method is good to know and I will get to it in the end.

Next in order is "Making your Map Speak Compass." I already mentioned that your map thinks that north is one direction (True North) and your compass thinks it is a slightly different direction (Magnetic North). In order to make your map speak compass language we are simply going to draw lines of Magnetic North on the map. Once we do that you can ignore the True North lines, navigate from the lines you have drawn, and your map and compass will all be playing nice together.

Once you have magnetic lines on your map you can navigate a couple of different ways. If you subscribe to the "orient your map" method you can orient your map now with your compass and the magnetic north lines. Since your compass is pointing to magnetic north along with your new map lines, then everything will be properly aligned and you are free to take your bearings. If you use the "measure the bearing" method, which is my preferred method (requiring an orienteering style compass), you simply



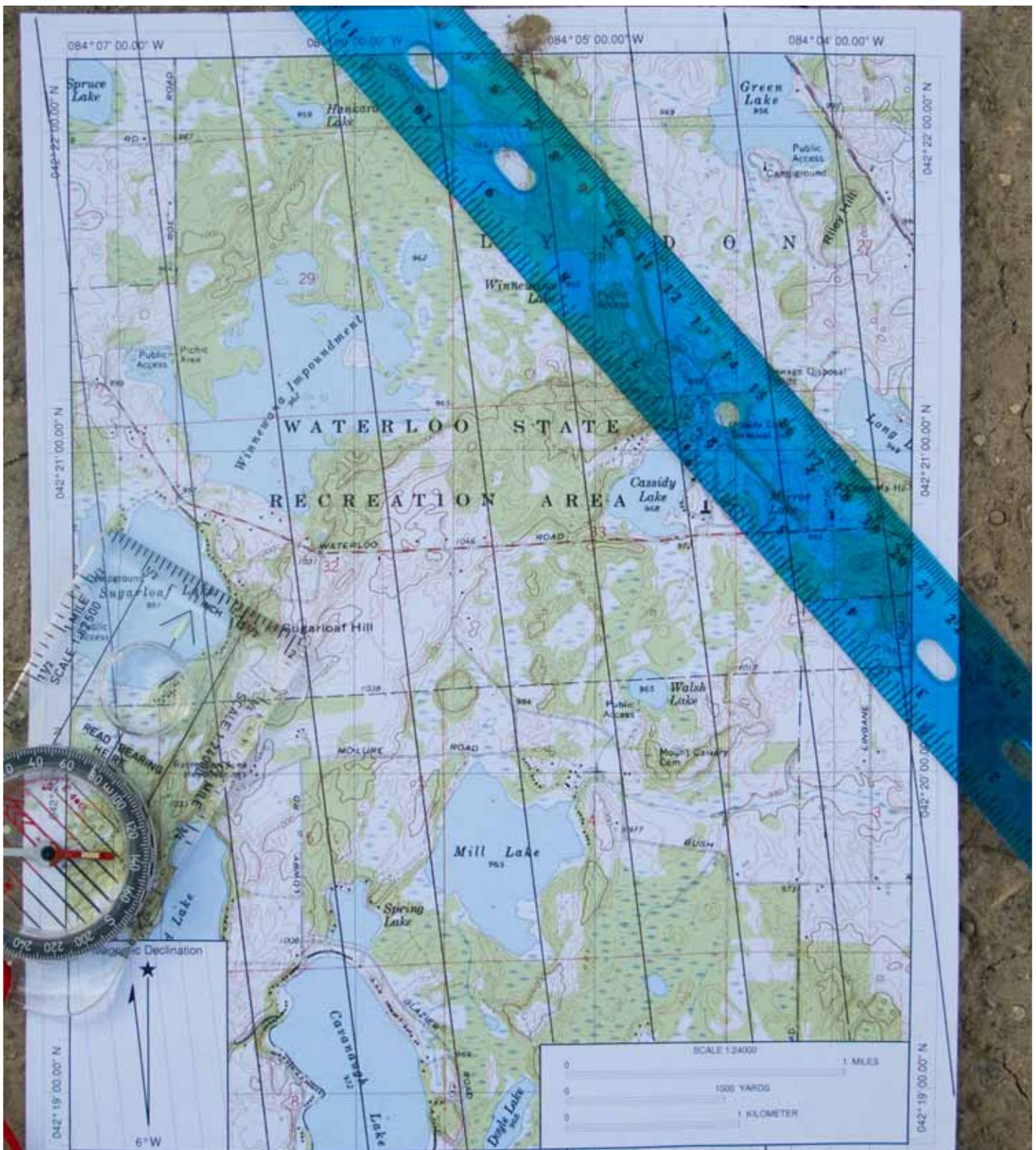


Figure 2

line up the edge of your compass with your desired direction of travel. Next you rotate the capsule until the meridian lines in the capsule line up with the magnetic north lines you have drawn. No need to orient the map or hold it still with this method. This method also benefits from only using the built in

protractor to make a measurement and not the magnetic needle. This can be important in route planning as it is near impossible to find a flat surface that does not contain something that will influence the magnetic needle and throw your measurements off if you were using the other method. Let's figure



Figure 3

out how we draw these magnetic lines then.

For illustrative purposes, I am going to use a map of my area (See Figure 2). Here the declination is approximately 6 degrees west. Again, this means that the compass should tend to point west of where True North is located. Intuitively then, the lines that we are going to draw on the map should lean to the west when compared to the True North lines. This can be verified by the declination diagram mentioned earlier in the article. The magnetic lines you are about to draw should line up with the direction that the declination diagram also indicates is magnetic north.

Let's draw the lines. The first method is to use a simple protractor and a ruler. The protractor is the little "D" shaped tool you used to use in elementary school. Put the base on a true north line and put a mark at 6 degrees. This mark should be the appropriate spot to get the lines to go to the west of true north. Now strike a small line. Use your ruler to make the line cover the entire page. Without moving

your ruler, draw a line on the other side of it. That will ensure that your lines are parallel. Then move your ruler so that one side lines up to a previous line and trace the other side. Continue this until your entire map is covered. Again, quickly verify that the lines you have drawn make sense with the declination diagram.

The second way of drawing the lines does not require the protractor. If you are using an orienteering style compass it already has a protractor built it and you can just use that. First, dial the capsule until North (N) lines up on the index line. Since we are dealing with 6 degrees west declination, you dial the capsule to 354 degrees (360 minus 6 degrees). When you do this you can line the meridian lines in the capsule up with the true north lines on the map and use the edge of the compass to strike a line. I don't want you to get too hung up on the math required to get the 354 degree number. If you follow my example you will note that the line that was struck is pointing west of true north in the amount of

6 degrees. If your first inclination was to dial 6 degrees on the compass (instead of 354 degrees), that is no problem. Give it a try. You will find that the line you strike is indeed 6 degrees different from true north, but it will be pointing to the east. If you compare your line to the declination diagram, it should be very obvious that you goofed. In my opinion, it is more important to be able to understand that concept and quickly apply it than it is to try and figure out the math aspect.

I have to pause briefly to issue a warning. Regardless of the map being used, it is a much better practice to actually measure your lines with a protractor (whether a separate one or on your compass), than it is to simply copy the declination diagram. It is much safer to use the diagram as “reference” as sometimes it is meant to merely be a graphical representation of declination instead of precisely measured. For example, magnetic north might be pointing off at a measured angle of 10 degrees to the west and the diagram indicates with text that it is 6 degrees to the west. The diagram is a representation of what the direction of declination is doing but not necessarily accurate. This is typically done for simplicity for the folks printing maps. It is easier to change a number on a diagram than it is to have thousands of different diagrams to put on their maps. If you measure enough declination diagrams you will eventually come across what I am talking about.

The benefits of this method are that you can pretty much use any compass style that you wish. It doesn't have to be one with declination adjustment and you don't have to worry about doing math in your head. The downside is that you have to be prepared ahead of time with your maps. If you decide last minute to hike a trail a couple of miles away and didn't prepare lines on your map in that area, you could be in trouble. Even if you have a ruler with you sitting at the trailhead drawing on the hood of your car is not a good use of your woods time. As good as this method works, it is always nice to know other methods.

The next method to discuss is how to make your “Compass Speak Map.” This method requires a compass that is declination adjustable (**See figure 3**). Most base models are not and it is usually a feature you have to pay for. I will show a similar method later for non-adjustable compasses. On an orienteering style compass that is adjustable the adjustment will usually be in the form of a small screw and a tool to turn the screw.

If you look in the capsule there will be a scale in degrees and a small index line. The scale will also indicate east and west declination. For our example of 6 degrees west declination, we simply turn the screw until the index line points to 6 degrees west declination on the scale. Sounds easy enough, but what is happening? When you point or take a bearing with this style compass you align the north arrow of the compass with the orienteering arrow (also known as the doghouse) in the capsule. If you never adjust your compass the doghouse is set at North (or 360 degrees). When we turn that screw and set the scale to 6 degrees west the location of the doghouse actually moved and is now pointing at 354 degrees (6 degrees west of north). Now when you go to use your compass with your map you can use the meridian lines in the capsule to line up with the true north lines on the map when you take your bearings. When you actually point those in the field the skewed doghouse takes care of the difference in declination for you.

Brilliant, isn't it? Of course, every method has its drawbacks and this one does too. The main drawback to this method is that you have to remember to set your declination correctly! That sounds overly simple, but I once had a friend that was in the Adirondack Mountains (15 degrees west declination) and had his compass set correctly. He got on a plane and flew out west to an area of 15 degrees east declination. Forgetting to adjust his compass, the combination caused him to be off by a total of 30 degrees! He was baffled for the first few minutes, but of course figured it out. The argument by many against this method is exactly that. Forgetting to set the declination can seriously screw you up and then prefer the previous method. My argument is that if you are going to take the time to measure and draw lines on your map you have to remember to do that too. Either method just plain requires forethought regarding declination. A huge advantage to this method, in my opinion, is if you find yourself in a situation where you had a change in plans or are operating with a map in which you did not previously have lines drawn. I use this method most often but I feel knowing each method is important “just in case.”

