How-to: Raise Chickens Right AMERICAN

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MILITARY EFFICIENCY MEETS BACKWOODS UTILITY

The Case Winkler Pack Axe Pulls Its Weight in Camp

SURVIVAL IS A TEAM SPORT Training Others Improves Your Chances of Survival

DON'T KNOW WHAT TO GROW? Pick the Best Plants for Your Backyard Patch

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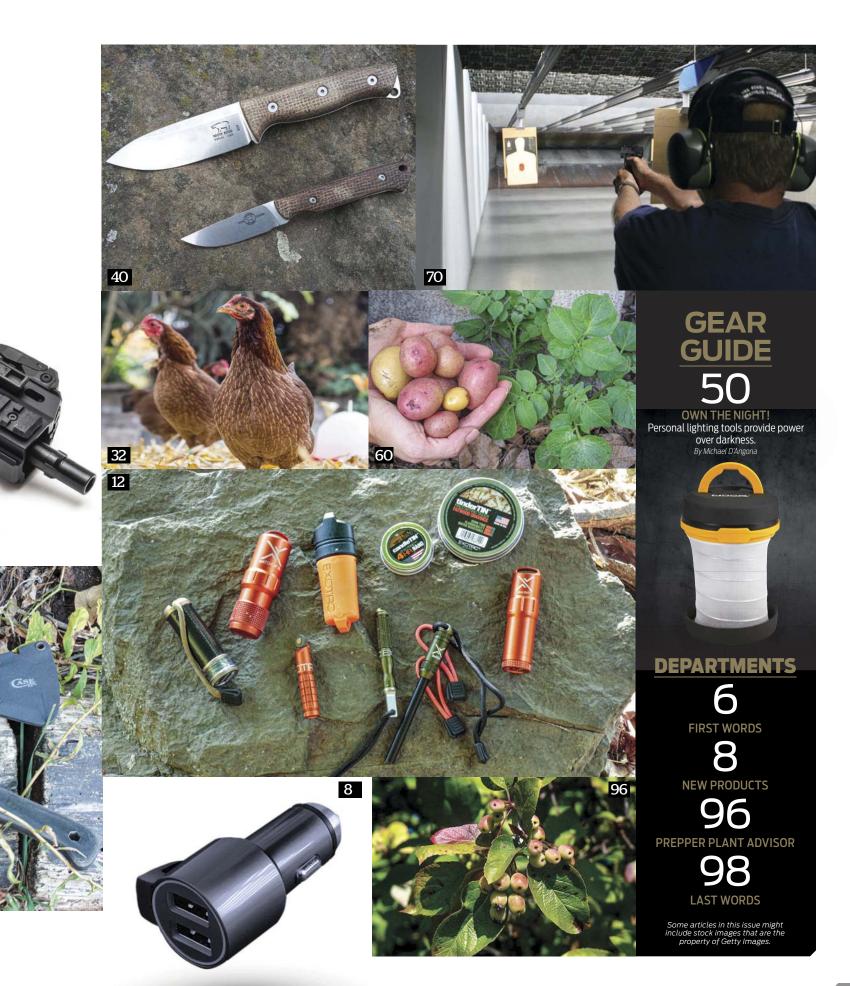
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WHO OR WHAT INSPIRES YOU?

s I sat down to write this month's "First Words" column, I tried to think of some way to "rally the troops" for the new year ahead.

It didn't take long for me to realize that I'm not really cut out to get people's blood pumping and lead the "kumbaya" chorus.

I thought about who's inspired me over my lifetime, and it occurred to me that the answers I found are probably common among most people. In my case, my parents and other older family members take up the top spots on the list. Respected friends, teachers, a boss or two, folks who accomplished goals I value and now, my kids, round out the list.

I quickly recognized that I haven't been inspired by people who talk or sing or act or try to persuade me to vote for them for a living. I value most the actions and words of those who have accomplished goals they set for themselves. In some cases, they succeeded in achievements that others set for them, such as those working at the "pointy end" of the military.

When I looked deeper into my criteria, I realized that people who "do" can be pretty inspirational. In my book, it doesn't matter what the scale or level of public recognition of the achievement is, it's more about the effort required to attain that success. What types of adversity did they have to overcome, and how did they handle the challenges along the way? When they completed the task, did they show it off to the world, or did they humbly move on to the next goal on their list?

I've never been a fan of glory hounds and self-promoters. I admire those who quietly do their thing and let others decide if it was noteworthy. In the end, a success is a success—whether others are aware of it or not. I guess this is why most of those who've inspired me have been people I know personally or professionally, not strangers I've read about or seen on a talk show. I find it harder to be inspired by people I don't know very well, although there have been exceptions.

So, because I'm equally unknown to our readers, I think it's safe to say that you have better sources of inspiration than me. Most of our readers have been living the prepping and/or survivalist lifestyle since long before I came along. To get to where you are, you've been inspired by people who knew what they were talking about.

And that's where American Survival Guide comes in. None of us or our mentors have all the answers, so we bring respected experts together to help you broaden your knowledge and skills base. I hope you're inspired by their writing as much as I am.

Two of the big takeaways from 2020 have been the significant growth in the interest in prepping and, to a lesser degree, the steady migration of people from large urban areas. As more people and businesses realize that many office jobs can be performed at home, there's a realization that "home" can be where people would prefer to live, not where they feel *compelled* to live. Relocations to a place in the country continue at a pace we haven't seen before, and this affords many people their first opportunity to plant gardens, dedicate some space to longer-term provisions and mingle with people who can help them learn to become more self-sufficient.

In my mind, cities are dehumanizing, and life in suburban and rural areas restores our connection to the Earth and each other. Because folks making this move are often "getting their hands dirty" for the first time, this gives us the opportunity to help them learn from our successes and share the wisdom we earned from our failures. In other words: You have the opportunity to inspire this wave of people to become more able to fend for themselves as you do. In fact, Dana Benner's article, "Survival Is a Team Sport" (page 86), explains the importance of welcoming these folks into the fold.

If given the opportunity to pass your expertise on and inspire others, I hope you'll take it. Thinking back, sharing our wealth (in whatever form) is one of the things that made the United States great. Let's do what we can to pass it forward.

Oh ... and Happy New Year!

All the best, Mike McCourt mmccourt@engaged.media



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SIGNATION

SOUTHERN SURVIVAL STREAMING NOW ON NETFLIX



L Zero Tolerance ZT0707 Folder

Zero Tolerance made the all-new ZT0707 to be the ultimate EDC knife. Its long, slender design provides ample blade length, while the ultra-deep-carry pocket clip and gently curved handle make it all but disappear in the pocket. The 3.5-inch drop-point blade is made from CPM-20CV steel and features a flat grind. The handle is made from machined titanium and features a steel-reinforced frame lock and ZT's proprietary Tuned Detent System. The front scale is made from premium-grade carbon fiber for weight reduction. Because of this folder's handle thickness of 0.43 inch and weight of 2.3 ounces, you won't know you're carrying the ZT0707 until you need it.

MSRP: \$310 KaiUSA.com

2 Zero Tolerance ZT0357 Folder

The ZT0357 is the latest entry into the Zero Tolerance line of hard-use knives. The 3-D-machined, textured G10 handles cover a stainless steel internal frame and a stout liner lock. The 3.25inch CPM-20CV blade opens via an integrated flipper and uses ZT's patented SpeedSafe assisted opening technology. The deep-carry pocket clip is reversible for either right- or left-handed carry. The steel frame is exposed at the pommel to reveal a generous lanyard loop. The ZT 0357 is designed to be a hardworking knife while providing all the quality materials and craftsmanship you've come to expect from Zero Tolerance.

MSRP: \$185

KaiUSA.com

3 Exotac FireROD XL

Exotac makes some of the best backcountry fire-lighting tools in the industry. The FireROD ferro rod series has been a staple in Exotac's product lineup for years. The FireROD XL builds on the innovation of its predecessor while adding new features not available in the smaller models. The waterproof, machined-aluminum handle compartment holds four pieces of quickLIGHT tinder while also holding about 12 inches of 1-inch repair tape on its exterior. The 3.95-inch-long, 0.5-inch ferro rod is the largest ever offered by Exotac. It screws into the handle, allowing for easy replacement. Each unit comes with a fireCORD lanyard and weighs about 5 ounces.

MSRP: \$59.95

Exotac.com

4 XS Sight Systems DXW2 Pistol Sights

XS Sight Systems has been an industry leader in making effective, innovative sights for combat handguns for more than 20 years. The new DXW2 sights are the latest offerings in the product line. The DXW2 sights utilize the tried-and-true Big Dot and Standard Dot tritium front sight with a white stripe, non-tritium rear sight. Each front sight uses the company's proprietary photoluminescent Glow Dot technology to allow the sight to be seen in dim light situations before it's dark enough to see the tritium. Sights are available in green, orange and yellow, with models to fit a wide variety of firearms.

MSRP: \$144 XSSights.com s the New Year is ushering in new challenges, American Survival Guide is bringing you new products to meet them. As always, we've selected quality items from trusted sources which, by themselves or paired together, will help you deal with whatever 2021 has to throw your way. From knives to accessories for your weapons to gear to keep you warm or organized, we think you'll be able to find something to help you rise to the occasion. ASG

5 Work **Tuff** Gear **Puzon Wilderness Bowie**

The Puzon Wilderness Bowie is the latest offering from the Work Tuff Gear Custom Collaboration line of knives. WTG has gained a reputation for extreme quality and innovation with its own line of knives and has offered its experience and manufacturing expertise to knife designers such as Dave Puzon. The blade features full-tang construction with an overall length of 16.7 inches. The blade is 9.3 inches of razor-sharp Japanese SK85 tool steel. The handles are 3-D-machined black G10 with red liners. Each knife weighs in at 30 ounces and is delivered with a custom-molded Kydex sheath.

MSRP: \$230 WorkTuffGear.com

6 **Beyond Anchor Belay** Jacket

Beyond Clothing's Anchor Belay Jacket is built for the coldest of crags. Waterresistant, 80 gram Primaloft Gold Luxe Insulation crafted from 100 percent postconsumer recycled materials combines with a quilted inside, providing ample heat, even when wet. The 20-denier shell has a a built-in brimmed hood, this jacket offers lasting durability and protection from the elements. Four-way stretch and articulated sleeves provide enhanced mobility, and the included stow pouch allows the jacket to be packed down for space-saving convenience when not in use.

MSRP: \$210

BeyondClothing.com

7 **Step 22 Stingray Flat Box**

Stay organized and keep your equipment protected. This collapsible box is the perfect addition to any organized adventure travel setup. With nearly endless uses, it works great for storing clothes, camera gear, food and camp kitchen necessities. Four separate handles make it easy to grab from any direction. Hook-and-loop-attached nameplates make it easy to identify contents. When it's not in use, its innovative design allows you to stow the included divider and fold the box down to about one-quarter of its open height—all within its own footprint-helping you save valuable space and easily store it when not in use. Its dimensions are 17x12x7.5 inches (open) and 17x12x2 inches (flat).

MSRP: \$85

Step22Gear.com

8 **Step 22 Pangolin Tool Roll**

STEP²²

STEP22

Step 22 has reinvented what was needed in a tool roll/bag by creating a hybrid of both. The Pangolin Tool Roll integrates three pouches for wrenches and sockets and a wrench roll, each of which can be pulled off the hook-and-loop backer so that you don't have to tote the whole lot somewhere to tighten that one loose bolt. Smaller zipper pockets at the top are perfect for specialized big pouch becomes a safe and clean spot to drop your tools or place hardware, ensuring nothing rolls away or gets lost in the dirt. The 1,000-denier coated material will stand up to being tossed around in the dirt or rocks ... or when that leaky faucet needs some quick attention. Its rolled dimensions are approximately 14x7.5x6 inches.

MSRP: \$145 Step22Gear.com

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9

Thyrm CellVault 18 Rechargeable Battery Storage

Tactical flashlights are better, cheaper and more powerful than ever before. However, these high-tech lights require high-tech, high-capacity batteries. Thyrm has leveraged its experience and manufacturing abilities to create the new Cellvault 18. Designed to carry an 18650 or 18350 lithium battery, these new CellVaults will keep your batteries easily accessible and fully protected. Improvements such as a clear side window and metal locking latches ensure you can check your gear's status at a glance and know that it's safe from water, dust and dirt.

MSRP: \$24.99

Thyrm.com

10 Dark Energy 3-in-1 USB Car Adaptor

"Multi-use," "practical," "powerful" and "strong" are all words that come to mind when discussing the Dark Energy product line. The new, 3-in-1 USB Car Adaptor is no exception. Most car adaptors do only one thing. However, the 3-in-1 Adaptor is completely constructed of metal and features two 2.4-amp power ports that are fast-charge ready. Unplugging the adaptor reveals a hardened steel glass breaker for shattering car windows in an emergency. Built into the body of the adaptor is a protected, razor-sharp belt cutter for removing stuck seatbelts. All this utility is built into a fully functional item that should always be kept in your car.

MSRP: \$29.99

DarkEnergy.com

11 Fenix E12 V2.0 EDC Flashlight

The Fenix E12 V2.0 EDC Flashlight is a new take on an old concept. With the E12, Fenix has made a compact, powerful flashlight that's easy to carry, use and power. The E12 starts with a 3-inchlong body that's made from 6061-T6 aluminum. The ultra-thin optical lens delivers a soft, balanced beam of light with a maximum distance of 223 feet. The user can select outputs from 5, 30 and 160 lumens by pressing the tail cap switch. The light is powered by easy-tofind alkaline or Ni-MH AA batteries. The included pocket clip positions the light for bezel-down carry and also allows it to be clipped to the brim of a hat.

MSRP: \$36

FenixLighting.com

12 Live Free Armory LF320 Elite Slide

Live Free Armory has focused its considerable talents in aerospace-grade manufacturing and machining on making custom, premiumgrade slides for the SIG SAUER P320. Each slide is precision cut from a solid billet of 416 stainless steel and expertly heat treated for strength and durability. The Elite Slide has been engineered for improved ejection and overall function. Each slide is available specifically machined for a variety of optics, thus providing a precision fit and eliminating the need for adaptor plates. In addition, each slide is finished with your choice of a variety of Cerakote finishes. All LF320 slides are fully compatible with factory SIG SAUER sights, internal parts and components.

MSRP: Starting at \$299 LiveFreeArmory.com



13 Olight Baldr Mini Weapon Light

Olight is no stranger to creating powerful weapon lights and laser aiming devices. The Baldr Mini combines both of these tools into a compact, highly adaptable chassis designed to be mounted on today's combat handguns. The Baldr Mini starts with rail adaptors designed to fit either Glock or Picatinny rails. The adjustable, built-in rail allows the Baldr to adapt to a wide variety of weapon platforms. The chassis carries a 600-lumen white light with a maximum 40-minute runtime and a green laser sight built into the white light bezel. The Baldr can be used "light only," "laser only" or "laser/light combined" and is activated with ambidextrous switches. The integrated battery is charged using the included magnetic charging dock.

MSRP: \$129.95 OlightWorld.com

14 Hill People Gear Lever Light Mount V2

Hill People Gear realizes that leveraction rifles carried in the backcountry are not only hunting rifles, they're defensive tools as well. Being able to see your target is the first step in engaging it. The new Lever Light Mount V2 is an MLOK light mount designed to fit a wide variety of lever-action rifles. Two hard-anodized aluminum side plates sandwich the MLOK mounting plate, allowing the mount to be used with everything from pistol-caliber carbines to .45-70 rifles. This mount allows the user to directly mount MLOK accessories or install a Picatinny rail for greater flexibility

MSRP: \$110

HillPeopleGear.com

15 Fenix TK11 Tactical Flashlight

The all-new Fenix TK11 Tac is a premium tactical flashlight with a twist. As you would expect from Fenix, the light is made from 6061-T6 aluminum and is finished with HAIII hard anodizing. The TK11 has dual fuel capability and can run on either an 18650 rechargeable battery or two CR123 lithium cells. The TK11 is impact resistant up to 1 meter and is IP68 rated for up to 2 meters of submersion. The light provides the option of 50, 500 The multi-function tail cap can be twisted to select "tactical" mode. which provides instant access to high output and strobe, or "duty" mode, which allows access to all light levels.

MSRP: \$98

FenixLighting.com

16 Werkz M6 IWB Weaponlight Holster

Werkz specializes in building premium-grade Kydex holsters for light-bearing handguns. While the M6 IWB/AIWB holster is available for a variety of weapon lights, Werkz has just released an M6 series that's compatible with the Olight Baldr Mini light/laser combo. Currently, Werkz makes holsters for Glock, SIG SAUER and Springfield Armory handguns. Each M6 is precision fit to a specific light/handgun combination. Each holster is optics-ready, allows for suppressor pass-through and will accommodate suppressor-height sights. Each holster is cut to allow a full grip on the gun and features a concealment claw and multiple belt-mounting options. Holsters molded for the Baldr Mini also allow the light to be connected to the charging cable while holstered.

MSRP: \$60 Werkz.com



ESSENTIAL FIRESTARTING GEAR

TRUST EXOTAC AND ZIPPO WHEN YOU NEED TO GET YOUR FIRE GOING.

BY STEVEN PAUL BARLOW

ou can practice fire-by-friction techniques for endless hours. You can search for the perfect hunk of flint to make beautiful, lifesaving sparks with a piece of carbon steel. But the best way to come close to a guarantee that

you'll have fire when you need it most is to carry proven fire-starting gear with you whenever you step off pavement.

I MUST HAVE FIRE!

In good conditions, I rely on fire to keep me warm, to purify my water, cook my meals, generate smoke to ward off insects and keep beasts—both real and imaginary—at a safe distance in the dark.

However, in a survival situation, fire isn't merely a convenience. It can be a life-or-death matter to have it. There are innumerable reasons you might be caught out unexpectedly overnight. Fire will allow you to dry your clothes, if necessary, and help you ward off hypothermia. And, in the winter, you have the added threat of frostbite.



> Exotac specializes in American-made products for firestarting.

> So, when your snowmobile breaks down and you're stuck miles from anywhere, you'd better have starting a fire near the top of your priority list.

> Call me "obsessed" if you want, but I never go into the woods without multiple ways to make a fire. Lighters can run out of fuel. Butane lighters can be finicky in extreme cold or at high elevations. I love ferro rods, but most require two hands to operate. But what if I'm injured?

I can play the "What if?" game until I go absolutely crazy. For my own sanity, I've resolved to carry different ways to make fire. And, after many years and lots of smoke in my eyes from damp firewood, the products I've chosen are mostly from Exotac and Zippo.

NEW FROM EXOTAC

Exotac specializes in American-made fire-starting products. Recently, Exotac announced its new fireROD XL. This is the largest ferro rod the company has offered. Its ferro element is 3.95 inches long. If, after lighting thousands of fires, it should ever wear out, the rod, itself, is replaceable. The metal handle end of the fireROD XL features a waterproof storage compartment large enough to store four pieces of the company's quickLIGHT tinder. In addition, wrapped around the handle are about 12 inches of 1-inch-wide repair

> Being able to light a fire can be critical in a survival situation. Make sure you have the right gear—and practice your techniques before you need them.







> Above, left: The Zippo SureFire Multi-Tool incorporates several tools that can be used to prepare tinder and spark a fire to life.

> Above, right: The Zippo Surefire Multi-Tool's flint wheel sparker has slots for storing extra flints.

> Below: The new Exotac fireROD XL is a large ferro rod with tinder storage in the handle and repair tape wrapped around it. (Photo: Exotac)

" … THE BEST WAY TO COME CLOSE TO A GUARANTEE THAT YOU'LL HAVE FIRE WHEN YOU NEED IT MOST IS TO CARRY PROVEN FIRE-STARTING GEAR WITH YOU WHENEVER YOU STEP OFF PAVEMENT."

tape. The FireCord lanyard that's included also has a strand of tinder material inside. While Exotac was at it, it improved its original fireROD. This ferro rod is 5/16 inch in diameter and 3.1 inches long. Many fixed-blade knife sheaths have loops especially intended for ferro rods. The Exotac fireROD would be a good choice for stowing in one of these. Its waterproof compartment is smaller than that of the XL model, but it still holds one piece of quickLIGHT tinder. The rod is replaceable too. A FireCord lanyard is included. Another new product from Exotac is the toolROLL. This roll-up package has pockets to keep your fire-starting gear and other survival or EDC items organized in one kit.

EXOTAC EVERYWHERE

I must have Exotac products in every pack and bag I own. My favorites from this company are the nanoSTRIKER XL and the nanoSPARK. The nanoSTRIKER XL is a small ferro rod in a tube. I always include a ferrocerium rod in my kits because they still work after they get

wet, and you can light more fires with them than anything else available for their size and weight. However, ferro rods can break ... and I've had them corrode.

I like this Exotac model because it has a screw-on, protective aluminum cover and a screw-on striker. Unscrew the cover and attach it to the other end to extend the handle. It's small—3.65 inches overall, including the handle and ¼-inch-diameter rod—but that makes it easier to tuck into a pocket or include in a pocket-sized survival kit.

I love my Exotac nanoSPARK. It's a flint sparker with a metal striking wheel in an aluminum housing that has a waterproof compartment designed to contain one quickLIGHT tinder tab and a spare flint or two. It uses common lighter flints. The unit is just 2.7 inches long and can be operated

Exotac fireROD XL Replaceable Ferro Rod

Key Product Spec

Length: 3.95 inches Waterproof storage has pieces of quickLIGHT tinder Approximately 12 inches of 1-inch-wide repair tape FireCord lanyard Weight: 5 ounces

MSRP: \$59.95





> *Above:* The Exotac titanLIGHT provides a powerful flame and doesn't require you to keep your finger on the fuel valve to keep it lit.



with one hand. I've used it to light camp stoves and my homemade alcohol stoves, as well as natural tinder material.

Another good Exotac fire-starter is the titanLIGHT. This is a lighter "on steroids" that uses liquid lighter fluid and produces a large flame. But, unlike other lighters, the fluid in the titanLIGHT is contained in a reservoir sealed with an O-ring. A second O-ring seals the screw-on cap that protects the flint-and-wheel mechanism. Unlike other fluid lighters, the fluid doesn't evaporate. As an experiment, I filled one with fluid about two years ago and set it aside. I take it out every so often to see if it still lights. It always does.

If you opt to include disposable butane lighters in your kit (I've got some of them too), you might consider the Exotac fireSLEEVE. This is a flexible plastic cocoon for a full-sized BIC lighter. It protects the lighter's flint and wheel from getting wet. A portion of the fireSLEEVE can be stretched over the lighter's fuel valve so you can keep the lighter lit without holding your thumb on the valve.

CATCH THE SPARK

If I haven't put you to sleep yet, you might have noticed that several of the Exotac firestarters include tinder compartments. That's a great feature. I usually keep the tinder there in reserve for emergencies or for times I'm having trouble locating sufficient dry natural tinder material. Exotac also provides tinderZIPS. These are zipper pulls that, like the company's fireCORD, have a strand of tinder material inside. I have them attached to some of the zippers on my jackets and packs.

SUSTAIN THE SPARK

From spark to ember to tiny flame, a fire is a fragile thing in its infancy. However, the best tinder materials to catch a spark are usually the fastest to burn to ashes. You can soak your cotton in petroleum jelly if you want to deal with that mess. For a fire extender, I usually keep it simple and include some tealight candles in my fire kit. Once I have a tiny flame, I light a candle and then push that under my fire lay.

Exotac offers its candleTINs in two sizes. I use the small Nano units that come in a threepack. These tins have screw-on lids and contain beeswax candles that burn for up to four hours—much longer than a tealight candle that's about the same size. You can keep the empty tins to restock with candles or to store other small items.

(Another good product, but not from Exotac, is Pyro Putty. This, too, comes in tins you can reuse later. Fluff up a small piece of Pyro Putty and, not only does it catch a spark, a small ball of it will burn for about 15 minutes. It's waterproof, nontoxic and comes in four formulas: Warm Weather, Cold Weather, All Natural and Ultra Lightweight.)

ZIPPO, OF COURSE

I wouldn't be a devotee of fire-starting products if I didn't also use Zippo lighters. These



The new Exotac toolROLL is a soft-sided organizer for your fire-starting kit or other survival gear. (Photo: Exotac)



 \checkmark The tool ROLL also has pockets suitable for storing your fire-starting gear. (Photo: Exotac)

" ... IN A SURVIVAL SITUATION, FIRE ISN'T MERELY A CONVENIENCE. IT CAN BE A LIFE-OR-DEATH MATTER TO HAVE IT."

Zippo Emergency Fire Kit

Key Product Specs

Zippo flint spark wheel
 Includes 5 paraffin-coated tinder rolls
 Water-resistant storage
 compartment for tinder
 Floats on water
 One-handed operation
 Molded lanyard hole
 Height: 4.0 inches
 Diameter: 1.13 inches
 Weight: 1.6 ounces

> Above: The Zippo Emergency Fire Kit uses a flint wheel sparker to light the Easy Spark Tinder rolls that are stored inside.

lighters are simple and dependable, and you don't have to keep your thumb on a fuel valve to keep them lit. Their flat shape makes them comfortable for pocket carry. The flints and wicks are easy to replace; and, if your lighter still won't work, Zippo will fix it for free.

No one in the movies carries a flashlight, but everyone in the movies has a Zippo to light the way. Woods wanderers have been using them to light fires since the 1930s. (And, because they come embellished with so many variations of artwork and designs, you're making an individual "fashion statement" with the particular Zippo you choose to carry!)

No, they're not perfect. The lighter fluid used to fuel them evaporates, and you have to refill them every two or three weeks. Additionally, if you overfill one of these and put it in your pocket, fluid can seep through and give your skin a chemical burn. Nevertheless, I find one filling is usually enough for most short trips I take. For longer adventures or for inclusion in a kit that I might store for months, I include a small aluminum Zippo fuel canister that holds one lighter filling that doesn't evaporate.

ZIPPO BUTANE, ELECTRIC INSERTS

If you'd rather not bother refueling a traditional Zippo regularly, Zippo still has a few answers: It now makes butane and electric inserts that fit inside any standard flip-top Zippo lighter sleeve. So, you can update your favorite Zippo with either a single- or dual-flame butane insert or with the electric insert that features a USB-rechargeable battery that powers two electric arcs used to > Top right: The Zippo Typhoon Match Kit holds Typhoon matches that are water resistant and have a 30-second burn time.

> *Middle:* The striker pad of the Zippo Typhoon Match Kit is also protected by a pop-off cover. Extra striker pads are included.







> Bottom: Great companions–Zippo also owns W.R. Case & Sons Cutlery Company.



Zippo has teamed with Woodchuck USA in a "Buy One. Plant One." program to help reforestation efforts across six continents.

Here's how it works: Buy a Zippo lighter from the company's Fight Fire With Fire Collection, and the two organizations will plant a tree in a hard-hit area. In 2019, the program concentrated its efforts in Madagascar. In 2020, the focus moved a bit closer to home (Lassen National Park near Hat Creek, California, which has been hit with devastating fires).

These special lighters feature real wood sleeves with laser-cut decorative patterns and are wrapped around standard Zippo metal lighters. Each lighter comes with a special code. Enter that code at WoodchuckUSA.com/Zippo, and you can find exactly where your tree was planted. light a fire. The electric insert is especially useful in windy conditions. Zippo's Flex-Neck Utility Lighter is a refillable butane model that's good to have around camp when you need additional reach to light a stove, candle, lantern or grill.

(By the way, Zippo isn't the only source of electric lighters: I've used a couple models of Tesla lighters, available from Survival Frog, and have found them to be very good. They, too, feature dual electric arcs for fire-starting.)

SUREFIRE MULTI-TOOL

Another recent product from Zippo is its SureFire Multi-Tool. It features a flint spark wheel that swings out from the tool like a knife blade. It has two slots for extra flints. On the other side is a foldout tool for processing tinder. It looks like a small cheese grater. It works very well for making wood shavings for tinder.

The SureFire Multi-Tool also features a knife blade, saw and a combination bottle opener and flathead screwdriver. A short length of fire paracord is attached to the lanyard ring. At its core is a strand of wax-coated tinder material. I wouldn't rely on the knife blade or saw as my primary cutting tools but, for fire-starting purposes, this is a useful tool.

EMERGENCY FIRE KIT

Beyond Zippo's traditional lighters, the Emergency Fire Kit is my favorite Zippo product. It's an excellent piece of fire-starting gear. It's a flint-and-wheel sparker with a screw-on cap to protect the mechanism. In the bottom of the plastic housing is an O-ring-sealed

"MAINTAIN THE DISCIPLINE OF GATHERING ENOUGH FIRE-MAKING MATERIALS BEFORE STRIKING THAT FIRST SPARK—AND REMEMBER TO CARRY YOUR FAVORITE FIRE-STARTING GEAR."



> In addition to its liquid fuel lighters (right), Zippo also offers inserts to turn your traditional Zippo into a butane lighter (left) or electric arc lighter (center). PVS-30 Limited Supply Like New, Factory Refurbished 1 Year Warranty 60% Off the cost of a new one



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"CALL ME 'OBSESSED' IF YOU WANT, BUT I NEVER GO INTO THE WOODS WITHOUT MULTIPLE WAYS TO MAKE FIRE."

compartment used to store five rolls of the company's Easy Spark Tinder. These rolls are made of compressed cotton treated with paraffin. They look like tiny rolls of toilet paper. Fluff a piece of one of these rolls, and it'll take a spark. You can insert a stick in the hole of a tinder roll so that once you light it, you can extend it into your fire lay. The kit floats too.

ZIPPO MAG STRIKE

Zippo also makes a ferro rod. Called the Mag Strike, it's built into a triangular plastic housing that's easy to grip. The snap-on cover that protects the ferro rod also incorporates the metal striker.

WHAT ABOUT MATCHES?

One good thing about matches is that you can light one, put it in your fire lay and back off without having to hold a lighter there. However, if you opt to use matches, don't go "old school."

Exotac and Zippo both make waterproof match containers. The Exotac MATCHCAP XL is sized to hold the dependable UCO Stormproof matches. The Zippo Typhoon Match Kit is larger and stores jumbo-sized Typhoon matches that are treated to be water resistant. They burn for about 30 seconds.

PRACTICE MAKES PROFICIENT

You might never be perfect at starting a fire, especially in poor conditions. But the only way you can become relatively proficient at it is to practice: On any hike or hunt, train yourself to look for sources of natural tinder. Pick a couple of dried milkweed or cattail pods. Shred the thinnest layers of birch bark. In winter, look for standing dead trees above the snow. Carve away wet outer layers of wood in really wet conditions.

Maintain the discipline of gathering enough fire-making materials before striking that first spark—and remember to carry your favorite fire-starting gear. **ASG**

> Right: The Exotac nanoSPARK in action. This device can be used with one hand to shower sparks to light tinder, a stove or a lantern.





> Above: Zippo firestarting gear goes well beyond the company's famous lighters.

> *Left:* The Exotac fireSLEEVE holds and protects a full-sized BIC lighter from the elements.