The next method that I call “sliding the scale” is extremely similar (**See figure 4**). Less expensive orienteering style compasses are generally not adjustable for declination. However, they generally do have another scale in the capsule for using this method. If you look in the capsule, around the



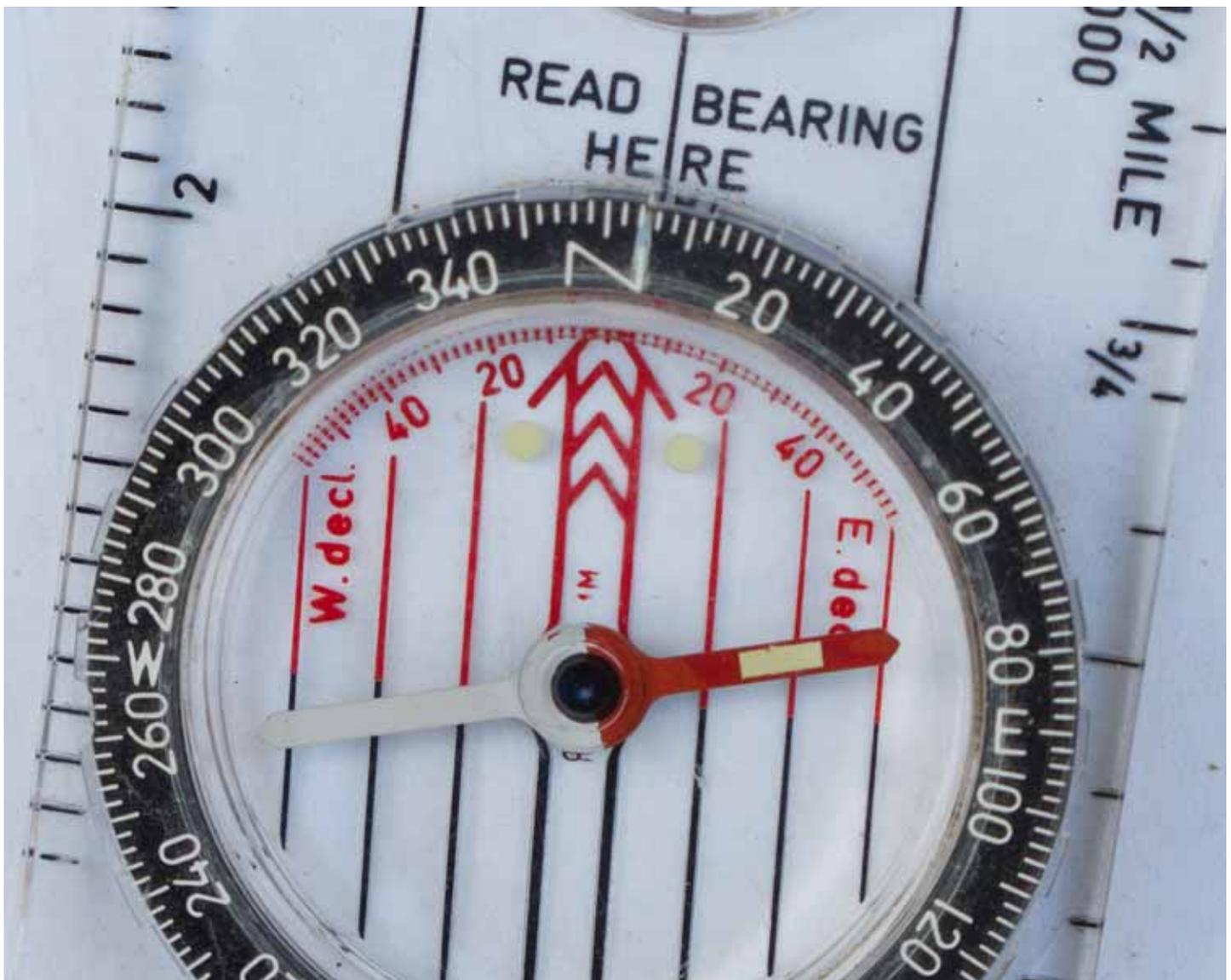


Figure 4

doghouse, you will see a scale that is also marked with west and east declination.

This scale works in the same manner that an adjustable compass does except that you personally have to remember to make the adjustment. Let's look at an example. You put your compass on your map and line the edge of your compass up with your desired direction of travel. You then rotate the capsule to line up the meridian lines in the capsule with the true north south lines on your map (exactly as you would with an adjustable compass). Since we have been using 6 degrees west declination, let's stick with that. Now you want to point that bearing in the field so that you know what direction to head in. Rotate your body and compass until the magnetic needle begins to line up with the doghouse. Instead of lining up directly in the doghouse you force the needle to point to 6 degrees west on that small scale.

Like an adjustable compass, this method pretty much takes care of declination for you without requiring math in your head. It is very simple and it works. It has the same drawbacks as the previous method. However, it has the added drawback of requiring you to remember your declination and point to it each and every time you point a bearing. With an adjustable compass you just set it and forget it for your current area. With this method you continually have to think about it. I have known folks to take a piece of tape and create their own temporary doghouse on the back of the capsule using this scale to make their own version of an adjustable compass. This is just an idea to think about, especially for a back up compass. You carry a back up compass, right?

Hopefully by now you realize that in practice the above methods are pretty simple. So it almost

scares me to bring up the next method for declination, which is math. It is not rocket science for sure; but it can be tricky and requires you to remember rules. To be honest, I don't want to be adding, subtracting, and trying to remember rules, when I am tired, hungry, or dealing with wind or rain. In order to be complete I will go through it.

In all other methods previously discussed we either offset lines or our compass to deal with the discrepancy with declination. Obviously, it is also possible to do some math in your head and actually dial in a different bearing. Here is how you do it.

First, it is important to realize that there are two separate functions you can do with a map and compass. The first is to take a bearing off of the map. A typical example of this is being in a known location and you see a location on the map where you would like to travel. You pull the bearing from the map so that you can use it on your compass to determine your direction of travel in the field. From now on, I will refer to this as "Map to Compass." The other function you can do with a map and compass is to transfer a bearing taken in the field to the map. An example of this is that you see a distant landmark. You point your compass at it and take a bearing. Now, you want to transfer that bearing to your map to aid in identifying your current location. In this scenario, you are taking a bearing from your compass and transferring it to your map. From now on, I will refer to this as "Compass to Map." You will soon see why this is important.

Now, if you know that your declination is again 6 degrees west, what do we do with that? Do you add or subtract it? This is where the rules come in. Have you ever heard the saying "East is least and West is best?" It is referring to adding and subtracting declination. It means that if you have an East declination you subtract, and if you have a West declination (as in our case) you add. There is a huge BUT here though! That applies when doing work from "Map to Compass." Repeat after me, map to compass, map to compass, map to compass! Those are the only real things you have to remember.

This means you pull a bearing off your map and it says 10 degrees. We have a 6 degree west declination, and are going from "Map to Compass," so we add. We dial in 16 degrees, point our bearing, and we have accounted for declination. What about "Compass to Map?" Well, you have to reverse the addition and subtraction rules. You subtract west declination and add east declination. I said earlier that you wouldn't have to remember anything else.

The way I look at it, if you can remember one case (Map to Compass), then you can figure out that the other case (Compass to Map) is the opposite. Let's try that example. You point to a distant landmark and read the bearing as 242 degrees and you now want to transfer that on the map. We have 6 degree west declination but since we are going "Compass to Map" we have to subtract it. We dial in 236 degrees on the compass and plot that on the map.

Sound a little bit confusing? Compared to the previous methods, it can be highly confusing. That is why this is my least favorite method. I highly encourage practicing and understanding it. But unless you are disciplined enough to practice this to the point where the additions and subtractions are second nature, I highly advise using one of the other methods. You have to remember that even if this is making perfect sense to you right now, you are probably sitting down, comfortable, well feed and in a nice environment. Just imagine being in the woods in the fall. It is taking you longer to get to camp than you would have liked. It is getting colder, darkness is coming in quick, you are hungry, and now it is starting to mist. So that you do not get lost you decide one more time to take bearing. Keep in mind your mental and physical exhaustion at this point. Your bearing reads 357 degrees and you have to take it "Compass to Map." Add or subtract? What is the number? If it didn't pop immediately to you, you should either practice this method a lot or simply comprehend how to use it if you have the time to sit and think about it, and use one of the previously discussed methods.

I hate to end the article on a discouraging note. The point I wanted to get across in this article is that declination does not have to be a mystery. There are various methods of dealing with it that are very practical and easy in the field. I hate to only preach one method of doing something and just say it is the way it should be done. Everyone's brain works different and one of these methods is bound to appeal more to you. If you have something that is currently working for you stick with it and perhaps you picked up a tip or two here. Otherwise, try out these methods think about the pros and cons of each that I have mentioned and you will soon make up your own mind on what you like. The important thing is to not play "ostrich" with declination.



Jell-O: Multipurpose Kit?

By Dawi

A few years ago when I first heard about bushcraft and started watching Pathfinder videos I myself was in a renaissance of research. The subject at the time was traditional glues. I knew for a fact that arrows needed glue to keep the heads and fletching on, but didn't know of anything except what folks call *hoof glue*. I'd read a lot of history on my people and various other tribes and their crafts, and it was all referred to as such. I was under the impression that you just gathered all the hooves from the animals and heated them somehow.

What I came across astounded me. We basically make glue from what folks usually throw away; scraps of hide, undesirable meat, internal organs, bones, hooves, sinewy pieces, fish skins, swim bladders, and even blood! Outside of traditional tool making, this process has been kept most well in various painting arts, and woodworking. From what I understand, each form of glue made from a different base has different strengths associated with it. Fish bladder glue is said to be the strongest while blood glue the most moisture resistant. Hide glue seems to be fairly balanced in its aspects.

So I then understood where hide glue comes from. But I didn't get how it got from the animals to our tubes and bottles. More research led to the next phase. The process is called hydrolysis. This is where water is added, and in our case here, then heated to separate particles of other materials. When this is done to these collagen rich materials it yields gelatin, and we all know what that is! It is a mixture of peptides and proteins, both of which are made up of amino acids. This gelatin is the base of these hide glues because of its gelling and drying solid ability.

In layman's way of explanation, you have your materials that are boiled so that the collagen breaks down into gelatin and that is strained from the larger pieces of material that it derives from. It is then able to be cooled and reused when added to water and made to thicken.

What this gets us is a basic understanding of how to make our own glue in the woods, and at home when we need it, in a self reliant fashion. What we also need to understand is its uses in edibility.

Gelatin is approximately 90% proteins per weight. Protein is what keeps our muscles and organs healthy and fresh. A typical adult requires 50 grams of protein daily, one who is pregnant 60 grams, nursing 65 grams, and a young toddler needs 16 grams every day.

Traditional uses for gelatin among my people, or hide glue, were the application of bindings on arrows, hafting tools, in pigment paints, and soup thickening to make stew. These are some very important articles in my mind, and I can't imagine where we'd be without our ancestors having had them. Plus we are some serious stew eaters. So this has led me to come and find what I can use it for.

The modern bowmaker that makes composite bows with traditional materials will oftentimes use Knox brand gelatin. This is a flavorless, very low calorie, proteinless version of gelatin dessert that is used in cooking and alternatively woodworking. That allows for it to be included in other materials without having added calories or sugar contents, making it edible for diabetics and other diet requirements.

But what you don't see is the addition of Jell-O brand gelatin. I suppose this is because of the color additives and sugar content. Most crafters want a colorless appearance that is devoid of smell. After I had gained all of the information I have stated was when my gears started turning. If Jell-O brand gelatin could be used as a glue as well, it could also be kept for eating purposes. So let's have a look at its nutritional value.

A typical box of Jell-O brand gelatin is in a three ounce package. This creates two cups of gelatin dessert when made by the directions. The calories in total amount to 320 (+/- 30% Daily Value) by the box, and have 8 grams of protein (+/- 20% DV). This includes 76 grams of sugar. It has 76 grams of total carbohydrate (24% DV), and approximately 3 grams

Dawi a.k.a. *Huhamaza* (Ironlegs) is a lineal descendant of the Mdewakantonwan Dakota people, and his passion is the pursuit of a resurgence of culture lost in the stampede of the last 150 years. His specialty is bowmaking, under the tutelage of Jamie Burleigh and every dusty piece of information he can consume. He loves all aspects of traditional lifestyle, from wild foods to stories and lore, and likes sleeping under the trees when he can swing it.



of sodium (12%DV). What this shows us is that we can utilize a box of Jell-O to supplement a daily meal in a self reliance/survival situation, to provide a caloric equivalent comparable to each in turn; 4 apples, a mom and pop single patty hamburger, bean burrito from the popular taco chain, or a small fry at one of the hamburger overlords. Obviously you would not want to rely on Jell-O alone. It does not have any of the essential vitamins you need in it. You would need to consume four or five boxes a day to have your average calorie requirement and you'd never feel full!

So my suggestion is to use it as a soup base or tea of sorts. When dissolved in hot water, and watered down in ratio to the original serving size, it tastes much like flavored water. Made into a hot drink, I really enjoy it. You don't want to use cold water, that will have it start to set and put it in its more solid state. The end result is filling your stomach either way. Plus if you have purified your water by boiling, you are already halfway there. Once it is in your body it will not stay a solid or become a solid because of your constant body temperature. As a soup base, this will allow you to put vegetables and meats of less desirable flavor into a pot with some color and excitement. I really enjoy the fruit and berry variations they offer.

But back to the original idea, I decided to use Berry Blue Jell-O as a glue. I picked this color for its stark contrast to the materials used and I wanted to have a snack to go with the arrow I was making. The fletchings are peacock wing feathers, the shaft is Crape Myrtle, binding is b50, and the point is the bottom of a Snapple bottle that my nephew broke. A very suburban arrow.



Picture 1: The author's ingredients.

The beginning of the glue process, I pour out about 2 tablespoons onto a piece of paper. I have relatively a cup of water boiling in a pot on the stove and I add the gelatin so it can dissolve. The water evaporates a great deal and I take it off the heat so that it can thicken some. It needs to be very syrupy in texture.



Picture 2: Thick and syrupy, see the cling on the pot?

Then it is ready to be applied and I do so with a brush. I cover the area where my fletchings will lay and where my bindings will be. I then wrap the fletchings and recoat the outside of the bindings so they have a layer on their exterior. I do likewise with the glass point, applying the glue to the base of the head and inserting it into its nock in the shaft, then gluing the underlying area of where the binding will be and the outside of the binding once it is laid.



Picture 3 (top): Needs good external covering as well.

Picture 4 (bottom): This head won't move!

A couple hours to dry, and for the thicker parts of glue the next day, and the arrow was

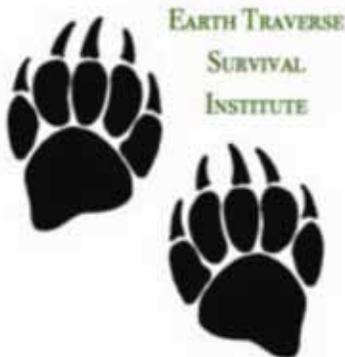


Ceilidh and Sage love Jell-O and Archery

completely shootable with an unmovable head. The fletchings didn't come loose and I shot into the dirt a few times (entirely on purpose!) Not only does this make an acceptable glue for fletching, but it also has a pleasing scent. The process was rather sticky, but tasty.

From now on, Jell-O will always be in my go bag. I might or might not fletch with it every time but I know it is suitable and worthwhile as a piece of

multipurpose kit. You could probably use it with very little water to create a small scented ball and use it as scent bait in a trap system. It would be sticky and most animals would investigate it once they smell it. At the very least, you should try this out and see how it works for you. If you don't like it as a glue you might like it as an alternate food addition. But always remember that our ancestors handed us their wisdom and though sometimes it's missing, it will always be there.



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Nail Making and Other Bad Habits

By Lon Humphrey



Finished, hand-forged nails.

If you are really serious about doing it yourself or you want that old time look, you will want to make your own hardware for your projects. Incidentally, this is a project that will teach you many of the skills (hammer control, fire maintenance) you will need to make more complex things like hinges, hooks, knives, hatchets, and etcetera.

A little history first; in the early days of this country, building materials were hard to come by and expensive. There are several accounts of homes being burned down by their owners to collect the nails before moving on westward.

Laws of Virginia, February, 1644-5 --- 19th Charles 1st. Act VII

And it is further enacted by the authority aforesaid, That it shall not be lawful for any person so deserting his plantation as afore said to burn any necessary housing that are situated thereupon, but shall receive so many nails as may be computed by 2 indifferent men were expended bout the building thereof for full satisfaction, reserving to the King all such rent as did accrue by virtue of the former grants

or planting of the same from the expiration of the first seven years.

Wheeling West Virginia was a stop off point for early pioneers to gather supplies before heading on westward and settling. One of the valuable commodities that they bought were building supplies, namely, you guessed it NAILS!

In medieval England, nails hand-shaped on an anvil were available in a variety of shapes and sizes and were sold by the hundred count. The practice of selling a particular size at so many pence denoted by the symbol "d" for "denarius", an ancient Roman penny, led to the penny measure. This is a system of size classification still used today where a 2d nail measures 1"; a 6d, 2 inches.

Ok the history lesson is over. You will need a few simple tools to do this project. First, you will need something to beat the steel on. If you are lucky

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Left: Building the shoulders of the nail.



Top Right: The hole has been drilled in the leaf spring and is ready for "sinking".



Middle Right: Sinking the nail header over the hardy hole

Bottom Right: Finished nail header.



enough to have one, an anvil will work. If not, then a chunk of rail road track with a sharp edge will do the job. You also need a hammer; a ball peen will work great for this project. You need a nail heading tool, which I will explain how to make this item since it's an uncommon item. Additionally you will need something to cut the nail from the bar, a hardy or a hot cut, and a heat source.

The Nail Heading Tool

First, find a chunk of high carbon steel. Lawn mower blades or car or truck leaf springs

would work well for this.

Cut a section about six inches long and roughly in the center of the bar about two inches from the end. Drill a 3/16 inch hole and on the other end drill a 1/4 inch hole. This will allow you to have different diameter nails and only one tool. Now take a heat on this chunk of steel, bring it up to an orange heat with your drilled hole centered over the square hole in your anvil (this is called the hardy hole), and hit it with the peen end of your hammer. This might take a couple of hits, but what you want to do is

make a dome, this process is called sinking. Once you have the header domed, take one more heat to a bright red heat and let this cool in the air. This will take all the brittleness out of the steel and allow you to use it as a tool without fear of breaking it once it is cool. Next re-drill your holes and you should be good to go.

Build thy Shoulders

I start out with a piece of round stock 5/16 inch in diameter or larger and around twenty-four inches long. A common mistake is to draw out the point of the nail and then try to head it after you have sharpened the nail.

FIRST, with your steel at an orange heat, lay about one inch of the bar perpendicular to the EDGE of the anvil, then strike with medium blows directly above the edge driving the bottom of the bar down over the edge of the anvil forming a ¼ of a shoulder. Try and hit the bar in the same exact place each time. Rotate the bar ninety degrees. Continue this until you have formed a sharp square shoulder all the way around the bar. Do not work the nail below a dark red heat or it will break and you will swear.

Once you have your shoulders formed now is the time to draw out the shank of your nail. Strike the hot steel firmly once, rotate the bar ¼ of a turn, and strike again. Keep rotating and hammering until you have drawn out the nail to a nice point. When you find your rhythm you can strike and turn without missing a beat. An experienced smith can do this on one heat.

Once you have brought your nail back up to an orange heat, 1400 to 1500 degrees Fahrenheit, you need to score the steel around where you will break it off from the bar to create the head of the nail. On your hot cut strike the steel about ¼ to 3/8 of an inch above the shoulder on the cutting edge of the hardy but do not cut it completely off. Again, do this in ¼ turns until you have a small piece of steel holding your nail to the rest of the bar.

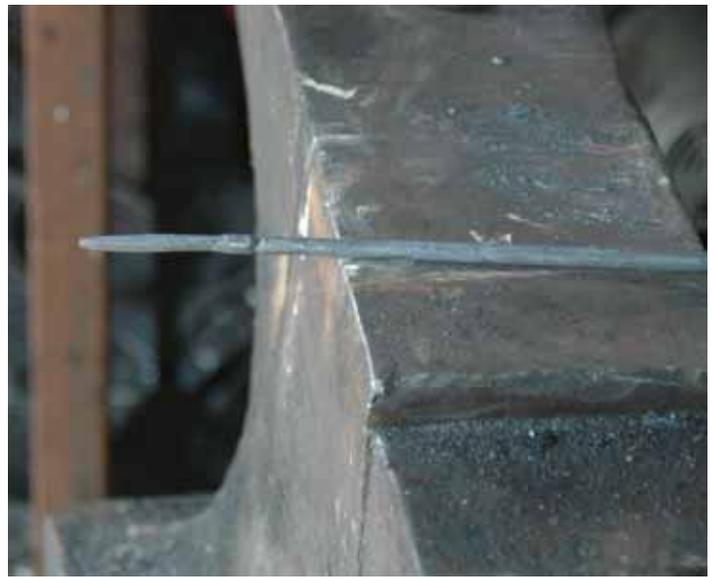
With the steel hot, place your nail in the header and break the nail off. Lay the header with the dome side up, over the hole in your anvil, and peen out the head of the nail. With practice you can do quite a few in an hour.



Top Right: nail ready for heading

Middle Right: Breaking off the nail

Bottom Right: Heading the nail



When Bushcraft Begins at 40

(A Common Man's Story)

By Paul Barrett



Paddling for shore after Canoeing instruction by Dan Moore.

There are likely some reading this that have experienced more “dirt time” in one year than I had enjoyed in my first forty! While this is regrettable to me on many levels, I made a decision a few short years ago that I would not allow regret to become an obstacle to embracing the future. I may have felt lost but rescue was coming. All the *Survival* guides provide similar advice as to what to do when you first find yourself “lost”: Stop, look around, assess your situation, and make a plan. Well, today I have a plan. I have begun to stock my toolbox with skills and have a solid read on the direction I am headed.