SOURCES

BIC ShopBIC.com

Exotac (888) 568-9347 Exotac.com

Pyro Putty (800) 790-4480 PyroPutty.com

Tesla Lighters (800) 773-7737 SurvivalFrog.com

UCO Gear (888) 297-6062 UCOGear.com

Zippo (888) 442-1932 Zippo.com

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BETERSCORES APERFECTION

THE COMPANY'S LARGE-FORMAT PISTOL PUMPS 10MM POWER INTO THE DISCREET AND PORTABLE APC PLATFORM.

hings have gotten a little strange in this world, what with the "mostly" peaceful protests" that the news media and all of us keep talking about. Gun sales are at an all-time high, and recent figures for the month of August show that we've already easily exceeded the number of firearms sold for the *entirety* of 2019.

People are worried—and for good reason. No longer is it the random robber or burglar we're worried about. Now, we have to worry about being attacked by a frenzied mob. It's little wonder that people are looking for "more comprehensive" defensive guns than just the standard compact carry pistol. That's why pistol-caliber carbines and large-format pistols are becoming so popular. They're a step up from a standard carry pistol, with the ability to offer more capacity and a stable, more accurate shooting platform. This keeps the package more compact and more portable than a full-

"IF 10MM IS YOUR 'SHTICK,' AND YOU WON'T SETTLE FOR LESS THAN THE VERY BEST, THE APC 10 PRO IS THE ONLY STOP YOU HAVE TO MAKE." blown rifle. And, for use inside the home, the noise signature is significantly less than a rifle-caliber firearm.

While there are lots of pistol-caliber carbines and large-format pistols that shoot 9mm rounds on the market, there are very few available in the more powerful 10mm chambering—especially outside of an AR form factor.

B&T Arms has recently introduced a new large-format, 10mm pistol for the American market for those of us who want just a little extra "umph" from our bridge weapon-of-choice.

MEET THE APC 10 PRO

Brügger & Thomet of Switzerland has enjoyed quite a bit of success recently. This includes the U.S. Army's selection of the company's APC9K subcompact weapon platform as its go-to defensive weapon for special units that protect diplomats and other officials who are considered high-risk personnel. In a fully automatic firearm and in a shorter barrel, the 9mm round makes sense,

Performance Results

	ACCURACY		
	VELOCITY (FPS)	AVERAGE (INCHES)	BEST GROUP (INCHES)
Speer 200-grain Gold Dot Hollow Point	1,104	0.69	0.295
Federal 200-grain HST	1,135	1.06	0.880
Sig Sauer 180-grain Elite V-Crown	1,230	1.28	0.960
Buffalo Bore 21A 200-grain FMJ	1,228	1.18	1.060
Buffalo Bore 21B 200-grain JHP	1,394	1.31	1.120

Notes:

Bullet weight is measured in grains

 Velocity is measured in feet per second (fps), 15 feet from the muzzle by a Competition Electronics ProChrono digital chronograph.

• Accuracy is in inches for three five-shot groups at 25 yards with a red-dot sight installed.

because it's controllable, and multiple hits from a faster fire rate help ensure the target is neutralized. In a semi-automatic form factor, I'm not quite as impressed with the 9mm's performance from a shorter barrel.

I think that's where 10mm steps in to shine.

It seems that others also felt this way and petitioned B&T to come out with a 10mm variant of its APC platform. In quick fashion, B&T listened to the desires of consumers and responded with the introduction of the APC 10 Pro. In almost all respects, except for size, weight and caliber, the APC 10 Pro for the American market is virtually identical to the APC 9 Pro.

Like the APC 9 Pro, the APC 10 Pro is a straight blowback-operated firearm, but because of the higher pressures involved, the APC 10 Pro includes a larger and heavier bolt to properly cycle. For the American market, the APC series of firearms is manufactured as pistols without the inclusion of a stock that would make them a short-barreled rifle. However,

> because they're large-format pistols, the addition of a stabilizing pistol brace is possible in order to make shooting them an easier and more comfortable affair.

There are many pistol braces available

Far left, top: A standard AR-15-style pistol grip is fitted to the APC 10 Pro and can be swapped out for other compatible grips.

 Middle: The 6.9-inch barrel comes complete with a tri-lug profile for fitting a suppressor.

 Far left, bottom: The non-recip- rocating, ambidextrous charging handle folds down out of the way for easier handling.
 > Top right and bottom: The APC 10 Pro comes with backup, fold-down battle sights for when an optic isn't used.

Brügger & Thomet APC 10 Pro

Specifications

Caliber: 10mm
Action: Blowback
Receiver: Polymer lower
Barrel length: 6.9 inches
Overall length: 15.15 inches
Weight: 6.1 pounds
Finish: Matte black
Sight: Folding, low-profile, adjustable
Capacity: 15+1
Magazine: one (1) 15-round

MSRP: \$2,650 (\$3,439 as configured)

> *Middle right*: The review pistol came with the APC 10 Pro telescoping adapter for the Tailhook Mod 1 pistol brace.

APC10

for the APC 10 Pro. The one I received for review included B&T's telescopic brace adapter, which works with Gearhead Works Tailhook Mod 1 brace. This is a very "sexy," although expensive, piece of engineering that has rails on either side of the pistol that extend when the user simply pulls the Tailhook Mod 1's brace rearward.

The rails have included cutouts that will lock the rails at varying lengths of pull. To collapse the rails back into the shortest configuration, the user simply presses on a tab located at the end of the receiver to unlock the rails and slide the brace forward again. Extending the rails to their full length is a very quick and intuitive operation, making this setup ideal for a fast-moving, tactical environment.

"... MOST IMPORTANTLY FOR SOME—THE APC 10 PRO ACCEPTS GLOCK-STYLE 10MM MAGAZINES."



Far let zines we very rel

GOING PRO

The APC 10 Pro includes all the upgraded featu added to improve the functionality and ergonom First, the pistol grip can be separated from the out with a standard AR-style grip. There are mar user can tailor the grip to their particular liking.

Additionally, the APC 10 features ambidextrous handles. This essentially means the charging har fired. This is important, because there's not a lot support hand, and a reciprocating charging hand thumb during fire.

Other Pro features on the APC 10 Pro include a release that's easily accessible from either side. *I* been redesigned from a push-button style to mo preventing accidental engagement.

Although not necessarily "Pro" features, the APC 10 also includes folding polymer battle sights to act as a backup for an optic, as well as Picatinny rails at 12, 3, 6 and 9 o'clock for the attachment of additional accessories. Finally-and most importantly for some-the APC 10 Pro accepts Glock-style 10mm magazines. The APC 10 Pro ships with one 15-round Glock 20 magazine.

The ability to accept Glock 10mm magazines allows the user to swap magazines back and forth from the powerful G20 (or G29) pistol to the APC 10 Pro. This is a truly hard-hitting and effective combination to have on hand. While it's generally recommended to use Kriss USA's MagEx2 extended, 33-round magazines with the APC 10 Pro, I decided to try a couple of cheaper alternatives for the purposes of this review.

I bought a couple of magazines each of the ETS 30-rounders and SGM's 30-round magazines. I was curious to see how well these mags functioned, as well as to see if it was worth saving a little money (but if you can afford the APC 10 Pro, you're probably not going to sweat the price of the Kriss magazines).

THE NOVICE AND THE PRO

For range testing, I asked a couple of friends to go with me to try out the APC 10 Pro. Lincoln, who's a seasoned shooter, and Hannah, who's brand-new to the shooting sports,



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both enjoyed their time with the APC 10 Pro immensely—as I did. However, there's simply not enough space here for me to lavishly offer all my praise for this finely crafted bit of Swiss engineering.

The pistol was exceptionally accurate with a number of loads, from Speer's 200-grain Gold Dot offering to Buffalo Bore's 180-grain JHP rounds. We shot hollow-points, flat-nosed bullets and everything in between, and there were absolutely no failures. In fact, the operation was boringly reliable, and the action was as smooth as glass. The craftsmanship of the APC 10 Pro reminded me of other venerable European manufacturers, such as H&K and the Sig Sauer of old. Both Lincoln and Hannah practiced moving with the APC 10 Pro while addressing and shooting our 3D Bad Guy targets from Thompson Targets. They both commented on how easy it was to handle the pistol and maneuver with it, despite it being a little chunky and front heavy. With the pistol's weight and the larger bolt, the recoil wasn't all that noticeable. Even Hannah, a slightly built novice shooter, could barely keep the grin off her face the entire time. After shooting several other pistols during the range session, Hannah kept going back to the APC 10 Pro as her favorite, if that tells you anything.

I was just as impressed. From a bench at 25 yards and using a 1X Leupold Freedom RDS, my best five-shot group was essentially one hole; this was with Speer's 200-grain Gold Dot Hollow Points. Subtracting the .400-inch diameter of the 10mm bullet from the caliper-measured group of .695 inch left me with a group measuring just .295 inch—that's simply the best group I've ever shot at 25 yards with a pistol and no magnification! I won't claim that all the groups I shot with the APC 10

"FOR THE AMERICAN MARKET, THE APC SERIES OF FIREARMS IS MANUFACTURED AS PISTOLS WITHOUT THE INCLUSION OF A STOCK THAT WOULD MAKE THEM A SHORT-BARRELED RIFLE."

> Far right, top: While the author doesn't know about the ETS aftermarket magazine's reliability, it experienced no malfunctions during testing.

> Near right: The polymer lower receiver features an ambidextrous thumb safety.

> Far right, bottom: The APC 10 Pro is compact enough to tote in a pack or bag (such as the Hazard 4 Defense Courier messenger bag).

Copy Contract Cont

Middle left: The APC 10 Pro has plenty of rail space for adding your choice of accessories.

> *Bottom left*: Novice shooter
> Hannah drilled on this target as she practiced shooting while on the move 25 yards and up.

> Right: The Tailhook pistol brace opens up to allow the shooter to rest their arm on the hook for a more stable platform.

were that good, but that was probably more me than the pistol. As you can see in the accompanying table (see page 24), the APC 10 Pro will easily outshoot the shooter.

0

Part of that excellent accuracy was due to the fairly nice trigger. It wasn't the typical mushy or heavy trigger you find on most pistols designed as submachine guns. The trigger's takeup was smooth and grit free, and it broke crisply at a reasonable 4.96 pounds on average. The trigger wasn't so light as to encourage an accidental discharge, but it also wasn't heavy enough to interfere with a clean and smooth pull while staying on target.

As mentioned earlier, the APC 10 Pro was exceptionally reliable, with no malfunctions of any kind. That included our time with the aftermarket, 30-round magazines from SGM and ETS.

That said, there were a couple of kinks with those magazines: First, one magazine from ETS had a sharp, plastic burr at the feed lips that sliced my thumb open when I was sliding a round into place (I'll get over it, but it wasn't a pleasant experience).

Second, and probably most importantly, was that the magazines from both companies seemed just a bit thicker than the Glock magazines. This caused them to fit more snugly in the magazine well and not lock into place as easily as the Glock magazines. We either had to wiggle and finagle the magazines back and forth into place or give a very solid tap on the bottom of the magazines to lock them in place. The wiggling worked for the SGM magazines ... but not for the ETS mags. Those required a sharp pop from the bottom to get them in place.

When the shooting was done, both the Glock and the SGM magazines dropped freely with the press of the magazine release. The ETS magazines hung up and had to be pulled out manually. While there were no malfunctions with any of the magazines while shooting, in my mind, the extra manipulation required for > Below: Lincoln addressed the target with the Leupold Freedom 1X red-dot sight installed.



"B&T ARMS HAS RECENTLY INTRODUCED A NEW LARGE-FORMAT, 10MM PISTOL FOR THE AMERICAN MARKET FOR THOSE OF US WHO WANT JUST A LITTLE EXTRA 'UMPH' FROM OUR BRIDGE WEAPON-OF-CHOICE."

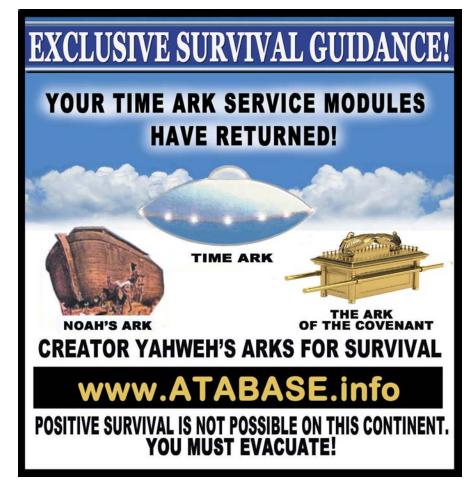
the aftermarket magazines would preclude them from fast-paced defensive encounters for which quick, sure and easy manipulation is required. I'd use the SGM magazines for range practice to save wear and tear on the Kriss extended magazines that I'd carry for real-world defensive use.

OLD-WORLD EXCEPTIONALISM

The large-format APC 10 Pro pistol certainly lived up to ideals we have of finely made Swiss watches, German automobiles and other examples of exquisite European craftsmanship. It was just that good.

That said, the APC 10 Pro is not priced for the faint of heart. The base pistol has an MSRP of \$2,650, and the telescoping brace adapter (with the Tailhook Mod1) tacks on another \$789. That's a total of \$3,439 for the APC 10 Pro as it's configured in this article, although you could save a little by going with a less-expensive option for the brace.

So, who is the APC 10 Pro for, and is it worth the price of admission? Anyone who owns a Glock 20 pistol and wants the very best in an accompanying carbine-style pistol package would find the APC 10 Pro very appealing. Even if you don't own a G20, with its tri-lug, 6.9-inch barrel that's ready to take a suppressor, the APC 10 Pro would serve



"IT'S LITTLE WONDER THAT PEOPLE ARE LOOKING FOR 'MORE COMPREHENSIVE' DEFENSIVE GUNS THAN JUST THE STANDARD COMPACT CARRY PISTOL. THAT'S WHY PISTOL-CALIBER CARBINES AND LARGE-FORMAT PISTOLS ARE BECOMING SO POPULAR."

> Above: The Leupold Freedom RDS allows the shooter to maximize the APC 10's excellent accuracy.

> Left: Hannah practiced moving while shooting while addressing the badguy target.

as a formidable home-defense weapon. It packs more punch than a 9mm alternative and will still be easier on the ears indoors than a full-blown rifle. Outside of the home, it can be easily carried in a pack or bag with a 15-round mag installed and a few 33-round magazines along for the ride.

As to whether it's worth it or not, I guess that's up to the individual. If the H&K SP5 is worth \$2,799 in its base configuration (its roller-block design notwithstanding), the APC 10 Pro is well worth its asking price of \$2,650.

As a long-time prepper, I've always done what I can to cut costs so I can save money for other things or to simply increase my inventories. Nevertheless, there are some things that are worth the stretch. If you want the very best the market has to offer, that costs

a little extra sometimes.

But, in the case of the APC 10 Pro, you can sleep easy at night. In my opinion, when it comes to absolute reliability, accuracy and ease of operation, the APC 10 Pro is the very best 10mm, large-format pistol available on the American market today.

If 10mm is your "shtick," and you won't settle for less than top shelf, the APC 10 Pro is the only stop you have to make. **ASG**

> Left: Speer's 200-grain GDHP was exceptionally accurate with a group measuring just .295 inch at 25 yards.

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Brügger & Thomet, USA (813) 653-1200 BT-Arms.com

Elite Tactical Systems (ETS) (855) 887-5452 ETSGroup.US

Gear Head Works (615) 549-8800 GearHeadWorks.com

Glock (770) 432-1202 US.Glock.com

Kriss USA (855) 574-7787 Kriss-USA.com

Leupold Leupold.com

SGM Tactical (865) 980-0510 SGMTactical.com

Speer Ammunition (877) 426-7849 Speer.com

Thompson Target (330) 699-8000 ThompsonTarget.com

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AVOIDING THE MISSHAPS OF RAISING CHICKENS

IMPORTANT POINTERS FOR THE NEW POULTRY OWNER

BY PETER SUCIU

uring the 19th and early 20th centuries, it was common to keep livestock, including pigs, cows and even chickens, in towns and cities in the United States. As the cities grew, local ordinances slowly curbed the keeping of animals in urban centers—mostly due to the issues of noise and smell nuisances—but even those were relaxed during wartime as people were encouraged to find creative ways to feed themselves. After World War II, the flight to the suburbs, thanks to the availability of the automobile, along with increased accessibility to packaged and prepared foods, made the keeping of animals a thing of the past.



> Above: This small organic farm has repurposed discarded horse trailers as coops with nests on the side that allow for easy egg harvesting. The fence helps keep predators away from the chickens and limits contact with wild birds. (Photo: USDA photo by Lance Cheung)

> Left: The Bantam Welsummer is a breed that was exported to the United Kingdom in the 1930s. These chickens lay about 180 darkbrown eggs per year. (Photo: Public Domain/Creative Commons) "LARGE CITIES, SUCH AS NEW YORK, SEATTLE AND PORTLAND, OREGON, HAVE CHICKEN PROGRAMS, WHILE SUBURBAN OR BACKYARD CHICKENS ARE ALSO HATCHING AROUND THE COUNTRY AND WITH THE SUPPORT OF MAJOR FOOD PRODUCERS."



By the 1980s, for the most part, only farmers (or possibly hippies) dared raise chickens. Given the fact that there's an abundance of grocery stores in most areas, and because we live in a technology-centric culture, it would seem unlikely that individuals would consider raising livestock ... yet, the chickens have come home to the 'burbs and cities to roost!

Many cities have relaxed their regulations and made permits easier to obtain to raise and keep chickens. Large cities, such as New York, Seattle and Portland, Oregon, have chicken programs, while suburban or backyard chickens are also hatching around the country and with the support of major food producers.

"Raising backyard chickens gives families more time together, teaches responsibility to children and puts food on the table," said Archer-Daniels-Midland (ADM) Consumer Products Business Manager and chicken expert Mike Barrett.

GETTING STARTED

While the outbreak of the novel coronavirus highlighted how precarious the American food supply chain can be, and many people had to rely on food banks and donations to keep their families fed, raising chickens has been seen as a way to prepare for a future pandemic outbreak or a breakdown of society.

> It's almost easy to see why this breed has earned the "Easter Egger" name: This bird looks like a colorful Easter egg! (Photo: Public Domain/Creative Commons)

> Bottom, left: The

Barred/Plymouth

ative Commons)

Rock chicken (Photo:

Public Domain/Cre-

brown egg of a

building a coop and throwing down some feed.

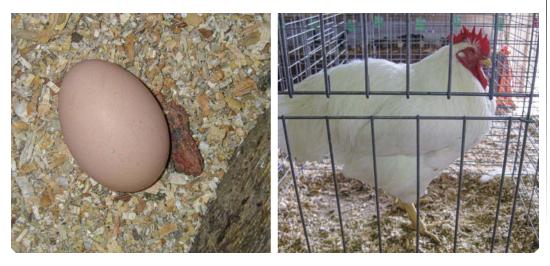
First, suburban and urban dwellers need to check local ordinances and should consult with local experts. There are other factors to consider, including climate, area predators and how the birds will adapt to a backyard or roof garden.

"When it comes to having a backyard flock, not all municipalities are created equal," Barrett explained. "Before building a coop, choosing which breeds you want and buying the first bag of feed, check with your local zoning board to make sure you may have chickens at your residence. Many towns have zoning restrictions that limit each address to four to five hens, and most towns are rooster-free zones. Your local zoning board would have all the rules and regulations so you can get started the right way."

A next step is ensuring you can care for the birds properly. For instance, raising birds in Texas is going to be different than raising them in Minnesota.

"Coops should be warm in the winter and cool in the summer," Barrett added. "You should budget time and resources to feed, water and clean up after your new feathered pals."

However, raising chickens is actually hard work and isn't something that's as simple as



> Near left: White Barred/Plymouth Rocks are crossed with Cornish chickens to create the "chicken" found in many grocery stores. (Photo: Public Domain/Creative Commons)



A poultry farmer holds a healthy, young chicken. It's necessary to monitor animals to ensure that if there's a disease outbreak, it can't spread to the rest of the flock/herd. (Photo: USDA photo by Larry Rana)

Created from cross-breeding in the early 20th century, the Norfolk Grey is a rare breed. While it's known for both egg production and its meat, it produces fewer eggs than other chickens, and its meat is considered more "gamey" than other breeds. While the hens produce eggs throughout the winter, these are less-hardy birds, which is why it's recommended only for those who are experienced in raising chickens. (Photo: Public Domain/Creative Commons)

MEAT OR EGGS?

A common question asked by those first getting started raising backyard or rooftop chickens is whether special breeds are required for the production of eggs, as opposed to chickens raised for meat. Chickens aren't exactly a "one-size-fits-all" solution.

"Many breeds serve a dual purpose. However, the strategy varies for raising the best layer or best meat-quality bird," Barrett noted. "Owners of layers typically plan slower growth, with the goal of laying many eggs over the bird's life span. Broilers, or meat birds, are raised more quickly and make it to harvest or finishing weight in six to eight weeks."

The associated costs are generally reasonable and, depending on the size of the coop, it can be built for under \$200, while the actual chickens cost around \$2 to \$4 each. Five chickens could eat roughly a 50-pound bag of feed per month, which averages around \$15.

For families, it can also be a fun project ... if, at times, a bit of a smelly and dirty one.

"Chickens provide more than eggs or meat: They provide family time, insect control and some great fertilizer for the garden," Barrett pointed out. "More than that, they allow you to know where your food came from and how your food was raised. The enjoyment from watching chickens peck around the yard while you're sipping your favorite beverage will also help the stress just melt away!"

> Near right: Chickens are easy to raise. They provide eggs, as well as meat. However, they need to be kept safe and healthy. (Photo: Gus and Maggie Bryngelson)

> Far right: Originally a bird bred for egg production, the Polish is considered more of an ornamental breed. They're vulnerable to aerial predators and are also known to be shy and skittish birds, so they're not an ideal choice for a backvard coop. (Photo: Public Domain/Creative Commons)







> These chickens stay in their shelters—with electric netting and dogs to protect them from predators and exposure to wild animals. (Photo: USDA)

10 TOP HOMESTEAD CHICKEN PICKS

"Which comes first—the chicken or the egg?" The chicken absolutely comes first. As a result, it's important to consider the right breed.

Here's a rundown of some of the top choices for backyard birds.

Ameraucana. This is a breed that can produce three or four eggs per week, but it'll take awhile for the birds to reach maturity and start laying. These chickens are cold weather-tolerant, in part because the Ameraucana was developed in the United States in the 1970s from Araucana chickens brought from Chile. However, these unique backyard birds don't care for high heat.

Barred/Plymouth Rock. If you don't mind a chicken that's a bit "talkative," the Barred/Rock is a good choice. Each bird can produce around five eggs per week. This breed works best when the chickens are allowed to range freely. It's a dual-purpose breed, raised both for its meat and its brown eggs.

Brahma. Known as the "King of the Chickens," Brahmas are big birds that produce about three or four medium-to-large eggs per week. They're winter-hardy and produce from October to May—a time when many other breeds "take a winter break."

Cornish or Indian Game. This breed of chicken originated in the English county of Cornwall and dates back to the early 19th century. It's a large stock breed that's mainly used for meat production.

Easter Eggers. Despite the name, these birds don't just produce eggs for dyeing; and, they're actually known to be good in colder weather climates. In fact, these aren't a

> Near right: Chickens can be raised to provide both meat and eggs. (Photo: USDA photo by Lance Cheung)

> Far right: This is how most people encounter chicken these days—in the meat section of their grocery store. However, in the spring of 2020, due to the COVID-19 pandemic, chicken was in short supply as the "production" of chicken slowed. (Photo: Enid Burns)





> Above: The Rhode Island Red is an excellent dualpurpose breed that provides both meat and eggs. (Photo: Public Domain/ Creative Commons)

breed, per se, but are a variety of crossbred bird that doesn't conform to any breed standard. However, birds marketed as "Easter Eggers" will typically produce around four extra-large eggs per week. **Euskal Oiloa.** Also known as the

"Basque" chicken (because it originated in the Basque region of Spain and France), this is an extremely hardy bird, which has made it a favorite of homesteaders. Hens lay about 200 to 220 large brown eggs per year, while the roosters can grow to as large as 9 pounds in a season, making them a good meat bird.

ISA Brown. These low-maintenance chickens can produce 300 eggs or more per year, and many can start to lay eggs as soon as they're 16 weeks old. They're good in most types of climates as well.

Marans. Originally bred in southwestern France, these birds are also descended

"WHICH COMES FIRST—THE CHICKEN OR THE EGG?' THE CHICKEN ABSOLUTELY COMES FIRST. AS A RESULT, IT'S IMPORTANT TO CONSIDER THE RIGHT BREED." from fighting game chickens carried from Indonesia and India. They're new arrivals to the United States. Marans hens lay around 150 to 200 dark-brown eggs each year, depending on the variety. Marans are historically a dual-purpose bird and are prized for their large, dark eggs and meat. However, unlike other breeds, Marans aren't as tolerant to extreme heat—despite their roots in the Far East.

Rhode Island Red. A famous bird for laying eggs, these reds produce about 250 to 300 eggs per year. And, despite their name, they're not partial to a particular state. The Rhode Island Red was also developed as a dual-purpose breed to provide both meat and eggs. Since about 1940, it's been selectively bred, predominantly for its egg-laying qualities. **Welsummer.** For those living in the south, the Welsummer is a chicken that's both coldand heat-hardy, and it can generally produce around four eggs per week.

THE DANGERS OF CHICKEN OVERPRODUCTION

Ironically, one of the reasons to consider raising backyard chickens is because of the sheer number of chickens being produced commercially today. Current estimates are that 50 billion chickens are "processed" yearly; and while a chicken dinner used to be something for special occasions, chicken has become one of the world's main dietary staples.

However, some experts warn that this demand isn't sustainable.

"The increased production is the result of concentrated farming methods, via which farmers produce chickens according to company specifications," explained Roger Horowitz, a historian of American business, technology and labor and an expert on the nation's food supply. "There's room to expand these methods. However, they often generate community opposition due to environmental impact, especially groundwater pollution from chicken waste. So, technically, it's possible, but practically expanding that further depends on acceptance of concentrated feeding by the regions where they're located."

Horowitz warned that disease is a huge problem for concentrated feeding operations, where there are often 20,000 chickens in a single facility.

"If one gets sick, they all get sick and have to be killed. And, because these concentrated operations are often in close proximity to each other, a disease that hits one chicken house can spread to another. So, yes, disease is a huge problem created by precisely the same conditions that are necessary for such massive increases in chicken production. While disease is always a worry for livestock production, the social risks are far greater when we rely on a relatively small number of livestock farmers to supply the animals we need to turn into food."

Given these facts, the United States and other countries could face a shortage of chicken, but it would only last as long as it would take to "replenish" the supply from eggs.

"If there were a true epidemic, it could take months for the chicken supply to recover," Horowitz pointed out.

One concern is that the mainstream media fails to pay attention to such outbreaks. In fact, before COVID-19, the pig population in China was devastated by a disease that swept through the nation's concentrated pig operations.

"Some estimates were that 40 percent of all pigs in China had to be slaughtered to halt the epidemic's spread," Horowitz noted.

> Top right: The Euskal Oiloa is a hardy chicken from the Basque area of France/Spain. It's become increasingly popular in the United States for its egg production and as a meat bird. (Photo: Public Domain/Creative Commons)

greatest danger of an avian outbreak remains migrating birds. Waterfowl fly at 40 to 60 miles per hour, and migrating mallards such as these can cover 800 miles in eight hours if helped by 50 mph tail winds. This could spread avian flu over a great distance verv quickly. Keeping wild birds away from your backyard chickens is recommended. (Photo: USDA)

> Bottom right: The

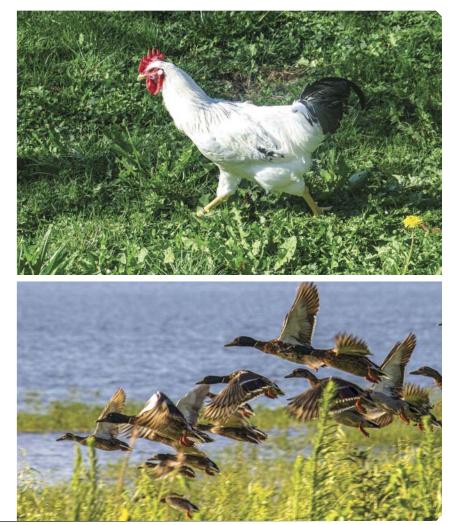
KEEPING THE BIRDS—AND YOURSELF—HEALTHY

While it's easy to see the pros of raising chickens, including the fact that their eggs are about as fresh as they can get, there are other conditions. One only needs to consider the lessons from the COVID-19 pandemic and how it likely originated—not in an advanced lab in Wuhan but probably as a result of the wrath of "Mother Nature," like most zoonotic diseases.

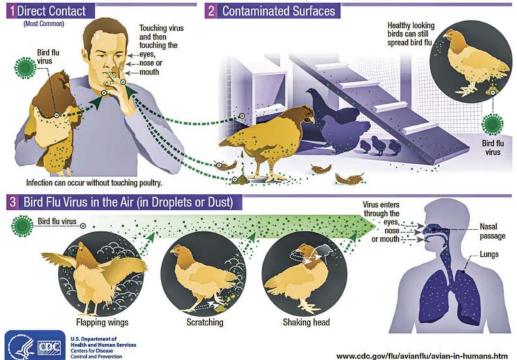
Birds, much like pigs, can be sources of seasonal illnesses that can spread to other animals ... and also people.

"The spread of illness between flocks of backyard chickens, as well as the spread of zoonotic diseases from chickens to humans, is a valid concern," warned Dr. Megan Lighty, associate clinical professor of avian diagnostic and outreach for veterinarians at Penn State University.

"There are multiple steps bird owners can take to protect their birds from the spread of infectious diseases," Lighty pointed out. "'Biosecurity' refers to the protective measures taken to reduce the risk of introducing infectious diseases into an animal population. In general, biosecurity includes steps such as physical isolation between sites where birds are raised; separation of caretakers (e.g., dedicated individuals who take care of the



How Infected Backyard Poultry Could Spread Bird Flu to People Human Infections with Bird Flu Viruses Rare But Possible



birds at one site but don't visit any other sites where birds are present); separate equipment, perimeter fencing and coop/ barn design; and use of PPE (personal protective equipment—gloves, washable/ disposable boot covers, etc.) when working around birds."

Good husbandry—including nutrition, an adequate supply of clean water, ventilation, protection from predators, sufficient space for the birds, etc.—is also very important for disease prevention.

"Vaccination can be used to protect birds against specific diseases. However, vaccination is often challenging to manage in backyard flocks," Lighty explained.

Simple maintenance and upkeep can go a long way toward keeping the chickens healthy and productive.

"Keep the coop clean, dry and well-ventilated,

C Left: Bird flu infections in people are rare ... but possible. Most reported bird flu infections in people have happened after unprotected contact with infected birds or contaminated surfaces. (Photo: CDC)



Above: The Euskal Oiloa is a rural, rustic, dual-purpose breed. Hens lay approximately 220 brown eggs per year. (Photo: Public Domain/Creative Commons)

and safeguard your flock from predators or rodents," Barrett added. "Wash your hands per CDC (Centers for Disease Control and Prevention) guidelines after handling the birds, eggs and the coop, and keep pets out."

ILLNESS CONCERNS

Chickens and eggs can be good protein sources. Unfortunately, both can also be sources of serious illness if the proper safety measures aren't taken.