My first realization was that, for me, the suburbs were a prison. While I love people and their stories, I’m not a huge fan of where most people’s energies are channelled today. Trading our hard work and precious time for what (to me at least) seemed like an endless pursuit of new gadgets, name brand clothes, and fancy meals became a farce; a rat race with no finish line. The time had come to plan

my escape. Reliance on the material world and its trappings would be replaced by self-reliance and a better understanding of the natural world and its more honest pleasures.

Without at least a slight understanding of the world in which I was brought up, talk of prisons and escape may seem a little dramatic. I was, of course, taken camping and fishing as a kid. But I usually heard commands to wash my filthy, fishy hands before I heard congratulations on my two pound trout! In my family dirt was dirty, trees came from the Garden Center, and wild edibles were for squirrels. Needless to say I wasn’t one of those kids with all the latest in outdoor gear or fishing tackle. But I LOVED fishing. Without realizing it I became

Paul Barrett lives in Ontario Canada and is an outdoors enthusiast who enjoys fishing, hiking and self-reliance. Current pursuits include learning more about wild edibles and medicinals, primitive weapons and traps, off grid living and homesteading. Living more in tune with the natural world is a constant focus.





Feasting on frog legs at a local Wilderness Cooking class.

quite the minimalist fisherman by the time I was seven or eight years old. I would wander away from one of my Father's soccer games with some line and a hook in my pocket; find an appropriate stick for a rod, stone for a weight, and bubble gum for a bobber (a trick which my Dad taught me, so I won't condemn him too strongly for being a city boy!) After digging up a worm for bait I'd inevitably catch *something* with my crude gear.

By ten years old my summer days consisted of riding my bike six miles to a friend's house that lived by Lake Ontario. We'd pack a lunch and sometimes fish from six am until dark. What I find remarkable about this now is that we never really cared if we caught much. We were happy just to be out there at the small creek that fed the lake, outdoors, and in each other's company. When at thirteen I broke my leg playing sports, I took



Sampling Plantain at Wild Edibles seminar by Bob Considine.

advantage of some time off school to head to where the Salmon were running. I got my Dad to drop me off at a local park on his way to work. There I fished, crutches in tow, until he picked me up again ten hours later. It worried my parents a little leaving me there all day alone, defenseless with a broken leg. But mostly they just thought I was nuts! They looked at me with that same look many of us get when we

try to explain to people our interest in self-reliance or survival.

As a teenager and young adult I was lucky enough to be invited many times to friend's cottages. Here I began to learn where I most felt comfortable. Away from the sirens, car horns, and department stores I finally could relax. Many times I've headed back from a long weekend in the woods and felt that



Myself, with friends Jamie and Dawi, posing with Dave Canterbury.

pang of depression. Not because I was leaving the woods for home, but as I now realize, the woods *was* home. I was homesick in a way I couldn't fix.

Once I knew where I wanted home to be I began my research on how I was going to make it happen. There were so many considerations; the cold, the heat, the bugs, the money. I knew that the lifestyle I wanted would require not only a lot of work to get started, but even more work to sustain.

How to live further than a few hundred yards from the grocery store and gas station quickly became a lesson in humility. Not only did I need to learn about homesteading, alternative power and the like, I soon became interested in sustainability or self-reliance on a new level.

I think it's natural for a man walking through the woods to at some point stop and say to himself "I wonder how I would do out here on my own?" The

classic “shipwrecked” scenario, while romanticized in movies, is something I think more people have mulled over than will admit to. This is something I have wondered for a very long time. Although, if someone were to ask me now what would be my five desert island CD’s or my five desert island luxury items, I’d have to politely tell them: Cutting Tool, Combustion Device, Cover, Cordage and Container. (Thanks Dave!)

In all seriousness, my research quickly led me to the study of Survival and Bushcraft, or the term I prefer, Self-Reliance. At the tender age of 41 I was a little humbled by my lack of “tools” in the areas of navigation, water purification, wild edibles, trapping, and the list went on and on. I’d long been a fan of the Survival based TV shows but serious study was my new challenge. If I had an advantage it was my passion for learning what needed to be learned. For those of us who weren’t Boy Scouts, weren’t military trained, or even just those of us who grew up a little too close to our creature comforts, there is a feeling of having to play “catch up” that can be a little intimidating. What we do have available is information and an incredible family of outdoors enthusiasts from countless backgrounds who are willing to share their knowledge and experiences. This is not to say that a million hours on You Tube or Facebook are any substitute for actual dirt time. You definitely need to immerse yourself in practice. Knowing the tools exist is not the same as owning them.

Immediately upon starting my web research on living “off grid” I realized there was a considerable overlap between the subjects of homesteading, farming, survival, prepping, bushcraft and many other terms. This is a garden that, quite frankly, Google can’t weed for you. The term “Survival” alone can derail you very quickly from the study of outdoor skills to the rants of the paranoid. If for no other reason, this is why I embrace the term Self-Reliance. My search in this field has lead me to people and groups that not only have a wealth of knowledge and skills to share, but also have created a community of learning and sharing that is humbling to a newcomer like myself.

I have to admit, I’ve been very lucky and blessed. Before I knew the difference between a spider shelter and a bow drill, I had the good fortune to find a tight knit group of likeminded people and someone I would now describe as a friend and mentor. He and other members of our little group often stay up until the wee hours answering in great

detail some of the most “newbie” questions imaginable. If my family was a little slack on teaching me Wilderness Skills, at least they taught me “there is no such thing as a stupid question.” So when you’re online and you see those beginner questions, take a second and answer as honestly and accurately as you can. You don’t have to be an expert to contribute. Sometimes a nudge in the right direction is all it takes. I was fortunate enough to have been nudged in the direction of a local bushcraft group and the recent Pathfinder Spring Gathering. I have found that students can become teachers, and teachers can become students. The climate of learning in the self-reliance community is truly unique and exciting.

I’ve never believed in the cliché “you can’t teach an old dog new tricks.” It’s never too late to pursue new passions or rekindle old ones. And at 43 I’m very pleased to be adding new tools to my toolbox every day. But you have to get out there! You need to find people to inspire you! I am blessed to have found inspiration from many of you. I have met some amazing teachers and friends. Not long ago, when all I had was the love of the wilderness and a wonder for how to better enjoy it, a friend reminded me that “wonder is the beginning of wisdom.” With the help of many of you, I hope one day to achieve that wisdom.



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Multi-Use First Aid Items

By Jim Miller



An alcohol prep after being ignited with a ferro rod. (Photo by the Author).

It seems that when most people buy a First Aid kit, they throw it in their gear bag, never to think about it again until it is needed for some type of injury or illness. This cripples their gear planning. In reality, you should be thinking not only about redundancy in your first aid gear, but also about how many first aid items are multiple use items. In this article we will take a step back from a traditional first aid kit and discuss some of the other uses for that equipment.

Take some time and think about the components of your first aid kit. Would you be able to list the items in your kit and multiple uses for the items? Let's take a look at some typical first aid kit items and some alternate uses for them.

The first components to come to mind are antiseptics. Many kits include antiseptics like benzalkonium chloride (BZK) or hydrogen peroxide. Both are fine antiseptics that I will use at home, but they don't have as many uses as plain isopropyl alcohol. I choose alcohol preps as my field antiseptic because it not only disinfects a wound, but it can also be used as an accelerant for assisting with starting fires (Figure 1), can disinfect tools, say after using

your knife to process an animal, or you can wring the alcohol into your ear to help evaporate water in your ear. Not only that, but they also take up slightly less room in your kit, allowing you to pack more of them or save the room for other gear. Alcohol based hand sanitizers can be used for the same purposes.

Another useful antiseptic with multiple uses is 2% Tincture of Iodine. This will not only disinfect wounds, but it can also disinfect water. Polar Pure is another variation of using an iodine solution for water disinfection. Polar Pure is a glass container that contains iodine crystals. Water is poured into the container, and then becomes an iodine solution that is used to disinfect water. This solution can also be used to disinfect wounds.

Next we have triple antibiotic ointment. Most of these have a petroleum jelly base, so they can be used for many of the same uses as petroleum jelly. For example, if you need dry tinder and you don't

Depending on the day, Jim Miller can be found working as a Firefighter/EMT, or securing computer networks. While not working either job, he can be found spending time with family or doing outdoor activities such as mountain biking, fishing, kayaking, or just about anything else outdoors.



An alcohol prep as compared to a BZK pad. Note the size difference. (Photo by the Author).

have cotton balls saturated with petroleum jelly, you can saturate gauze with petroleum based triple antibiotic ointment. This can be done with most products that contain the right amounts of petroleum or wax, including some lip balms. You could also use these for chapped lips, or to lubricate the bearing block on a bow drill set. Petroleum jelly has many first aid uses. Petroleum based triple antibiotic ointment can be used in its place for most of those uses.

Tape is always an important component of a first aid kit. Most kits come with medical tape, but other tapes will work. These not only hold bandages and dressings in place and can be used for splinting, but can also be used as makeshift moleskin for blisters. Some people even remove splinters by applying duct tape and pulling the tape off of the area. Other than the medical uses, tape can be used in place of cordage in a variety of applications. Duct tape is also flammable and can be helpful in getting a fire started. Adventure Medical Kits has duct tape in 2" x 50" rolls that will fit nicely into a small first aid kit.



A gauze pad saturated with antibiotic ointment being used as tinder. (Photo by the Author).



Trauma shears and a medical pen light. (Photo by the Author).

Trauma shears are the multi-tool of pre-hospital care. They are used for safely cutting clothing off of injured patients, as well as cutting bandages. I've even used them as a bottle opener. In reality they are just heavy duty scissors. Assuming you have them in your pack, you can use them for any scissor type application. They could be useful for cutting cloth to make something, or even to help with the processing of game.

While we are on the topic of medical cutting tools, some first aid kits contain scalpels. These are just sterile, very sharp razors that can be used in some medical procedures that are more invasive than untrained people should be performing. While they are good to have in case of medical emergencies, they can also be used for anything that requires small, precise cuts. This would be especially useful in processing smaller animals.

My kits always have a small medical pen light for checking pupil reaction after a potential head injury or looking into a patient's nose, ear or mouth. If you don't think about what is in your first aid kit, you might not think that this is a backup light source that is already in your kit. Granted, they don't provide as much light as a full sized flashlight, but they will provide enough light to see what you are doing. A word of caution; these lights are typically turned on by squeezing the pen type clip against the handle. If they are stored in your pack with the clip squeezed in, your battery might be dead when you go to use it.

Many kits will contain safety pins. While these can certainly be used as a temporary repair for gear, they can fill other needs in a pinch. An open safety pin can be used as a fish hook or a gaff.



Contents of a commercial First Aid kit, slightly modified by the author. (Photo by the Author).

More advanced kits might have a syringe included. A trained person can use it to inject medications or irrigate a wound. Don't forget that they can also be used as a needle, dart tip, light weight awl, etc.

Elastic bandages are common for a variety of uses, including sprains, splinting or pressure bandages. When unrolled they can also be used in certain applications in place of cordage. Note that this material is very stretchy and will not be suitable for all cordage applications.