"The most common zoonotic diseases we see in people related to contact with backyard poultry are *Salmonella*, *E. coli* and *Campylobacter*," Lighty said. "Anyone can become infected, but children under 5 years of age, adults over 65 and immunocompromised individuals are at the highest risk for developing these diseases."

Avian influenza is often mentioned as a zoonotic disease from poultry. While it can be a very serious disease in people, it's not very common, especially in the United States ... however, until March 2020, a serious coronavirus wasn't all that common in the United States either.

RESOURCES FOR RAISING BACKYARD CHICKENS

ADM's Animal Nutrition's Pen Pals Poultry: a guide to feed products for various types of chickens

https://www.admanimalnutrition.com/webcenter/ portal/ADMAnimalNutrition/pages_feed/poultry/ poultrybroilers

Centers for Disease Control and Prevention (CDC): information about keeping backyard poultry and their keepers healthy

https://www.cdc.gov/healthypets/pets/farm-animals/ backyard-poultry.html

Homestead and Chill

"The Top 18 Chicken Breeds for Your Backyard Flock" https://homesteadandchill.com/backyard-chickenstop-18-breeds/

United States Department of Agriculture "Defend the Flock" program

https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information/avian/defend-theflock-program

"RAISING BACKYARD CHICKENS GIVES FAMILIES MORE TIME TOGETHER, TEACHES RESPONSIBILITY TO CHILDREN AND PUTS FOOD ON THE TABLE."



Above: ISA Brown chickens are low-maintenance birds that can
 produce 300 eggs or more per year. (Photo: Public Domain/Creative
 Commons)



"General recommendations for reducing the risk of zoonotic disease transmission from backyard poultry include keeping birds out of your house (keep them outside or in a barn/coop); using dedicated footwear and clothing when taking care of birds; washing your hands after handling birds or their equipment; always supervising young children around birds; and keeping the coop clean," Lighty added. "Proper egg handling and cooking are also important for people who are eating the eggs from their backyard chickens."

If these guidelines are followed, those chickens can ensure a steady delivery of eggs and more—especially if the grocery store isn't accessible or open. **ASG**

A Near left: Grocery store chicken is ready to
 cook—a reason many people opt not to raise
 their own chickens. (Photo: Enid Burns)

MY EXPERIENCE WITH THE URSUS 45 AND SMALL GAME KNIVES HAS ONLY SOLIDIFIED MY OPINION OF WHITE RIVER'S QUALITY PRODUCTS. THESE TWO ARE EXCELLENT KNIVES, WELL-SUITED FOR A WIDE RANGE OF TASKS."

859

S35VN

US

WHITE RIVER

\$35VN

USA

White River has a well-deserved reputation for using high-quality materials to make heirloom quality knives.



ear the western edge of a small Michigan town called Fremont sits one of the best knife makers in the country. There, led by patriarch John Cammenga Sr. and his wife, Susan, White River Knife & Tool produces top-quality blades suited for survival, bushcraft and

much more. This is truly a family business, because their sons, Matt and John Jr., are also integral members of the team.

About a year ago, I had the opportunity to play around with a couple of White River's knives—the M1 Backpacker Pro and the Firecraft FC5. I've been eager for "round number 2" ever since, so I was very excited when the company's Ursus 45 and Small Game knives showed up on my doorstep.

UNBOXING

We need to take a moment to talk about the packaging White River Knife & Tool uses for its knives. If you've ordered a knife online before, if it didn't come in a plastic blister pack, it probably arrived in a white cardboard box. These boxes work well for storing the knife; no question about it. However, White River operates on a level well beyond this.

Instead of using cardboard, the company packages its knives in a wooden box. White River's logo is burned into the top, which opens by sliding it off the bottom. The interior has been carved out to precisely fit the knife and sheath. Underneath is a card that identifies the knife, the selected options for it and contact information for the company.

Does this packaging guarantee a great knife? Maybe not, but it's certainly an indication of just how much care and thought go into White River's products.

LGAME ISUS 45

Fr,

EXCEPTIONAL PERFORMANCE FROM WHITE RIVER KNIFE & TOOL

TEXT AND PHOTOS BY JIM COBB



Left: The presentation boxes White River uses to ship and store its knives are second to none.

> Near right: The Small Game's Burlap Micarta handle material is almost indestructible, yet it's comfortable in the hand.



THE SMALL GAME

I'll admit I have an affinity for small fixedblade knives. They're very handy and easy to carry. However, finding a *great* small knife is often difficult. Many of them have an equally small handle, which can prove troublesome for someone who has gorilla mitts for hands. Personally, I'm not fond of three-fingered grips.

The Small Game suffers no such issues and has a full-length handle (about 4.25 inches).

Its overall length is 7.25 inches, and its blade takes up 2.62 inches of that measurement. It's available in three handle colors: Natural Burlap Micarta (shown in this review), Black Burlap Micarta and Black-and-Olive Drab Linen Micarta. The steel used in this full-tang knife is CPM S35VN. At the spine, the blade is 0.125 inch thick.

The first thing I noticed after removing the Small Game from its leather sheath is how comfortable it is in the hand. Overall, it's a fairly slim model, but the contouring of the handle, complete with palm swells, provides plenty of purchase. Because it's combined with the texturing of the Micarta scales, there's an immediate sense of security with the grip.

The blade is short—even shorter than some of the folding knives I've carried over the years. Nevertheless, there's plenty of edge there to get most jobs done quite easily. I wouldn't suggest trying to process firewood with it, but food prep, whittling and similar chores are perfectly within its wheelhouse. Because of its long handle and comparatively short blade, it's easy to slip a thumb up over the spine for leverage when carving. While the Small Game was designed for processing small game (hence its name), it's

very well-suited to be a great EDC fixed blade. It was scary-sharp right out of the box; this, given my previous experience with White River, was expected.

 Above: This thick rubber hose posed no trouble at all for the Small Game knife. > Near right: The Small Game is available with black handles, as well as this Black-and-Olive Drab combination. (Photo: White River Knife & Tool)

> Far right: Food prep is an important test, because it's a common knife chore, especially for those the size of the Small Game.



"WHILE THE SMALL GAME WAS DESIGNED FOR PROCESSING SMALL GAME (HENCE ITS NAME), IT'S VERY WELL-SUITED TO BE A GREAT EDC FIXED BLADE."

TEST #1: RUBBER HOSE

One of the downsides to doing a lot of knife reviews is that you're constantly on the hunt for materials that might be interesting to slice up. This often leads to an odd assemblage of items that any normal person would've just tossed into the dumpster.

For the Small Game, the first thing I grabbed was an old hose. Over the last few years, it's grown shorter as a result of whittling away at the end with various knives.

I like to use this to test blades because the rubber is thick and dense; yet, it still has a little give to it, which makes it difficult to just slice apart easily. Plus, it has a fair amount of old mineral deposits coating the inside that tend to not "play nice" with a knife's edge.

Despite all that, the Small Game made short work of the hose. It easily sliced pieces off, one after another. I used a couple of different approaches, from pinching the hose a bit in order to raise up a section to begin slicing to using the knife's tip to puncture the hose. I then rolled the hose as I cut around it. The latter proved to be a little easier. With either method, though, the knife performed flawlessly.

Small Game

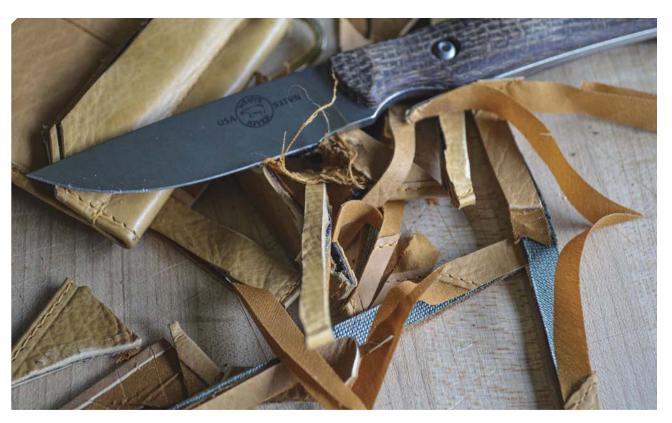
Specifications

Overall length: 7.25 inches
 Blade length: 2.62 inches
 Weight: 2.75 ounces
 Steel: CPM S35VN
 Sheath: Leather

MSRP: \$150 *URL:* WhiteRiverKnives.com



Above: The Small Game strikes the perfect balance between being small enough for everyday carry and large enough to be truly useful.



> The Small Game easily demolished an old leather wallet.

TEST #2: LEATHER WALLET

Remember what I said about that odd collection of stuff? I found an old wallet in a box of random odds and ends when I was cleaning out my dad's house. It was one of probably a dozen different wallets I found. After bringing it home, this particular wallet was discovered by one of our pups, which decided to taste-test it and gnawed off a corner. Because it was unsuitable for anything else at that point, into the knife review box it went.

The Small Game sliced through the leather like a laser beam. It never caught or hesitated with the material. The wallet, as it turned out, was constructed of multiple layers of leather with a satin-like material sandwiched in between each layer. Each cut was a long slice across the wallet, and even the thinnest pieces were carved off very easily.

TEST #3: FOOD PREP

Anyone who's familiar with my knife reviews knows that at least one test is typically food prep of some sort. I'm the family cook, so I spend a lot of time in the kitchen.

> The contour of the Small Game handle provides a great grip in all conditions. Mini peppers are popular in our home. They're great on salads or just eaten alone. I had a small bag of them to use up, so I rinsed them off and went to work. I intentionally waited to do this test until after I'd put the knife to use for a while and also run it through the other tests. A dull blade would end up tearing through the peppers instead of actually cutting them.

As I anticipated, the Small Game knife had no problems at all. It sliced each pepper easily, and I was able to use the tip to cut out the seeds without any trouble. I processed the bag of peppers in no time.

When all the testing was complete, the Small Game was still quite capable of shaving the edge off a piece of paper.

Throughout the entire testing process, as well as the daily use for the weeks prior to the formal tests, the knife was eminently comfortable in hand. In particular, I really appreciated the length of the handle, as well as its contours.

The only modification I'm considering is adding a lanyard. The knife sits very deeply in the sheath, so a lanyard would assist in drawing it out. Even so, this is by no means a necessity. The knife is wonderful as is.



> Near right: The black Micarta material is one of the available colors for the Ursus 45. (Photo: White River Knife & Tool)

> Far right: Feathersticking is easy with the Ursus 45. (Photo: White River Knife & Tool)

> Below:

The Ursus 45 is

on the large end of the "medium"

spectrum, but it

doesn't feel like a boat anchor



"MAKE NO MISTAKE: [THE URSUS 45] IS A BEAST OF A KNIFE! IT'S VERY MUCH BUSHCRAFT ORIENTED, ALTHOUGH IT'S ALSO ADEPT AT ANY OTHER MEDIUM-BLADE TASK."

THE URSUS 45

"Ursus" is Latin for "bear," and "45" refers to the 4.5-inch blade length. Make no mistake: This is a beast of a knife! It's very much bushcraft oriented, although it's also adept at any other medium-blade task.

It's 9.5 inches long and features a 5-inch handle. The CPM S35VN steel blade is a sturdy, 0.158 inch thick. From edge to spine, it's 1.3 inches. The drop-point blade profile is one of the most common and useful designs on the market because it's so versatile and handy with just about any common knife chore.

The handle scales are the same material found on the Small Game's handle scales, making for a matched set. The handle has some slight contouring—it's not quite the classic "Coke bottle" shape, but there's definitely a bit of palm swell there. There's an integral guard, as well, which is something I always like to see on a fixed-blade knife.

This is a heavy-duty, well-built knife. Even so, at 8.3 ounces, it won't feel like a boat anchor on your hip.

Ursus 45

Specifications

Overall length: 9.5 inches
 Blade length: 4.5 inches
 Weight: 8.3 ounces
 Steel: CPM S35VN
 Sheath: Leather or Kydex

MSRP: \$250 (with Kydex); \$265 (with leather)

URL: WhiteRiverKnives.com



WHITE RIVER KNIFE & TOOL

This company derives its name from Michigan's White River, which runs through family property located in the Manistee National Forest. There, everyone enjoys hunting, fishing and numerous other outdoor pursuits—activities that then feed into the design process for the company's knives.

In the last several years, White River has developed a well-deserved reputation for heirloom-quality knives. In addition, with the exception of a few exotic materials, everything used to create its products is sourced here, in the United States.

White River Knife & Tool is truly one of the best companies in the knife industry. It comprises friendly, knowledgeable people who make top-notch products that are made to last. Other than size, one of the biggest differences between the two knives is that the spine of the Ursus 45 is considerably sharper than the Small Game's. This is quite useful in the field, because you can use the spine to shave tinder from sticks, strike a ferrocerium rod and perform similar tasks without dulling your primary edge. And, when it comes to survival, take any advantage you can get.

The Ursus 45 comes with a choice of sheath. The first option is a handsome leather pouch-style sheath. It's equipped with a ferrocerium rod, which is held in a loop. The rod has a small bit of shock cord that keeps the rod secure until you need it. The knife sits very deeply in the sheath, so there's little chance of it working itself free as you move. While a lanyard isn't absolutely necessary, users might find that adding one to the provided loop at the butt of the knife is convenient to help draw the knife from the sheath.

Alternatively, purchasers can choose a Kydex sheath, which is equipped with a leather dangler to attach it to a belt. This can be removed via four screws, and the sheath can then be attached to a pack or other location through the use of several eyelets. This sheath is designed so that it has a thumb rest to assist with removing the knife. It also has a loop for a ferrocerium rod, just like the leather model.

The Ursus 45 easily shaved paper right out of the box. I didn't touch up the edge at all from the time I received the knife until I completed the review process. After

"THE SMALL GAME, IN PARTICULAR, IS A GREAT OPTION FOR A FIXED-BLADE EDC, AND THE URSUS 45 IS AN EXCELLENT CHOICE FOR A FIELD KNIFE."

> Right: A ferrocerium rod comes with the Ursus 45. It's held secure in the loop by a bit of shock cord.





> Above: The Ursus 45 reduced this thick leather belt to bits and pieces rather handily.



> Left: Buyers have a choice of Kydex or leather for the Ursus 45 sheath.

FIDD FOUR 17°59'35.9"N, 120°20'45.2"W FREEDOOM



AEROPRECISIONUSA.COM

> *Near right*: This is the Black-and-Olive Drab option for the handle color. (Photo: White River Knife & Tool)

> Far right: Buyers who choose the Kydex sheath also receive the attached ferro rod. (Photo: White River Knife & Tool)

"INSTEAD OF USING CARDBOARD, THE COMPANY PACKAGES ITS KNIVES IN A WOODEN BOX ... THE INTERIOR HAS BEEN CARVED OUT TO PRECISELY FIT THE KNIFE AND SHEATH."

> *Below, top right:* The spine of the Ursus 45 is a perfect 90 degrees, making it well-suited for scraping tinder or a ferro rod.

> *Below, bottom right*: Lumber was quickly turned into scraps with the help of the Ursus 45.

playing with it for a few weeks doing chores in the yard and such, I ran it through a couple of tests.

TEST #1: LEATHER BELT

I'd used up the last of an old leather belt during a previous review, so I swung into my local thrift shop to pick up another one. These belts are great for reviews, because they're thick and durable (and, if you know where to shop, they're cheap).

I started by drawing the knife across the belt. It made clean slices all the way through each time. Because the leather was thick, I did have to put a little pressure behind the cuts, but not to the extent that caused concern.

From there, I tried push cuts: Instead of pulling the edge across the leather, I pushed straight down. The knife was sharp enough to cut deeply, although I did have to rock it back and forth a bit to make it pierce the leather completely. Again, given the thickness of the belt, this was neither a surprise nor a disappointment.

TEST #2: BATON

There are those who use their knives to baton wood and those who don't. This is a rather divisive issue in the survival and bushcraft communities. I'm of the opinion that while a knife makes a poor axe or hatchet, batoning might still be needed from time to time.

Almost any knife can be pounded through a small-diameter branch or log. (Craig Caudill, well-known survival instructor and head of Nature Reliance School in Kentucky, did a video awhile back in which he used a butter knife from the kitchen drawer to baton a few pieces of firewood. The knife didn't look all that awesome when he was done, but the point was that virtually any piece of thinnish steel can be driven through wood.)

The idea behind batoning as a review test isn't to see if the knife can split the wood. Indeed, given the quality of the steel, I knew fully well that the Ursus 45 would handle the job with no ill effects. Rather, the point is to see how the knife handles and how it feels in the hand while you're doing the job.

I grabbed a 2-by-4 from the lumber pile and went to work. The Ursus 45 split the wood quickly and easily ... which was no surprise. The contour of the handle, combined with the Micarta material, provided a solid grip. I went so far as to move my hand to the very end of the handle, simulating having to use part of the upper end as a striking surface, and still had absolutely no problems.

As with the Small Game, when the testing was complete, the Ursus 45 was still able to shave the edge of a piece of paper, which speaks well to its edge-holding capability. I've been a big fan of White River Knife & Tool since the first time I met the owners





and crew at SHOT Show a couple of years ago. My experience with the Ursus 45 and Small Game knives has only solidified my opinion of White River's quality products. These two are excellent knives, well-

suited for a wide range of tasks. The Small Game, in particular, is a great option for a fixed-blade EDC, and the Ursus 45 is an excellent choice for a field knife. **ASG**

SOURCE

White River Knife & Tool WhiteRiverKnives.com

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VVITHE NIGHT **PERSONAL LIGHTING TOOLS PROVIDE POWER OVER DARKNESS.**

BY MICHAEL D'ANGONA

he dark can be a scary place. No matter whether you're a seasoned outdoorsman, a veteran of the military or law enforcement, or just an

"ordinary Joe" with very few phobias, the darkness can send a chill up and down your spine.

Although the true fear might lie in the darkness being equivalent to the unknown, it doesn't change the fact that being without light can cause unneeded stress, worry and a serious risk to your security and well-being.

However, a simple and very obvious

solution to keep you moving forward is to create your own light, no matter where you are, with portable and powerful lighting gear. From handheld flashlights and pop-up lanterns to pen-sized darkness-piercers, there's an illuminator that can break through the blackness and enable you to continue on with your important tasks.

For unexpected emergencies, sudden survival situations or just a power outage on your block, personal lighting gear offers more than just a break in the darkness; it provides comfort, peace of mind and safety when the world around fades to black. ASG





Coghlan's LED/Xenon Headlight

verview

You never know when you'll need a blast of light when you're at home or out in the wild, and this compact headlight can offer a "brilliant" solution. It operates via either three 5mm LEDs or a focusing Xenon bulb, so you'll see clearly through the darkness with this useful item secured firmly to your head. With a battery life ranging from 80 hours to a whopping 240 hours (depending on the output level), you can rest assured the darkness will never have the advantage over you!

- Specifications
- Shockproof and shatterproof body
- Water-resistant outer shell
 Requires 3 AAA batteries (not
- included)
- Includes adjustable head strap

\$28.99

URL

Coghlans.com



Coghlan's Bug-Eye Kid's Headlight

verview

The little adventurer by your side also needs a headlight, and this one fits the bill. The Bug-Eye Kid's Headlight is designed with oversized, colorful features and built to withstand the punishment that kids can dish out, so your children can enjoy outdoor activities after the sun goes down. It's uniquely designed to fit securely and comfortably on small children with an adjustable strap and a rounded plastic head. It's ideal for children 6 years old and older. pecifications

- · Light output: 18,000 millicandela
- Lightweight and comfortable to wear
- 18-hour battery life
- Robust LEDs won't break

MSRP \$8.99

Coghlans.com



Coghlan's Trailfinder LED Multilight

Overview

This amalgamation of a handheld and free-standing flashlight and a headlamp gives you plenty of options for lighting up a dark camp. The Trailfinder features a durable outer shell and a 20-lumen LED light that won't break the bank. Because of its solid 12-hour battery life, you'll have plenty of light, whether you're at home or on an adventure.

Specifications

- Long, 12-hour runtime
- · Comfortable headband
- Pivoting head for multi-directional light
- Requires 1 AA battery (not included)

\$7.99

Coghlans.com



Rothco Kerosene Lantern

Overview

Go "old school" on your next camping trip with this classic kerosene lantern. This hurricane-style lantern features a real glass globe, classic, brilliant-red color and a tank that holds plenty of fuel for getting through emergencies. The wire handle loop makes both transport and hanging easy, while the adjustable wick allows just the right amount of light for your needs.

necifications

- Adjustable wick allows
 precise flame control
- Fuel reservoir holds up to 8 ounces of kerosene
- Wire-covered glass offers protection and secure fit
- Only 12 inches tall for easy
- transport and storage

MSRP \$13.99

- 13.99
- URL

Rothco.com



Rothco Solar Lantern and Torchlight

rview

For use during an emergency or a weekend camping trip, this multi-use lantern offers brilliant light for nearly any purpose. The integrated solar panel keeps the batteries charged and ready, while the USB port offers a secondary form of charging when the sun is off-line. The unit easily converts from a lantern to a handheld flashlight within seconds. For camping, unexpected emergencies, on the patio or just trekking through the dark unknown, this lantern is a must-have for everyone.

- pecifications
- 4.2V solar panel recharges batteries
- Six bright, 3-watt LEDs; 1-watt LED torch light
- Durable casing protects from accidental bumps and drops
- Recharges through USB port

• 4-hour runtime

MSRP

\$14.99

Rothco.com



Goal Zero Lighthouse Mini Lantern

Overview

Brighten up any room, tent or bug-out location with this compact, powerful lantern. This little powerhouse allows for dual charging options, either through a USB cable or by utilizing a separate solar panel (not included). The legs fold up and down, and you can switch between 180 and 360 degrees of light to provide just the right amount of illumination for your needs. The built-in charging function keeps your cell phone "juiced up" at all times. The maximum output is 210 lumens (four-hour runtime on 360 degrees), and the maximum runtime is more than 500 hours (lowest output; 180 degrees).

Specifications

- Adjustable brightness
 and direction controls
- Two standing heights
 plus hanger hook and a
 magnet
- Dimensions: 2.91x4.51
 inches
- Built-in USB charging cable

MSRP

- \$39.95
- URL
- GoalZero.com





Goal Zero Lighthouse Micro Charge USB Rechargeable Lantern

Overview

Versatility is the name of the game. The Micro Charge USB Rechargeable Lantern features both a USB input and output port for charging the unit, as well as for charging small electronics. As a result, you'll be worry-free about dead batteries or walking in the dark. Choose between traditional hand carry or the integrated hanging loop to mount this lantern overhead in a tent or small camper. The amount of light output can be adjusted to fit the situation (from 7 to 150 lumens).

Specifications

- Built-in 120 lumen flashlight
- USB rechargeable with easy-toread battery indicator
- Waterproof for outdoor use
- Runtime between 7 and 170 hours, based on brightness settings
- Dimensions: 1.5x4.4 inches
- Incredibly lightweight (only 3.07 ounces)

MSRP

\$29.95

GoalZero.com



Goal Zero Torch 500 Multi-Purpose Light

Overview

Bring a torch on your next outdoor adventure. This one, however, won't burn out; it'll stay bright for hours. It utilizes both a built-in solar panel and USB-C port for recharging, while its durable casing keeps out sand, dust and debris. It's both waterproof and shockproof and will hold up to many years of repeated or emergency use. Best of all, the Torch 500 keeps your small electronics' batteries fully charged—no matter where you find yourself in the world.

Specification

- Spot and flood lights each have maximum 300-lumen output
- Maximum output for both lights at once: 500 lumens
- Three adjustable light settings
 Ideal to charge a cell phone,
- tablet and headlamps

\$49.95

GoalZero.com



NDuR Pop-Up LED Lantern/Flashlight

Overview

Sometimes, you don't need an oversized light with complicated "bells and whistles." This flashlight-and-lantern combo performs like a pro while saving you pack space and money. The Pop-Up Lantern with Flashlight offers bright LED light, either handheld or as a lantern, for your tent, camper or bivy and can also withstand rainy weather and bumps along the trail. From "bright" to "low" to an emergency flashing beacon, this little wonder performs big while maintaining a small footprint.

Specifications

- Lighting modes: Bright, low and flashing
- Dimensions: 3.5x2 inches (collapsed)
- Maximum output: 41 lumens
- Maximum runtime: 3.5 hours
- Requires 3 AA batteries (not included)

MSRP \$7.99

NDuRUSA.com



NDuR Emergency LED Flashlight With Glass Breaker

Overview

"Multifunctional" describes the Emergency LED Flashlight With Glass Breaker. Not only will it light up the trail or a room, the integrated glass breaker can also help you escape from a vehicle. The strobe function can signal for help afterward. The flashlight's outer casing can withstand rough, wet outdoor conditions—which makes it invaluable during in-the-field adventures while exploring or when hiking into unknown territory. Use the included clip-on lanyard to keep this tool nearby.

Specifications

- Output modes: bright, low, dim flash and strobe
- Maximum output: 350 lumens
- Maximum runtime: 3.5
 hours
- Requires 4 AA batteries
 (not included)

MSRP

\$19.99

IIRI

NDuRUSA.com



NDuR LED Headlamp

Overview

Hands-free instant light at the push of a button—that's the convenience of the NDUR headlamp. This compact and comfortable light offers four lighting modes to suit your personal situation: bright, low, red and red/white flashing. Use this convenient headlamp while exploring, trekking back to camp in pitch-black conditions or when working on intricate tasks for which you need to keep both hands free. This headlamp is ideal for your bug-out bag, your vehicle's glove box or as part of your tool kit.

Specifications

- $\cdot\,$ Head tilts up to 45 degrees
- for close and distant use
- Maximum output: 105 lumens
- Maximum runtime: 6 hours
- Powered by 3 AAA batteries (not included)

MSRP

\$9.99

URL

NDuRUSA.com



Ledlenser MH8 Headlamp

Overview

The Ledlenser MH8 takes headlamps to a new level. It features rechargeable batteries (you can also use disposable AA batteries), a 20- to 600-lumen output, adjustable beam from "spot" to "flood," a detachable lamp head and additional red, green and blue light options, so you'll have all your lighting needs covered. It has a transportation lock that prevents accidental activation, as well as a dimmer switch, and the head tilts down to 50 degrees.

Specifications

- Five lighting functions: power, low, mid, boost and blink
- Maximum runtime: 60 hours
- Charge status and low-battery indicators
- Magnetic battery charging system

MSRP

\$69.95

LedlenserUSA.com





5.11 Tactical EDC PL 2AAA Flashlight

Dverview

Designed with a slim profile and integrated pocket clip, this flashlight was designed to be carried just about everywhere. It produces brilliant light wherever it's needed. The housing is created from machined aluminum, ensuring long-lasting performance. Slip it inside your shirt pocket, store it inside your emergency kit, or snug it into the MOLLE webbing on your backpack. This light produces big results without question!

- Specifications
- Output: 107 lumens
 Runtime: 4.33 hours
- Water and impact resistant
- Removable pocket clip
- Powered by 2 AAA batteries

MSRP

\$27.99

511Tactical.com



Ledlenser MT10 Flashlight

Overview

Big things come in small packages; the MT10 Flashlight is proof of that. Featuring an incredible 1,000-lumen output, this compact flashlight is both impressive and delivers when it counts. It operates on one rechargeable lithium-ion battery and offers an included USB port that allows you to charge it nearly anywhere. In addition, it has a battery status indicator; it transitions easily from a broad floodlight to a sharply focused long-distance spot; and, best of all, it fits easily into your jacket or pants pocket. It's compact and lightweight and packs a punch in the lighting department!

Specifications

- Output: Adjustable from 10 to
 1,000 lumens
- Runtime: 6 to 144 hours, depending on the setting
- Visual battery level indicator
- Water resistant
- Includes battery, wrist strap, pocket clip, pouch and USB cable

MSRP

\$79.95

URL

LedlenserUSA.com



5.11 Tactical EDC 2AAA Flashlight

Overview

This palm-sized light goes where you do, shining light when and where you need it. Its housing is built tough and with a rubberized overmolding, so accidental drops won't stop your work at hand. The removable pocket clip keeps this flashlight attached to your belt or pocket, so it's easily accessible when you need it. At just 3.15x1.25x0.67 inches, and with a beam distance of nearly 90 feet, the EDC Flashlight will, indeed, be your everyday-carry light source!

- Specifications
- Output: 127 lumens
- Runtime: 3.33 hours
- Powered by 2 AAA batteries
- Hole for key ring attachment
- Impact resistant up to 2

meters

\$22.99 UBL

511Tactical.com

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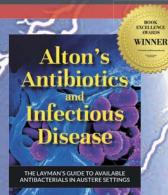
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Fenix E28R Rechargeable Flashlight

Overviev

This mild-mannered flashlight is a powerhouse in disguise. Featuring a blinding 1,500 lumen output and a durable aluminum body, this handheld illuminator can stand up to the toughest outdoor conditions. The E28R has five steady-on settings and a strobe function, all operated by the convenient shoulder switch. The unit recharges via the included USB-C fastcharging cable and includes a lanyard and replacement O-ring to ensure waterproof protection. The E28R is lightweight at just over 2 ounces and easily clips into your pocket or to your gear bag for easy carrying and storage.

- Output: Adjustable from 30 to 1.500 lumens
- · Runtime: 2 to 74 hours, depending on setting
- Waterproof up to 2 meters; dustproof
- Includes rechargeable 18650 lithium-ion battery
- Also runs on 2 CR123 lithium batteries (not included)

NSRP

\$92

FenixLighting.com



Overview

Need the perfect flashlight? The Powertac M5 1,300-lumen, handheld light comes very close. Sporting an ultra-tough case that protects it from drops, moisture and debris, and with an incredibly bright light output, this pocket flashlight could become your go-to light source for every outing. Choose from "firefly," "low," "medium," "high," "turbo" and "strobe" lighting options to suit your personal needs. Its rechargeable 18650 lithium-ion battery powers up fast through the included magnetic USB cable. The low-voltage/charging status indicator helps ensure this flashlight's ready when you need it.

- Specifications
- Output: Adjustable from 0.51 to 1,300 lumens
- Runtime: 3 hours to 25 days, depending on setting
- Magnetic USB cable for easy charging
- Waterproof and submersible up to 2 meters

MSRP

\$79.95

Powertac.com



Fenix PD40R V2.0 Rechargeable Flashlight

When you really need to light up an area or target something with an overwhelming amount of illumination, consider the Fenix PD40R V2.0 Rechargeable Flashlight. With a maximum output of 3.000 lumens, it's what you need to turn midnight into daylight. You can choose from three other steady-on modes, plus strobe, with the rotary switch. The included 21700 lithium-ion battery is rechargeable, and a type-C charging cable comes in the box. The aluminum body has a type III hard-anodized finish for extended anti-abrasion protection.

Specifications

- Output: Adjustable from 30 to 3,000 lumens
- Runtime: 2.67 to 88 hours, depending on the setting · Length: 5.4 inches
- Diameter: 1.3 inches (head); 1.0 inch (body)
- · Waterproof and submersible up to 2 meters

MSRP

\$156

FenixLighting.com

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BY CHRISTOPHER NYERGES



> Right: Amaranth is easy to grow. It has a history of use going back hundreds of years.

C Left: Apples, most nutritious if you also eat the skin, have long been one of the favorite foods throughout the world.



uring a seminar, one of the students asked, "What are the 'best' plants for planting in my own yard or garden? Can you tell me the top six plants I should grow?"