My first aid kits usually have a Space Emergency Blanket to control core body temperature for shock victims. These can also be handy for creating a shelter, collecting water, foraging, etc. They can be used for many of the same uses as the tarp in your pack. Your imagination is the only real limitation here.

Medical grade gloves are very important for protecting yourself from blood borne pathogens while treating others. They are also handy for processing game without contaminating your hands. In a pinch they could also be used as a makeshift water container or a waterproof container for storing

small items. (You must tie a knot in the glove to accomplish this).

Tweezers have a place in your kit for removing splinters and other small foreign bodies. Don't overlook their usefulness when it comes to any task that requires dexterity that you cannot achieve with your bare fingers, such as making fishing lures or flies in the field.

A triangular bandage can be used in splinting, creating a sling, or making a tourniquet. In reality they can be used for a number of uses that most people would not think of. They can be tied on as a bandana, used as a rough water filter, an oven mitt for touching hot materials, cordage, etc. At 40" x 40" x 56", they can be used to take the place of most cloth items.

These days many people wear contact lenses. If you carry sterile saline solution for your contact lenses, this can also be used to irrigate wounds. I would only recommend this use for actual saline solution.

Common Items and First Aid Applications

Bandanas are great for a lot of things. They



can be used as a dressing in an emergency situation. Use caution with this, as dressing an open wound with a dirty bandana could introduce an infection.

Condoms have long been used for water containers in small survival kits. Similar to the medical glove, they can also be used to waterproof small items. They can even be used as a makeshift glove.

Plastic bags are useful as a container for many things that might be in your pack. They can even be repurposed as water containers. You might not have ever thought about it, but the plastic bag can be used to make an occlusive dressing for a sucking chest wound. They could also be used to hold biohazard material such as bloody gauze.

If you have women in your group, consider the alternate uses for feminine products. Tampons are great for nose bleeds and puncture wounds. Maxi pads make excellent trauma dressings and can be used to add padding to gear straps, etc.

If you have a significant wound and you are far away from medical care, Krazy glue can be used

in place of sutures to close an open wound. It is similar to Dermabond®, which is a medical grade glue that is used for this very purpose. (I am not recommending this as a practice, but presenting this as an option for emergencies.)

As you can see, many first aid items have multiple uses that should be factored into your overall kit philosophy. Before your next outing, take out your first aid kit and familiarize yourself with the components. You will be better prepared when you need your first aid gear, and you will better understand the components of your overall pack.

Disclaimer: This article is not intended to be a substitute for proper medical training or advice. You are ultimately responsible for the actions you take during a medical emergency. Always make sure that you have proper training to use any piece of medical equipment before the need arises. Always follow the manufacturer's instructions while using medical equipment.



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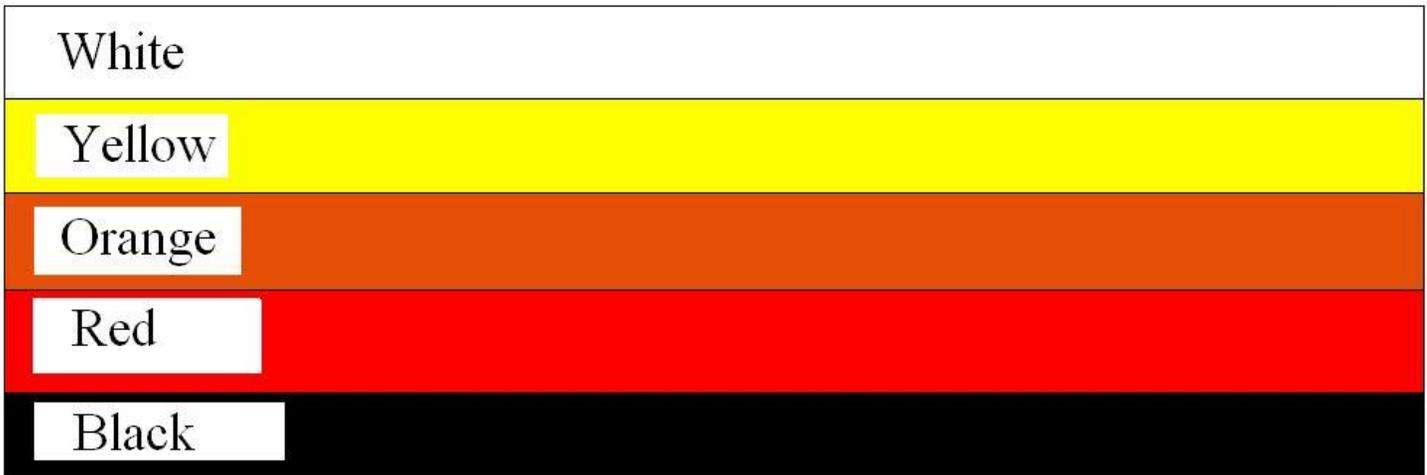
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The Color of Safety: *Awareness Color Codes and Self Reliance*

By Gert Grohmann



The Color Codes of Awareness.

Too many people move through life unaware of the world around them. They are so caught up in their own thoughts of work, paying bills, texting, talking on the phone and other issues, that they never really understand their immediate environment and therefore do not recognize potential threats to their safety. By not paying attention to their surroundings they place their safety at risk every day.

One of the benefits of living in civilization is that it provides a fairly safe and benign environment. You can be careless, inattentive, and oblivious in your day-to-day life and somehow avoid harm's way for years, until one day you run out of luck and get hurt. Perhaps your mind wanders as you start to make a left turn in traffic and get hit broadside by another car. Or you are arguing while slicing tomatoes and cut your finger badly. It only takes a moment of inattention to create a serious situation.

The same principle applies even more to spending time in the backcountry. You can be careless, inattentive, and oblivious but eventually, Mother Nature or Mr. Murphy will catch up with you. It is amazing how easily you can get lost, injure yourself, or get caught when the weather turns nasty.

You can reclaim a large measure of control over your fate through learning to observe your environment, constantly evaluating what is happening, and reacting appropriately based on this

information.

One tool that is taught under many different names is the color codes of awareness. This tool was initially used by the military back in WW II and Korea and later adapted by Col. Jeff Cooper, as well as other self defense instructors, to the civilian and law enforcement world. The color code system assists you in evaluating your state of mind and puts a color to it. This allows you to do a mental check on where your awareness is on a graduated scale and evaluate your readiness to respond to a potential threat.

The concepts behind the color codes translate well to back country activities as well as your daily life. Many people freeze when confronted with a traumatic situation because they never see it coming and they are surprised and overloaded to the point of paralysis at the instant that it happens. One reason that most emergency response personnel do not freeze is that they are responding to a situation that

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Which color code is appropriate for this situation?

they already expect and understand is bad. Another is that they have already initiated a plan of action in their heads that they will execute on their arrival.

The original military system utilized 5 colors: white, yellow, orange, red, and black. The original 5-color code was developed prior to, or early in, WWII. Col. Jeff Cooper refined it down to 4-colors in the 1950s, combining red and black. Ray Chapman went back to the 5-color code subsequently, as did John Farnam and Massad Ayoob. The 5-color version is as follows:

- **White:** You have total lack of awareness
- **Yellow:** You are at a relaxed level of alertness
- **Orange:** Your radar is up, you sense something is out of place
- **Red:** You are actively confirming that there is indeed a threat
- **Black:** You are taking immediate action based on the confirmed threat.

Why are the colors important? Simply stated, the earlier that you detect a threat to your safety, more effective your response can be.

White is where most of the world spends its time. At this level you are unaware and not watching for trouble. People in white are the ones that walk into doors and don't notice other people as they approach. They take wrong turns because they were driving on autopilot and walk off of bluffs because they didn't look around.

How many times have you been driving somewhere and after you arrive you don't remember how you got there? The next time it happens to you, understand that you were operating in white when that happened.

But you say that you can't be "on" all of the time? When is it acceptable to be in condition white? When you are at home with the doors locked, the alarm system on, and you are relaxing with your





Which color code is appropriate for this situation?

dog at your feet (most dogs are in condition yellow all of the time). Now you can turn your mind off because you have plenty of early warning systems in place. If you leave your home you should be in condition yellow.

Yellow is a relaxed state of general alertness. You are not looking for anything or anyone in particular; you simply have your head up and eyes open. You are alert and aware of your surroundings. You are difficult to surprise; you identify problems before they require your immediate attention. You don't anticipate a date with Mr. Murphy today but, if he shows up, the odds are that you will see him before he sees you.

In yellow, you might notice that your hiking partner is starting to slow their pace; you might notice that the geography isn't matching the map that you are following. Once you sense a possible problem you move to condition orange.

Orange means that something seems out of place. Not enough for you to immediately change your actions, but enough that you are paying

attention to the feeling. Your awareness is heightened and more focused. Your partner is starting to develop a limp. When checking your map, that ridge up ahead shouldn't be there.

How do you know if something is a threat? You need to look at the totality of the situation. Use all of your senses, look around for clues, listen, feel the change in temperature on your skin. Smell odors that don't belong.

When shifting to orange, you are paying more attention to a potential threat, but without losing sight of the potential that there may be other threats in your immediate area. You cannot afford to suffer from tunnel vision at this point. Continue to take in your surroundings, but pay extra attention to the item that is making you feel uncomfortable.

Here is where you start to plan your when/then scenarios. "When this happens, then this will be my reaction." You have not confirmed a threat at this point, but you should be formulating a plan based on the totality of your situation. Start determining what your assets are and what your



liabilities are. With even a simple plan already in place, you are miles ahead of where you were in yellow. If you believe the situation is an actual threat, you then escalate to Condition red.

Red means you are confirming the threat and readying your body to respond. You have verified that your instincts were correct and that there is an actual threat. You are not engaged in an active response, but you are mentally preparing to do so. Many times, even though you are in condition red you will not have to do anything because the perceived threat doesn't pan out. In those cases you just de-escalate to orange or yellow. The key is that you are mentally prepared with a plan of action and are ready to implement that plan if you need to escalate to black.

At this level, you are also determining a "trigger" that will immediately force you into action at the appropriate time. This is how you achieve the decisiveness necessary to survive. By setting your trigger, you can physically and mentally react quickly enough to deal with the problem before it deals with you. The reason that many people fail to react to a bad situation is that they never have a hard and fast triggering event, so when a situation arises, they don't react until it is too late. Most people are in denial that a situation is getting bad to the point that their safety is at risk.

If you are caught in condition white, you may never become aware of a threatening situation until after disaster strikes. Under the very best of circumstances, you will need six to ten seconds just to realize something is happening, and then you still have to get your wits about you and respond. The reality is you simply do not have that amount of time in many situations. By disciplined use of the yellow, orange, and red stages of awareness, your reaction times can be reduced from tens of seconds to nearly instantaneous.

The final Condition is black. At this point, one or more of your mental triggers has been tripped

and there should be no hesitation on implementing your plan of action. You are actively engaged in dealing with the threat.

If/then vs. When/then thinking

In order to assist with your transition between the color codes, begin to live your life thinking not about if/then scenarios, but when/then scenarios. People that fail to react to bad situations tend to think in terms of if, not when. "If that person drops over in front of me then I will do this." The individuals that react effectively will look at the situation differently. They assume that the bad thing WILL happen and they determine how they will react based on an element of certainty.

Always remember, it is best to see a bad situation developing and avoid it. Awareness of your environment comprises the majority of situational awareness. Trust and pay attention to your instincts and confirm any potential threat they perceive. If you cannot avoid the situation, then mentally prepare, have a plan, and do not hesitate: execute with full confidence and purpose once the threat has manifested itself.

Conclusion

Ultimately, the more aware you are, the more trouble you will avoid. As with any other principle or skill, the more you practice and rehearse the better you will react when the wolf is at the door. Practice using the Color Codes and if/when thinking daily, integrate them into your life and into your daily activities and hopefully you can avoid a trip to your local emergency room.



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Self Reliance in the Southwest: My Arizona Survival Kit Battery

By Scott Foster



The author's Arizona Survival Kit Battery – Winter Supplemental Kit, Summer Supplemental Kit, Vehicle Kit including Personal Kit, and other essentials.

Survivalism and survival kits are a hot topic these days made popular by the many new reality shows bearing survival themes. There is a reason why these shows are so popular. People are recognizing that planning and equipping themselves for potential emergencies away from home makes incredible life-saving sense! Consequently, interest in the art and science of self-reliance is on the rise. For nearly everyone, except those living in highly urban environments or those confined to their homes, the question is not whether to assemble and own a survival kit but rather how to assemble one that will do the job – one that will keep you alive in an emergency! The answer is not a simple one. To assemble a truly effective survival kit requires a well thought out analysis addressing three

factors: environment, conditions, and functional needs, all taking into account the region of the country where you live and travel.

My home is Arizona, a land of incredible beauty and environmental diversity highly typical of the Southwest. It is also a land of extremes. In the Sonoran Desert, temperatures can exceed 115° F in summer with available water sources fifty miles away or more. While the mountain forest regions can

Scott Foster is a free lance writer and photographer, training consultant, and educator, with a lifetime interest in the outdoors, firearms, and survival techniques. He has been exploring and enjoying his adopted state of Arizona for more than 26 years. His other many interests include bass fishing, predator hunting, and military history. Scott resides in Surprise, Arizona.



The author's vehicle kit is well stocked with an array of essentials that all fit into a heavy duty nylon utility bag. Where his vehicle goes, it goes.

exceed -20° F in winter with heavy snow conditions. How do you create an effective all-purpose survival kit taking into account the environment, conditions, and functional requirements that match all these extremes and everything in between? For me, the sensible answer was to create a survival kit battery consisting of a core survival kit that I always carry in my vehicle combined with separate, supplemental kits that are season-appropriate - one supplemental kit for winter, and one for summer. Completing the battery is an off-road emergency kit for my vehicle and a few other essential items.

My core survival kit is actually two kits in one – a personal survival kit and a vehicle survival kit. I have a compact personal kit containing core survival essentials that fits easily into a fanny pack which I carry with me when I'm hiking, hunting, or fishing. At all other times, I store the personal kit in my vehicle kit. My vehicle kit consists of additional important survival tools that I may need to access but don't necessarily want to always carry with me due to their bulk and/or weight. When heading out on

Arizona Survival Kit Battery

- Vehicle Kit
- Winter Supplemental Kit
- Summer Supplemental Kit
- Off Road Emergency Kit
- Other essentials - .40 pistol with two 15 round magazines, water, cell phone

Personal Survival Kit

- Small coffee can wrapped in cord or mule tape with lid (container, cooking vessel).
- Disposable lighters (2).
- Metal match w/striker.
- Box cutter with break-off, disposable blades
- Emergency poncho.
- Heavy duty, 3 mil 42 gallon trash bag (emergency sleeping bag/shelter).
- Mini roll of duct tape.
- Gallon zip lock bag.
- Pocket comb (to remove Cholla Cactus needles).
- Mini-first aid kit (including band aids, pain reliever, lip balm, hand sanitizer, super glue).
- Dryer lint (kindling material).





During summer months in the Arizona desert, you've got to do all you can to protect yourself from the sun. A wide brim hat, long sleeve lightweight shirt, sunscreen, and these other items are survival essentials.

firing three shots in succession. Water is the most important item of all in any survival kit. Without it, your window of survivability is extremely limited in any situation under any conditions in any environment. People can survive for weeks without food but only 3-5 days at most without water. In the Arizona desert having water is the difference between life and death.

How much will it all cost? It doesn't have to be expensive. If you already spend time in the outdoors you probably already own many of the key

ingredients. Most of the items in my battery I already owned. I just had to organize and pack it all accordingly. I also keep an eye out for bargains at garage sales and discount stores for additions to my battery. You never know what you may find that has direct or indirect application to being self-reliant!

Through methodical planning, anyone can assemble and utilize an effective survival kit battery that can not only keep you alive, but even comfortable in any survival situation. Start by assembling your personal/vehicle kit and give it a



The author's truck has its own survival kit to help keep the author from getting stranded!

Winter Supplemental Kit

- Plastic tarp
- Nylon duffle bag
- Pack
- Waterproof, insulated hunting jacket
- Insulated bibs
- Waterproof insulated boots
- Fluorescent orange wool cap
- Insulated gloves
- Wool socks
- Long underwear
- Hooded sweat shirt
- Sweat pants
- Wool sweater
- Cold weather sleeping bag
- Fluorescent orange upside down marking paint.
- Single mantle propane lantern (mainly to heat your shelter at night).
- Extra propane tanks (2)

Summer Supplemental Kit

- Pack
- Wide brim ventilated hat
- Sunscreen
- Ventilated long sleeve cotton fishing shirt
- Cotton tee shirts (2)
- Hooded sweatshirt
- Knee braces
- Roll of duct tape
- Headlamp
- Extra flashlight
- Extra folding knife
- Heavy duty plastic sheeting (for solar stills)

Off Road Emergency Vehicle Kit

- Come Along
- Tow strap
- Vehicle tool kits
- Steel cable
- Fire extinguisher
- Ax
- Bolt cutters
- Jumper cables
- Tire iron
- Shovel



Many who've never been to Arizona think it is all desert and sunshine. Much of the state is high mountain forests with brutally cold winter temperatures. The state record is -70°F. When venturing out into the high country in winter, be prepared for cold!

permanent home in your vehicle. When traveling beyond the limits of civilization, throw in your supplemental kit, your off-road emergency kit for your vehicles with the other essentials, and you are ready to enjoy your region of the country prepared, confident, and self-reliant.



The Arizona desert – beautiful, but potentially deadly.

The Primitive Blunt

By Jamie L. Burleigh



I took some pictures while I was in the process of making a primitive small game blunt tipped arrow. For most of my primitive arrow shafts I prefer to use common, local flora. There are many choices out there some of them you may not even know will make a good arrow until you cut a piece and just try it out!

The Wild rose, Willow, Hazel, and some of the sprouting shoots from maple and ash trees work well but are definitely not limited to these species as anything that looks like good straight arrow material will probably make good arrow material. Some of the sample in the last batch I collected had a lot of pithy centers and was very light weight, do not overlook these as you can cut out and make primitive self nocks and tip grooves just like you would in a simple self-cane arrow!

When I collect the shoots I like to gather 25-30 and tie them up in a bundle, this will keep them straight until they dry properly and season well so they do not have the tendency to warp or twist on you.



Take your pick of a straight shaft out of the bundle and scrape off the bark and any inner strands of fibers that may be on the outside of the shaft. I like to use the square back of my knife for this as it

not only saves on the main cutting edge, but it keeps you from accidentally cutting into the arrow shaft too deep and ruining the arrow.



If you are skilled you can also just use your sharp edge if the bark is too rough to get a smooth finish.



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

After the arrow has been scraped and fully cleaned, cut to length and straighten up the shaft if needed. There are ways that you can correct a not so straight shaft with some oil/fats and some direct heat to hand straighten these semi-dry arrows. To leave them for months to dry is a rule of thumb, but I guess if you were hungry you would surely want to speed up the process!

Time to cut in the string nock, take your knife and cut a diagonal cut as shown in the picture. If you did not have a knife I guess you could sand or scrape away with an abrasive rock.



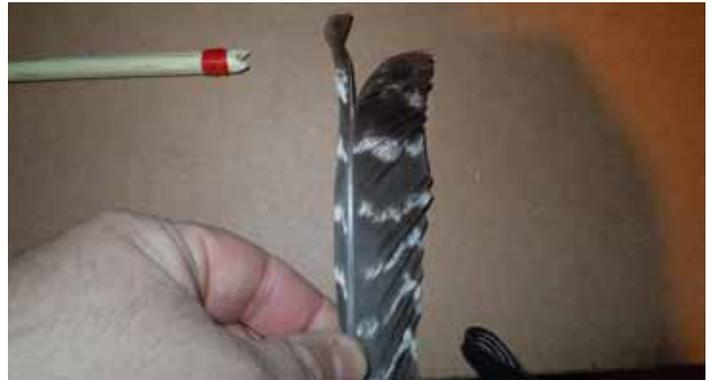
Now rotate the shaft 180 degrees, and do the same thing again.



This arrow has a pithy center so the bow string notch is already cut out for me. If this wasn't the case you would simply remove this area and then with a length of sinew or artificial sinew I reinforced the nock to prevent any splitting at the nock end.



Time to process our ONE feather. Yes just one feather will be used to make this primitive flu-flu arrow. I like this style, as it is simple and practical. Take the larger and fuller side of the turkey feather and start to pull apart at the tip grasping firmly on the quills.



Gradually work your way down to the quill.



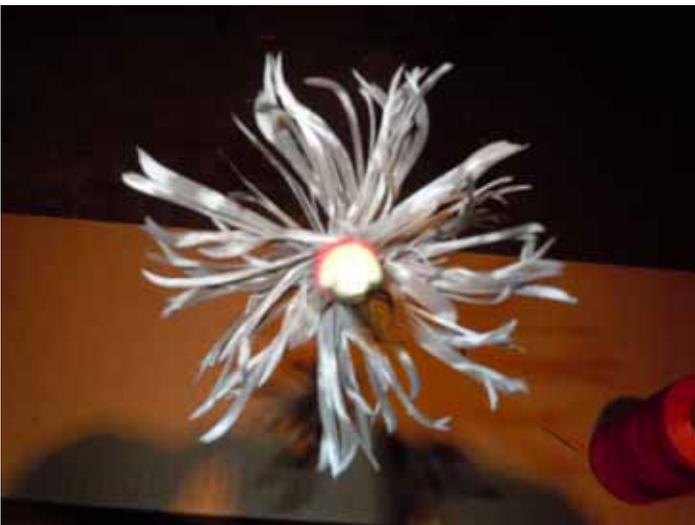
Roughly measure three fingers down from the nock end and tie off the top of the feather with artificial sinew and secure it to the shaft.