These seem like simple enough questions, but it's really more akin to asking a life-long knife smith, "What's the best knife?"

How can you really answer that question? Although I did (eventually) answer it, we had a lengthy discussion first.

WHAT ARE THE BEST PLANTS?

In order to answer this question, we first have to define what we want to get from the plants we decide to work with:

- Which plants are the most nutritious?
- Which plants are the most productive with the least amount of work?
- Which plants are easiest to grow (in your area), almost taking care of themselves?
- Which plants provide more than food, offering multiple uses such as fiber, medicine, soap or even fragrance?

There aren't many plants that fulfill *all* these requirements. Most people begin by selecting the best food plants, meaning the crops that they enjoy and will grow in their area.

In general, I suggest you first make a list of everything you'd love to grow for food in your ideal garden. Then, whittle down that list, eliminating the plants that simply won't grow in your area (such as bananas in Pennsylvania, for example). Ideally, keep as many native plants to your area as possible, because they're already acclimated to your environment.

After you've narrowed your options, make your final planting decisions based on what's most important to you. Remember that the list you make might look nothing like my suggestions because of our unique personal preferences and the limitations of our areas. This should, at least, give you some idea of how to think about the "best" plants to grow in your space.

To help get you started, these are the top six plant choices of gardeners from various parts of the country:



Christopher Nyerges (Southern California)

- Apple tree
- New Zealand spinach
- Onions
- Potatoes
- Prickly pear cactus
- Tree collards

Jay Hartman (Brier, Washington)

- Beans
- Fig
- Olive tree
- Tomatillos
- Tomatoes
- Tree collards

The Urban Nature Girl (Pasadena, California)

- Beets
- New Zealand spinach
- Onions, green
- Potatoes and sweet potatoes
- \cdot Tree collards (perennial tree variety). These can be propagated by stem for food all year.
- Winter squash, such as butternut

(Note: Urban Nature Girl chooses potatoes, sweet potatoes and squash because there's a longer season to harvest, and they can be stored through the winter.)

Botanist Gina Richmond (San Bernardino Mountains, California)

- Apple
- Avocado
- Blueberries
- Mulberries (Oscar mulberry)
- Pumpkin (for seeds)
- Yams



Master Gardener Yvonne Savio (Southern California)

- Fig
- Kale, chard and beets
- Jujube
- Lettuce
- Persimmon
- Tomato

Before we delve into some options, note that, with few exceptions, we aren't including "wild plants"; just some of the most common plants you might select for your yard. I'm also not including any plants that might be called "exotic" or "specialized" (such as moringa, longevity spinach or bamboo), because they'll be addressed at a later date.

MOST NUTRITIOUS PLANTS

What plants are the most nutritious? Although most plants you grow organically in your own yard will be far more nutritious than anything from the supermarket, here are some plants that really stand out:

Amaranth (and its relatives, lamb's quarter and quinoa): The seeds and leaves of all these are rich in vitamins and minerals and have long been used in the "new" and "old" worlds.

Avocado: Although it can't tolerate freezing, the avocado is a high-calorie fruit with high amounts of potassium and vitamin A. This is a fruit you could almost live on if you had nothing else.

Beans: Beans are packed with protein, are easy to grow and can be stored for a long

 Below, left: A relative of the tomato, the tomatillo (or "husk tomato") is even easier to grow than the tomato. It's a hardy garden plant.

Below, right: Potatoes are very easy to grow. These were grown from sprouting potatoes.



 New Zealand spinach is a perennial spinach. A patch growing in good soil will produce greens for decades.
 time. They've long been an essential staple of civilization.

Beets: Beets are a hardy crop used in traditional northern European dishes. They're very easy to grow, and both the meaty root and nutritious greens are very good when cooked.

Cabbage: This is the "superstar" of the fermentation world, with varieties used for sauerkraut or kimchi.

Carob: This is a desert-dwelling tree that'll live and produce for more than 50 years. The pods are naturally sweet, three times richer in calcium than milk and rich in protein (the B vitamins). When you purchase this tree at the nursery, be sure you purchase a female tree (the male doesn't produce fruit).

Carrots: This popular vegetable is known for its beta-carotene content and versatility in cooking. Carrots also stand well in early winter, so they can be sown in late summer/early fall and survive intact in cold conditions to be retrieved as needed. They can replace potatoes in most recipes.

Chard: Chard and beets are related. Chard was developed just for its tops and is both easy to grow and very nutritious.

Citrus: Although citrus fruits are good sources of vitamin C, they're even better sources of vitamin A and potassium. They're also often used medicinally (lemons and grapefruit, for instance).

Collards (both the annuals and perennial tree collards): Collards are

> Cherry tomatoes on the dying vine. Tomatoes are easy to grow and often re-seed themselves.

> As with apples,

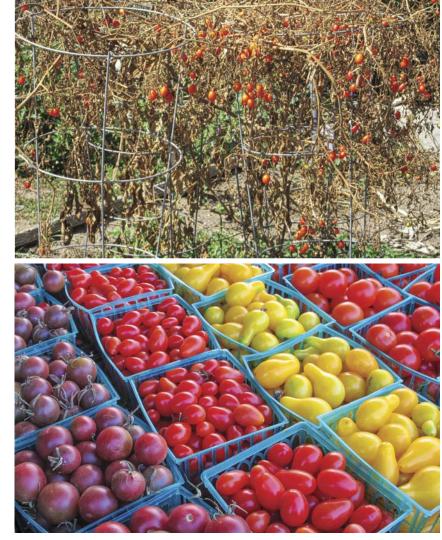
many other fruits and vegetables,

cherry tomatoes

colors.

come in a variety of

potatoes, onions and







Far left: These nice carrots and kale are favorites at many local farmer's markets.

Near left: Olives
 come to us from
 Europe, and they
 can tolerate drought.
 They're easy to grow
 and produce edible
 olives and top-quality
 oil.

known to be a good source of folate and vitamin K. In addition, the annual and perennial varieties are both easy to grow.

Kale: Some find the leaves tough; nevertheless, they're an incredible source of vitamin A and a good source of vitamin C, potassium, phosphorus and calcium. Kale is very popular today in diverse recipes.

Potatoes: This starchy staple is an excellent source of minerals and vitamin C, as well as healthy carbohydrates.

Prickly Pear Cactus: Eating the pads ("nopales") and fruits has known positive health benefits due to the high vitamin and mineral content (as documented in Ran Knishisky's *Prickly Pear Cactus Medicine: Treatments for Diabetes, Cholesterol, and the Immune System*).

Rose Hips: If you grow roses, you're already raising the hips (the fruits), which are one of the richest sources of vitamin C.

Tomatoes: Tomatoes are an excellent source of lycopene, and they offer a variety of culinary uses.

MOST PRODUCTIVE WITH THE LEAST AMOUNT OF WORK

In some cases, there's virtually no work required for plants in this grouping. That's especially nice when the harvest is plentiful as well.

Apricots: Apricot trees are easy to grow from seed and, during some years, they

> Below: Common in the wild and in gardens, rose bushes produce fruits (rose hips) that are one of the highest sources of vitamin C.

> Right: A collection

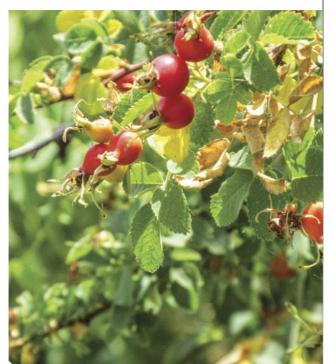
of cherry tomatoes.

these small toma-

a wide variety of

meals

Often used in salads.





Far left: Prickly pear cactus fruit must first be cleaned of its tiny glochids (hair-like spines). Then, this easy-togrow fruit is used for juices, jams, pies and other desserts.

Near left: Winter gourds have long been popular the world over. They store well and provide a substantial source of food for minimal work.



bear so many fruits that the branches break from the weight.

Figs: Some fig trees are very productive. In fact, some owners of these trees consider it a nuisance that they produce so many fruits. So, when the fruits begin to mature, get ready to dry some, make jams and even freeze some.

Hot/Sweet Peppers: Peppers respond well to good soil. While they need somewhat regular watering, they're reliable producers with minimal care.

Jerusalem Artichokes: Native to the eastern United States, these are sunflowers that produce prolific volumes of sweet underground roots. Just plant them in loamy soil and wait a few months.

New Zealand Spinach: This is a perennial ground-covering spinach. I'm surprised more people don't grow it, because it's so productive ... and with hardly any work (assuming your soil conditions are good).

Persimmon: Persimmons are reliable producers with few insect or disease pests. They require moderate watering. Many varieties are astringent, but "Fuyu" varieties can be eaten immediately once they're ripe. When dried, persimmons make an excellent snack or sugar source.

Potatoes: You plant potatoes ... and then you harvest them! Each "eye" of the potato can produce many potatoes.

Raspberries/Blackberries (in maritime climates or where irrigation is available): These close relatives are strong producers that spread dramatically once established. Both types elevate their fruit. Raspberries require minimal staking.

Squash (nearly all of them): Plant, water—and stand back!

Strawberries (in maritime climates): While always labor intensive, strawberries are good producers. They can grow in a variety of climates and are readily spread by runners (which typically results in double the number of plants each year).

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Tomatillos: These are hardy nightshade family vegetables that typically re-sprout from their own seeds. They have only modest water needs.

Tomatoes: There are many tomato varieties, but cherry tomatoes seem to be the most productive. And, because the individual fruits are lightweight, the branches don't need to be tied up to a trellis.

Tree Collards: If staked and given sufficient water, these perennials produce an incredible volume of nutritious greens.

GREAT CHOICES FOR THE LONG TERM

These are some plants that are easiest to grow in your area when you plan to make them a part of your long-term food sourcing plan. Many almost take care of themselves:

Apples: Apples can grow in nearly every environment of North America, although in some areas, you must choose specific varieties that do best in your area.

Asparagus: Asparagus is planted once ... and its roots will continue to produce edible shoots for several decades.

Citrus: Once established, citrus trees are reliable producers with minimal watering. However, they're not frost-hardy, and they require pest control for scale and mealybugs.

Figs: The fact that figs often go feral and survive in the wild should tell you that these are very easy to grow. In addition, they're often prolific. You can eat the ripe figs, dry them or make jam with them.

Grapes: When properly tended, grape vines produce fruit year after year. The



Far left: Prickly
 pear cactus is easy
 to grow in most
 parts of the United
 States. The tender
 portion of the pads
 is edible—raw or
 cooked—and is very
 nutritious. The pads
 also have medicinal
 properties.

Near left: If you
 only eat the onion
 greens, you'll have
 a perennial source
 of food.

leaves can also be eaten in Mediterranean dishes, and the vines can be used in basketry. **Mint:** Mint will grow in many climates. It simply needs adequate water and, in some cases, it must be contained or it'll become invasive.

Potatoes: I grow potatoes because I can just take the old sprouted potatoes, quickly bury them in good soil and forget about them. In other words: I grow potatoes ... because they're easy! Yes, occasionally, mine get eaten by burrowing animals, but this doesn't happen very often, because I plant potatoes in raised beds.

Prickly Pear Cactus: Incredibly nutritious, the green pads on this cactus are excellent vegetables. In addition, the fruits are an excellent source of vitamins and minerals. They're also a good, healthy dessert option. If prickly pear cactus can grow in your area, it'll require next to no care.

Olives: Olives are one of the "superstars" of desert environments because of their extreme heat and drought tolerance and low maintenance requirements. They provide their fruits, oil and high-quality wood for carving kitchen implements.

Onions (and the onion family): If you only eat the onion greens, these plants are perennials, producing greens indefinitely.

Raspberries/Blackberries (in maritime climates): These require moisture to grow well, but they have few insect pests and are reliable producers. Because of their thorns, they're great border plants that require minimal care, except for occasional pruning. **Strawberries (in maritime climates):** Strawberries can provide heavy production

< Below left: Potatoes originally come from South America, and today, many varieties and colors are available around the world.

Selow right: Avocados are very nutritious, although they won't tolerate frost.







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Far left: Carob trees are from the Middle East. They'll grow in the American West and Southwest and produce high-protein pods such as these.

 Near left: Tomatillos
 were originally cultivated in Mexico and Central America and have been cultivated for more than 2,500 years.

Left: Figs are easy to grow, and they produce tasty fruits.



> Below: Onions are easy to grow and are useful for both food and medicine



with sufficient moisture, although they're labor intensive and can become invasive. In much of North America, where strawberries were once grown (and then abandoned), they grow wild and continue to produce small, but tasty, fruits.

PLANTS WITH ADDED BENEFITS

Which plants provide more than food or, other than food, provide multiple uses, such as fiber, medicine, soap or even fragrance?

Aloe: Aloe is one of the ideal medicines for skin issues and some internal ailments. It's easy to grow, but it doesn't do well if it freezes.

Apple: Besides apples, the wood of this tree is useful for crafts and carving projects and is good for cooking.

Bamboo: Although there's food provided by young bamboo sprouts, bamboo is mostly a utilitarian plant worldwide. The hollow, flexible stalks are used for making structures, scaffolding, cups and cooking vessels, tools, chopsticks and other items.

Citrus Trees: The flowers are excellent if you also raise bees.

Grains: Some species, such as wheat, millet and even corn, produce both grain and very useful straw. Grains such as winter rye are also very effective as a green manure. They're part of the foundation of civilization and are easier to grow in the average backyard than you might think.

Mint: The Mentha species is known to be prolific, spreading rapidly and growing like a weed. It's good for culinary, as well as medicinal, uses.

New Zealand Flax: Commonly used as an "ornamental," this plant produces long, fibrous leaves that are ideal for any craft project requiring "fiber," such as baskets, sandals, ropes, hats, nets and other useful items. The leaves are literally unbreakable!

Prickly Pear Cactus: This cactus produces several foods. In addition, the cochineal bug that often lives on it produces a nontoxic, food-grade red dye.

Rose: The straight shoots of the wild rose were one of the more desirable arrow shaft materials used by Native Americans throughout North America.

Yucca (certain species): Although yucca does grow wild all throughout the U.S. West and Southwest, it's easily cultivated. Besides a few seasonal foods, it can also provide strong fiber for cordage and soap from some of the leaves.

DECIDING WHAT'S BEST FOR YOU

As we look over our lists, and as you try to determine the best for your area and personal preferences, see if any of the plants turn up on more than one list. Any plants that appear on more than one list are probably the most ideal for you to plant in your self-sufficiency garden.

When you work your way through the decision-making process, remember that you might also be able to extend growing and harvesting seasons and accommodate plants that wouldn't normally thrive in your area if you take the added step of building a greenhouse. (You can find my article describing how to build a home greenhouse on the American Survival Guide website: https://www.asgmag.com/how-to/grow-it-in-a-greenhouse.) ASG

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(It's good to practice at different distances and in different settings just to see what you and your firearm can do. Here, the author practices at 40 feet. (Photo: Manchester Firing Line)

ARSI NA CAN 578

"THERE ARE REVOLVERS AND SEMI-AUTOMATICS; SHORT BARRELS AND LONG; AND WAY TOO MANY CALIBERS TO LIST. EACH ONE HAS ITS PLACE AND PURPOSE. YOU JUST NEED TO NARROW THEM DOWN UNTIL YOU FIND WHAT'S RIGHT FOR YOU."

WHAT YOU NEED TO KNOW BEFORE SELECTING A HANDGUN

here's a great deal of responsibility to owning any firearm, especially a handgun. So, before you run out and purchase one, ask yourself, "Why?" If you can't honestly answer this question sensibly, I hope this article helps you figure it out. The purchase of any firearm should never be an impulse buy, and it shouldn't be bought because it's the "cool" thing to do. Firearms are not toys or pieces of jewelry to be flashed around; firearms are tools—dangerous tools that need to be treated with the utmost respect.