Take the feather and twist around and around the shaft until you run out of feather, then pull snugly on the quill end of the feather, push upward to tighten the flu-flu and secure the quill end with sinew once more.



Now gently work the feathers out and apart. This will make you a fine one-feather flu-flu fletching.



Sneak out your dogs chew toy of rawhide and cut a small rectangular piece! It would be better if you use a new chew toy bought from your local .99-cent store, and soak for about an hour in warm water to make it more workable.



Take a length of sinew and fold over the small piece of rawhide and secure it to the business end of your arrow.



This will dry and harden up quite nicely and with the "ears" you create by folding over the corners when you wrapped it secure onto the shaft, the "ears" will create just enough resistance in the grass and woods so it will not skip as far when you miss...but I really do not need this feature! (Just kidding)



Finally the end product. A fully functional, practical, and easy way to make a primitive flu-flu arrow. I hope you enjoyed reading this as much as I enjoyed making the arrow.



Stretching Your Survival Potential: Elastic Band Tools/Weapons

By Kevin Estela



The author and his father practicing using slingshots and spending quality father and son time together.



Here the author demonstrates how to hold the Paray dart shooter to eliminate the need for cordage attaching the elastic to the pipe.

I highly doubt many children had a childhood like mine. With a father who survived in the jungles of the Philippines during the Japanese occupation of WWII, I learned first-hand about practical self-reliance and survival skills my family used to evade the enemy and survive until the return of General Douglas MacArthur. I can vividly recall my father showing me how to turn an ordinary umbrella into a game getting arrow launcher. It is a simple process involving taking the tines out of the frame, sharpening and barbing the ends, inserting

them in the hollow tube of the body and using an elastic on the end to propel the homemade multi-pronged arrow. It worked to catch fish during the war and during my childhood it worked to keep me entertained for hours. You can imagine my delight in playing with this admittedly dangerous toy, the hours of entertainment shooting Styrofoam targets it provided, and the inspiration it created in me for a lifelong interest in studying, practicing and teaching survival skills.

With the right know-how, ordinary objects take on a whole new role in a survival situation. Even though you most likely will not have an umbrella in your survival kit, you may have other objects (commercial slingshot bands, bungee cords, elastic drawstrings) capable of game getting with some minor tweaking. For this article, I will focus on the use of bands with elastic properties to create three very potent tools.



Here are three types of elastics, surgical webbing, a bike inner tube with paracord string attachment and a commercial sling shot band.

Kevin Estela is a Survival Instructor with the Wilderness Learning Center in Chateaugay, NY where he teaches both primitive and modern skills. He is a regular guest presenter at various seminars throughout New England. Kevin tests, evaluates and reviews knives and assorted gear for various outdoor companies. He is also ranked in both Filipino Martial Arts and Brazilian Jiu Jitsu. He resides in Connecticut where he is a full-time High School History Teacher. Kevin can be reached at kevinestela@hotmail.com





Here the author has a young friend using the dart shooter practicing hitting dandelions. Demonstrating even a child could use it.

Slingshot with commercial bands, Silicon tube or condoms

I think everyone can remember when they played with their first slingshot. My father made me my first and it was more of a toy than anything else. I doubt I could have killed a fly with it. My father probably deliberately made it with weak bands to protect me from myself. Over the years, I came to love slingshots and now own a half dozen or so. From homebrew cut tree branch models to the commercially available with heavy-pull bands to the high end British imports, slingshots can provide food for the table or recreational fun. Using inner tube, surgical tubing, commercial bands, or even condoms in quantity, one can affix them to a forked branch (that doesn't have to be a perfect Y shape). Roughly cut or stripped off bark, sanded and coated with wood finish, any slingshot frame will do. I prefer a whipping knot for all attachments including bands to fork and leather pouch to band. This knot is very aggressive in its hold and I've never had a properly tied whipped end come free. Using marbles, pebbles, steel or lead shot, a slingshot can be fired very inexpensively, discreetly and regularly. Look at the gurus of slingshots and watch their ability, it is awe inspiring. You can do the same with practice! If you

don't want to spend hours hunting down your ammo, suspend a wool blanket behind your target and put a tarp down at the base. The projectiles won't puncture the blanket and will fall down where you can recycle them.

Hawaiian Sling with Slingshot band or Inner Tube

Using an old bungee tie down cord, commercial slingshot band, or any of the above listed elastic bands, a homemade version of a Hawaiian sling can be constructed. These slings are popular with skin and scuba divers for their ease of use, slim profile, and light weight. They can thrust a spear (forked is preferred if metal tips aren't available) to pin or impale aquatic critters. To make a Hawaiian sling at home, all that is needed is a long shaft such as an old ski pole, wooden dowel, cut branch, or arrow shaft. A length of elastic cord is looped and attached at the end with the same whipping knot. Arrow heads can be made out of the aluminum lids from canned food or other metal objects. To use, loop the elastic loop around your hand where your thumb and index finger webbing is and the shaft is pulled back into your hand while stretching the band. When you release pressure with your fingers the sling will send the shaft rocketing forward towards



The author demonstrating the Paray at a pond.

your target. These slings are highly effective because they have less profile in the water than an arm moving quickly to thrust a spear. Let the elastic do the work for you and you'll find your day's catch fill up quickly.

Umbrella or Tube Arrow Launcher

Perhaps the most effective tool (and the most fun) one can create with an elastic band is an arrow launcher with a tube my father calls in his native Filipino dialect, "paray." This is fashioned by taking a tube of one inch diameter and holding it at the end in one hand. In the same hand both ends of an elastic are held. A spear or arrow is placed inside the other end of the tube and the non-pointed end of it comes in contact with the elastic. You don't have to create an arrow nock but it does help. When the arrow is pinched and the elastic drawn back it is aimed and fired by releasing the grip. Barbs can be made out of coat hangers pounded flat and cut at sharp angles with a multi-tool. This tool is very accurate and extremely potent. It can be used at distances or used underwater. If used to catch fish keep the "muzzle" of it under the surface of the water. Refraction will make shots difficult if you can't judge location and by having the arrow under the water more hits will be recorded. By the light of a lantern, this is how my family caught fish in the darkness of the jungle. His

variation included a wooden frame with a trigger but considering his young age at the time and years past, he doesn't recall the exact way the trigger mechanism was created.

The creation or possession of the tools/weapons described above may be illegal in your state. I highly recommend consulting with someone about the laws in your area if you attempt to make any of the above; certainly if you plan on actually using them. I also recommend wearing eye protection and exercising extreme safety in handling and using these. Broken elastic bands can easily blind if they hit an exposed eye. Make sure to inspect bands before each draw to ensure they aren't cracked or showing serious signs of wear. These tools can send projectiles farther than expected and with deep penetration potential. Also, elastic-type bands have varying strengths (literally and figuratively) and weaknesses. Find the bands with the most pull and stretch. With that being said, look around your house, your garage, your local hardware store. You will start to appreciate seemingly benign objects for the deadly potential they have. Get creative and see what you can make with objects in your desk or office (see picture of the coat hanger dart launcher made out of a pen and some elastic band) You'll find you can "stretch" your survival potential.



Here the author shows how to grip the sling band of the Hawaiian sling to have it ready for use. Note the refraction in the water (the shaft appears to have a bend in it).

Pathfinder Youth Organization

National Pathfinder Youth Organization

By Dan Moore

Mission Statement:

- To provide our next generation the opportunity to experience the outdoors in a safe, positive learning environment.
- To inspire personal growth and self confidence by teaching and practicing the skills needed to be self reliant in the outdoors.
- To promote family oriented activities that will enhance awareness and respect of our natural environment.
- To provide training, equipment and support through an all volunteer network, at no cost to participants or their families, with an emphasis on reaching out to underprivileged youth.

The National Pathfinder Youth Organization is a 501(c)(3) charity dedicated to passing on the tribal knowledge to our youth. Inspired by Dave Canterbury (who serves on the Board of Directors) the NPYO has come a long way since its inception. We knew that we wanted to take kids out and teach the principles of the Pathfinder System, so with Dave's encouragement we did just that. Through emails and phone calls we exchanged ideas and shared our exploits with each other, but at this point we lacked any real structure. We had a grand vision, but without a plan it would only be a dream.

In the Premier Issue of SRI, I wrote about the early days of the Organization and how so many people got behind us to get it off the ground. The kids would need basic kits to use in the field, so Dave held an online auction to raise some money. The participation was awesome and Rob at canteenshop.com stepped up with huge discounts and contributions to get us going. We had a vision. We had a basic plan. We were laying the foundation upon which we could build a framework. And we had a tiger by the tail!

It was clear that it was going to take the talents and dedication of tightly knit group to build and run this organization. Bill Sigler came on board to coordinate the administration of the PYO and serves as the President. Now there were four of us, Bill, Allen Tharp, Ken Seal and me. We began to have scheduled conference calls to discuss the ongoing development of the PYO. The more we talked, the more we realized the enormity of the task

that lay before us. One of our concerns was that as we grew we would want to maintain continuity and accountability throughout the organization so that as new chapters were established, we would all be on the same page. We decided that a mentoring program should be implemented to help new chapter leaders learn the procedures of the PYO and get individual attention and support as they started their groups. Before we could figure out how such a program would work, we had a new chapter started in Michigan. I was to be the first mentor, and Joe Kellam would be the first mentee. At that time Allen and I were working on writing a curriculum for teaching the kids and Joe offered to help. We gladly accepted his offer and soon realized what a valuable addition he was. In short order and by unanimous consent, Joe was added to the core group and has been instrumental in developing the mentoring system. It's funny how things work out sometimes. Now there were five of us working on this project.

Since the PYO would be a volunteer organization, financed by donations, it was imperative that we become 501(c)(3) charity. This proved to be a higher hurdle than expected. Sonj Canterbury came on board, not only to help get this done but to serve as Vice President of the National Pathfinder Youth Organization. Bill and Sonj worked tirelessly with the attorneys at Briggs Law Firm, who

Dan Moore is a military veteran, a lifelong outdoor enthusiast who loves to hunt and fish, an experienced trapper and avid canoeist. Dan is an ACA Level 3 River Canoe Instructor and has a passion for teaching.



donated their services. Not only was there a small mountain of paperwork to complete, but the entire structure of the organization had to be carefully thought through and agreed upon by the Board of Directors. The bylaws of the corporation had to be established as well as policies and procedures. Other details include Officers, Executive Committee, Finance Committee, Accounting, Insurance, Fund Raising, Organizational Expenses etc. The list goes on, but I won't bore you with it here. Suffice it to say that a great deal of work and thought has gone into this on both the administrative and operational sides. Such work is not a burden, but a joy to take part in. The focal point is and always will be the young people who we are endeavoring to serve.

As we continue to grow and build on the framework that we now have there will be new challenges. We look forward to meeting these challenges head on and growing stronger and better able to serve the youth and the leaders that are rising up to start new chapters. If you are interested in becoming a chapter leader you can contact us through our website, pathfinderyouth.org for details.

Another way that you can participate is with a tax deductible donation. A donation of any amount will be greatly appreciated. Directors, Officers and Leaders of the NPYO are volunteers and receive no financial compensation. All proceeds go directly to

the operations of the NPYO and to equipment and supplies for sanctioned Chapters. If you would like to donate, make checks or money orders payable to the National Pathfinder Youth Organization and send to, NPYO, 2005 Church Street, Russellton Pa. 15076.

National Pathfinder Youth Organization

Board of Directors

- Allen Tharp
- Bill Sigler
- Dan Moore
- Dave Canterbury
- Joe Kellam
- Ken Seal
- Sonj Canterbury

Officers

- President: Bill Sigler
- Vice President: Sonj Canterbury
- Treasurer: Allen Tharp

As of this writing the position of Secretary is vacant and Sonj Canterbury does double duty acting as Secretary pro tem. We would like to thank all of our supporters and we look forward to growing and learning together in the future. 

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What's New at Blind Horse Knives

By Alicia McQuain



Lon smoothing the handle on an orange bushbaby.



Kevin sanding the leather backs for the machetes.

What's new at BHK's Cambridge shop.

There have been many new things for the guys at our shop. We are getting ready to ship out a new batch of our machetes that have been selling like hotcakes on our BHK Outdoors website. The machete was a brand new item for BHK and a great experience working with them, a bit larger than our average knife.

Another first for BHK is as far as I know the first scandi grind Tiger Knapp. We have had quite a few other custom knives come in as well, but the scandi grind Tiger Knapp really stood out for me and surprised me that it has taken this long for one to be ordered.

Blind Horse Knives also introduced the "Mini" (lack of a better name for now) at this past pathfinder gathering. Dan had the idea to make a "mini" of all the different models of knives that we are currently selling. This "mini" is simply the same knife just scaled down to a neck knife and was a real big hit. Although it is cute it is very usable. It works

Alicia McQuain is a wife to John McQuain and the mother of Caleb and Austin McQuain. She is also a member on a board in her church. Alicia works at Blind Horse Knives and is the Daughter of Dan and Judy Coppins. She also runs the BHK Outdoors site and you will see her in some videos for BHK and BHK Outdoors. Alicia enjoys doing anything outdoors as long as it's with her family. She enjoys camping, fishing, hiking, canoeing, and sitting by the fire with her friends and family. Alicia strives to learn more about survival and self reliance so she attends classes at events any chance she gets.



Matt gluing a black bushcrafter with orange liners.



John putting rivets in the PLSK kydex sheaths.



PLSK scouts getting ready to be assembled.



Zhen gluing the NRA sheaths up getting ready to sew.

great as a neck knife and for doing all the little chores you might use your pocket knife for. If you currently have one of our larger knives and you are really enjoying the shape I will recommend this "mini" for a companion knife. A good example is our "M.U.K.", one of our hot sellers. It's a larger knife with a great Nessmuk shape. We also just came out with the "Camp M.U.K." and it is a smaller version of the "M.U.K." The next size smaller than the "Camp M.U.K." is our "Necessary Necker" and just another step down is our "mini". We do our best at Blind Horse Knives to have something for everyone and if you are into the Nessmuk style knife we surely have something for you.

The "Camp M.U.K." was our July special. The guys in the Cambridge shop were very busy trying to get these built. This was another one of our hot-sellers and our Underground members were

really taking advantage of adding liners and coming up with some really cool color combinations. I just had an order come in for an off white handle color and lime green liners. I am very interested in seeing how that comes out. Others have chosen to upgrade to curly maple handles and some have even decided to add red liners to their curly maple handles. I love getting to see the different choices that our customers order and then getting to see them built because I will be honest, sometimes I really can't believe the color choices some of you make but to see them built changes my mind.

The Cambridge shop is also finishing up a batch of our "PLSK Scout." What a beautiful knife. I know Blind Horse Knives is known for their functionality more than their beauty but the Curly maple on a large knife just really stands out. You add the BHK logo and the pathfinder school logo and it is simply perfect! We are hoping to start shipping this batch sometime this week.

Some other important news at the Cambridge shop is our newest employee. His name is Zhen and he is in the leather shop. Judy decided she could really use an extra set of hands trying to keep up with sheaths. As you all know for every knife there is a sheath! The good news for Zhen... We now have an electric sewing machine, up until a few weeks ago Judy was sewing on a manual sewing machine... one stitch at a time. It amazes me that Judy has been able to keep up this long.

I suppose that's enough inside information for now. I need something to talk about next time. Thank you everyone for your continuous support throughout the years. We hope to continue to be your knife company.

Over and out
Alicia



Book Review by L.T. Wright

Essential Bushcraft by Ray Mears

ISBN 0-340-82971-0

I remember when I first came across this book. I couldn't put it down. From the very first words in the preface to the end, it kept me interested with both the words and the fantastic color pictures. The illustrations are very well done and easy to understand.

The first chapter takes you through planning and choosing your gear, a kind of what you need section. It does a nice job of helping you set up the basics. The chapter on cutting tools does a great job of covering knives, saws, and axes. It gives you a good outlook at what to choose and why. It also covers the different knife grips you may use in bushcraft as well as practical use of them. The ax section was very interesting to me, it covered the different sizes of axes as well as their proper use and actually goes through proper cutting of trees. The chapter on water takes you through the importance of water, finding water, collecting water, and making it safe to drink. The fire chapter is very thorough. It covers many ways to produce a flame and using tinder.

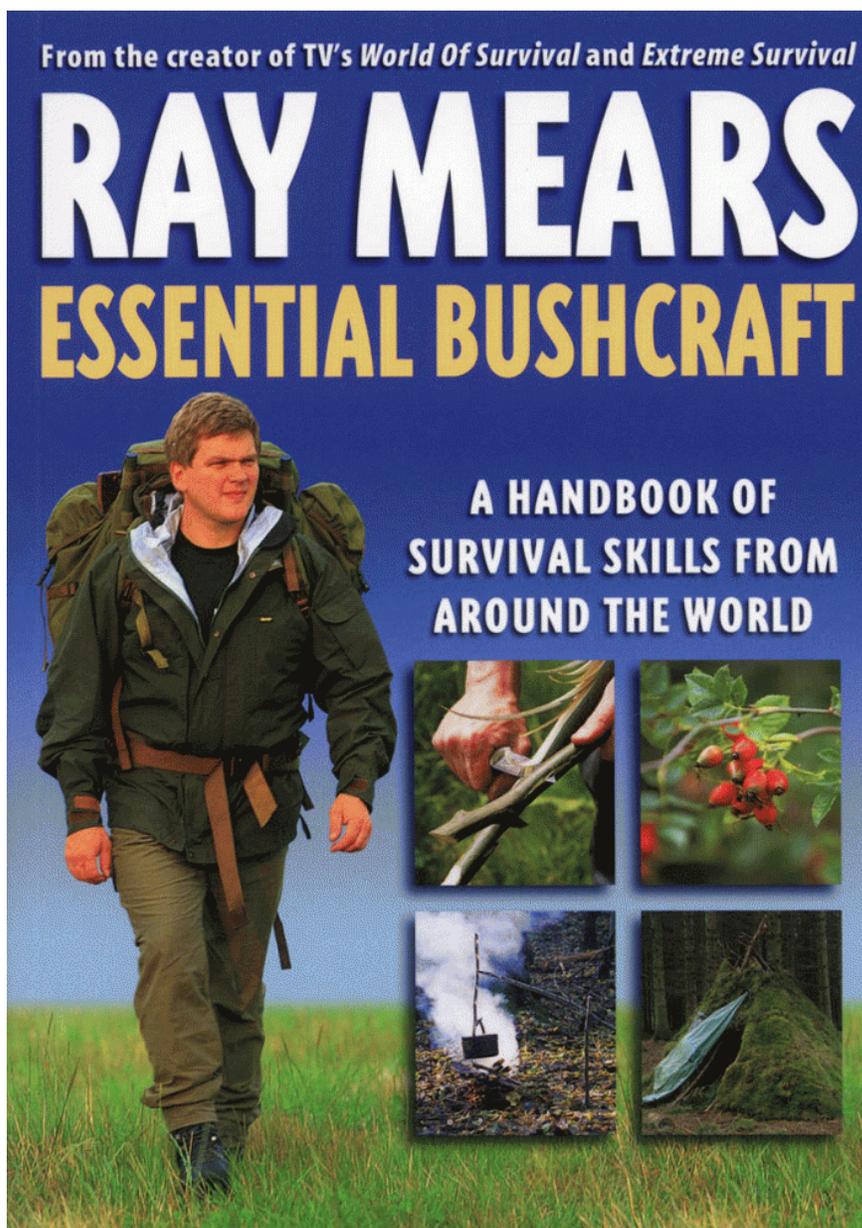
One thing I found quite interesting is the chart for the different woods for hand drills and hearth woods. There is another chart with the different woods for roasting and boiling. The cordage chapter starts off with teaching you improvised cordage and then goes right into how to make your own cordage. It also has a really nice section on how to tie knots with great drawings to guide you through.

The chapter on hitting the trail takes you on a journey through mental preparation, how to set the pace, and how to take care of your feet to keep them in walking shape. It has a great how-to navigate water and snow obstacles section that is worth reading. The last chapter

covers living off the land. It provides great explanation of calories and food deprivation. An interesting section on methods of obtaining foods from roots, to seeds to greens and fruits. It covers the do's and don'ts of mushrooms...when in doubt leave it out. He also covers seaweed and shellfish as well as insects and reptiles. There is also a section on birds and fishing.

Overall I found this to be a very knowledge-packed book. The information was well laid out and easy to understand. Whether you are a beginner to bushcraft or a seasoned veteran, this book is well worth your time. Oh yeah, once you get it and read it remember to get out and try the techniques. This is another publication that will help us all "Own our Skills"

God Bless
L.T. Wright



Pathfinder Trip Tip



By Dave Canterbury

When stuck in an emergency scenario, fire will usually become a necessity sooner or later. In less than optimum conditions where tinder is marginal or damp use your wits and think about what you have. Most hunters will have WD-40 or some sort of cleaning oil in their Backpack and in summer most of us carry bug spray. Anything that is petroleum or alcohol based will give you an accelerant to aid in keeping marginal tinder lit long enough to get a sustainable fire going. Products containing these chemicals will generally ignite with a ferrocerium rod without the need for open flame.

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