BEFORE YOU BUY

Do your homework. Know what you're looking for, how much you're willing to pay and what your main purpose is for purchasing a handgun. This will help you know whether you want a semi-automatic or a revolver (see the sidebar on page 76). Stick to your plan, and don't let the person behind the counter sway you one way or the other. If you don't, you're likely to walk out with a handgun that isn't exactly what you want and for which you paid more than you intended to spend. There's nothing to say you have to make the purchase right then and there. Shop around.

You should also learn about the legal rights and responsibilities that come with handgun ownership and usage. Laws vary by jurisdiction, so be sure to include areas in which you expect to carry your gun in your research.

I recently purchased a Heritage .22LR single-action revolver. The handgun is one I'll use to teach my daughter and granddaughters how to shoot and properly handle a firearm. I did my research and knew exactly what I wanted before I bought it. The salesperson tried to sell me a double-action revolver (which costs much more money). Once he knew I was serious about what I wanted, he backed off, and I actually purchased the handgun I wanted for less than I'd planned to pay. Above: The author's new Heritage singleaction .22LR revolver. He believes it's the perfect firearm for the shooter just starting out.

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WHAT WILL YOU USE IT FOR?

What are your main intentions for the handgun? Do you plan to hunt with it? Is it mainly for self-defense? Do you just intend to shoot targets at the range?

How you answer these questions will help determine which handgun is the best for you. There are many different handguns out there. There are revolvers and semi-automatics; short barrels and long; and way too many calibers to list. Each one has its place and purpose. You just need to narrow them down until you find what's right for you.

Target Shooting. If your main intention is simply to have a handgun to take to the range and shoot targets, you can't go wrong with either a revolver or semi-automatic chambered for .22LR. These are also great firearms for teaching people how to shoot and to practice firearms safety. These handguns come in a variety of sizes, although for target shooting, I've found that a 4- or 6-inch barrel is perfect.

<text>

Personal Protection. Here, the choices increase and are something you should really investigate. I recommend going to a place that'll allow you to try different firearms and different calibers. The range I go to (New Hampshire's Manchester Firing Line) allows you to rent different handguns and shoot them. This step is important, because you don't want a gun that's more than you can handle or less than you need.

Popular calibers include .380, .38 Special, .38, .357 Magnum, 9mm, .40 and .45ACP. Calibers such as 10mm and .44 Magnum are, in my opinion, a bit much, but you might feel differently. A .22 is not typically the caliber for this purpose. Your personal-defense gun should be light and easy to use. Because you're not going to make long shots, shortbarreled handguns—those with a 4-inch barrel and under—are perfect. They're easily concealed and easily carried.

Hunting. While there are hunters who do hunt specifically with handguns, most hunters carry a handgun as a backup. When I go hunting, even bird hunting, I carry a Springfield XD-S .45ACP as my backup gun. Why? Well, on more than one occasion, I've encountered a bear or coyote while turkey or grouse hunting. I don't like relying on birdshot in these instances.

For small game (squirrels, rabbits, porcupines and the like), I'd stick to the old, reliable .22LR. In this case, the longer the barrel, the greater the distance and accuracy of your shots. Just be aware that the longer barrels are heavier.







Above: The results on the target used at 40 feet with a Springfield XD-S. There are many kill shots, but shooting at 40 feet isn't the perfect range for this handgun.

Cleft: The author gets some shooting in at 30 feet. Practicing at various distances helps improve overall accuracy. (Photo: Manchester Firing Line)

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> Near right: The author is firing his Springfield XD-S. Every trip to the range is an opportunity to practice proper hand placement. (Photo: Stan Beck)

> Far right: Author Benner checks his revolver prior to firing it. Always err on the side of safety where firearms are concerned. (Photo: Mark Goddard)







In areas where larger game is more likely to be encountered, you'll want largercaliber handguns. Good choices include .357 Magnum, .44 Magnum, 10mm, .45LC, and .45ACP. I know someone who carries a .40 when hunting. However, to me, that's just on the edge of being effective; and by no means is a 9mm large enough for the situations I anticipate. While I hunt using long guns, there might be times when a long gun can be more of a hindrance than an asset. Examples of this include going into heavy brush after a potentially wounded bear or hog.

Left: This target was used at 40 feet. Not bad, but still not great, so more practice is in order.

The author used American Eagle FMJ rounds when shooting his Springfield XD-S at the range.

TEACHING

Your responsibility only *starts* with the purchase of a handgun. Just because you own one doesn't mean you know how to use it ... and use it safely. It's your responsibility to fully understand how the firearm works, how to solve problems with its operation and how to be safe when carrying and using the firearm. Start by reading the manual that comes with your handgun—*before* you load a single round in it. Each handgun is different, so do yourself and those around you a favor: Make sure you're familiar with it before you head to the range.

Safety starts with proper control, and that's only accomplished with constant practice. If you're new to using a handgun, start by taking a class taught by professionals. When I teach people to shoot, I spend a great deal of time on safety, proper stance and gun control—all before a single round is loaded. You need to know the mechanics before anything else. And when we finally get to the range, I'm always watching the student(s) to make sure they're doing what I taught them. I correct them as needed. If a safety rule is violated, all shooting stops, and we go back to the beginning.

CARRY SAFELY

If you plan on carrying your handgun, you



HANDGUN PROS AND CONS

As with everything else, there are pros and cons that come with handguns. Here are some practical aspects of handgun use. As long as you understand this, you can deal with them.

Pros

• They're generally small and easy to carry. The exceptions to this, of course, are some of the larger handguns with long barrels.

• They're easily concealed. This is important if you're carrying for personal protection.

• They're great as backup guns in hunting situations.

Cons

They might draw unwanted attention if carried openly. Some people become nervous when they see someone carrying a firearm (rightfully so). Some will take it as an invitation for a fight. Use discretion and caution in these situations.
They might give you a false sense of security. Some people feel more invincible because they're carrying a handgun and might be emboldened to do things they wouldn't normally do. This often happens when people aren't properly trained.
More accidents happen with handguns than with long guns. Again, this is mainly because some people aren't properly trained. Remember: Always think safety.

"YOU SHOULD ALSO LEARN ABOUT THE LEGAL RIGHTS AND RESPONSIBILITIES THAT COME WITH HANDGUN OWNERSHIP AND USAGE."

Below: The author

takes some time shooting a revolver

rest. (Photo: Mark Goddard)

from a bench

must do it safely. Accidental discharges can, and do, happen. Handguns can go off if they're dropped or when you accidentally touch the trigger when drawing the gun from the holster. Don't rely on the firearm's mechanical safety to keep accidents from happening.

In fact, some firearms don't have a mechanical safety. And some have more than one. It's up to you to know your firearm. With revolvers, most manufacturers recommend that you let the hammer rest on an empty chamber when carrying. Even though my Springfield XD-S has multiple safety features, very rarely will I carry it with a round chambered. It doesn't take much to load one in the chamber when needed.

The bottom line? It's always best to err on the side of safety.

Firearms of all sorts are tools. The Benner household has numerous firearms, both handguns and long guns, and each one has

SEMI-AUTOMATICS VS. REVOLVERS

Semi-Automatics

Semi-automatics use detachable magazines to feed the ammunition. Gas from the first round drives the bolt back, allowing another round to be automatically fed into the chamber. The number of rounds that can be fired is only limited by the number of rounds in the magazine. Magazine capacity varies widely, depending on the ammunition used and other factors.

Revolvers

These handguns operate strictly on a mechanical system involving a rotating cylinder that holds the rounds. When the external hammer is pulled back, the cylinder rotates, putting a round into position to be fired. Revolvers are typically capable of holding six rounds but can hold less or more, depending on the handgun and ammunition used.

Revolvers are available in either single or double action. With single-action revolvers, the hammer must be manually pulled back for each shot. A double-action revolver automatically rotates the cylinder into place for the next shot when you squeeze the trigger.

Carry Options and Accessories

Both types of handguns have many carry and accessory options, although the selection is broader for semi-automatics. Personal preferences and enhancements can make the use of your handgun more effective and comfortable. Nevertheless, keep in mind that these add-ons will make ownership more expensive.

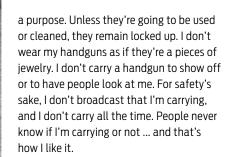
> Right, top: Adjusting to shots on target at 30 feet, the author has found the perfect range for his Springfield XD-S. Of 40 rounds, 37 were hits

> Right, bottom: The author's daughter, Sarah, is learning to properly fire a handgun at Manchester Firing Line in New Hampshire. She's using his Heritage .22LR single-action revolver.

> Below: This revolver (top) and semi-automatic handgun (bottom) have both made many trips to the range with the author.







If you're a handgun owner, you owe it to yourself to receive proper training and to practice often. It's not uncommon to find me renting a lane at my firing range just to keep sharp. You need to know the limitations of your handgun-and, more importantly, your own limitations. Safety always, always, always has to be in the forefront of your mind and guide your actions. Accidents do happen, but most of those accidents can be avoided by strictly following firearms safety guidelines.

You owe it to yourself, your family and the people around you to treat your handgun with the utmost respect. ASG



76 AMERICAN SURVIVAL GUIDE [JANUARY 2021]

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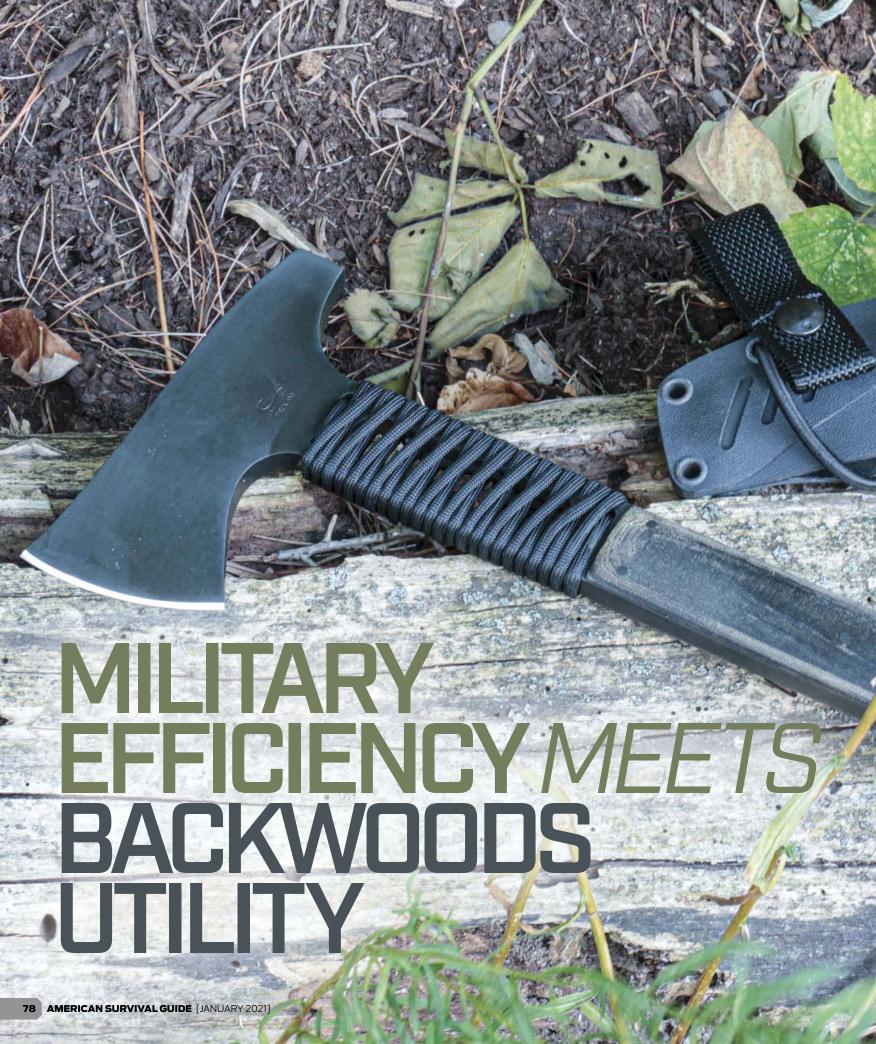
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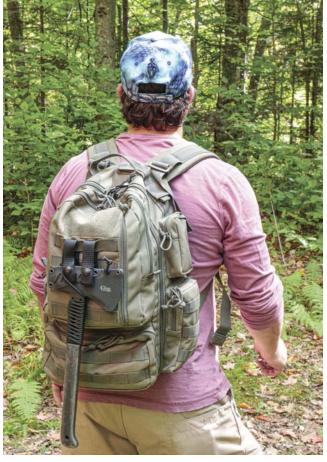
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- + BREATHABLE
- + QUICK DRYING







> Top: While the Pack Axe could be secured to your belt, the author feels it's more likely to be tucked into, or attached to, the outside of a pack. In either case, you don't want to leave it at home!

> *Left*: The Case Winkler Pack Axe is an excellent, all-purpose chopping tool that can handle urban emergencies, backwoods survival and everyday tasks.

YOU'LL KEEP THE CASE WINKLER PACK AXE CLOSE AT HAND.

BY STEVEN PAUL BARLOW

'd describe it as a hatchet with a military tomahawk lineage. And, it can handle any marching orders you're likely to give it. The Case Winkler Pack Axe is a tool that provides more chopping power than a large knife, yet it's small and light enough that you won't be tempted to leave it at home. As a tool for survival applications on pavement or off, it'd be hard to beat.

WHAT IS IT?

The Case Winkler Pack Axe, as the name implies, is a collaboration between W.R. Case & Sons Cutlery Company and Winkler Knives and is the most recent offering in the Case American Heroes series.

First, let's look at the build. At just 26 ounces, the Pack Axe is a lightweight hatchet. It's crafted from a single piece of 3/8-inch-thick 80CrV2, an excellent high-carbon tool steel that's strong, holds an edge well and—important for an axe—can take lots of pounding shock. The metal has a Caswell matte-gray nonglare finish. The flatback head features a cutting edge of 2.57 inches, sufficient for most tasks while still able to get into tight spaces.

> Top right: The cutting edge is 2.57 inches, concentrating its chopping power over a small surface area. Its size would be especially useful in tight spaces, such as when quartering game.

> Bottom right: The upper portion of the handle is wrapped in paracord to protect the handle from errant strikes. It also provides a good gripping surface when choking up on the handle for precise cuts. The paracord has many other survival uses as well

> Below, left: Todd Barlow sharpened this stick for use as a lashing post with a couple of good, angled slicing chops. There's no wooden handle to chip, shatter or rot. The full tang is skeletonized, and it's tapered so that it's narrower at the bottom. This emphasizes the weight at the head and gives the Pack Axe excellent handling qualities. The curved knob at the bottom of the handle serves effectively as a hand stop to help you maintain your grip when you swing the axe. The handle panels are sturdy, Micarta-like canvas laminate. They provide a secure hold without becoming abrasive to the hand during long chopping chores. The handles aren't removable.

Too common these days are the "packable" hatchets offered by some companies; they have stubby, little handles that just about negate their chopping abilities. Not so with the Case Winkler Pack Axe: It has an overall length of 14.25 inches. That's sufficient to give you lots of leverage for powerful chopping swings. A hexagonal hole at the bottom of the handle allows for attachment of a lanyard or for hanging the axe when it's not in use.

The Kydex sheath covers the whole head of the Pack Axe. It features two snap-on nylon straps that can serve as belt loops or for attaching it to MOLLE gear. To secure the axe in the sheath, there's a knotted stretch cord that you wrap around the







bottom of the sheath and secure in a notch at the top. It's handy and provides quick access to the axe: Simply pop the cord out of the notch, and the axe can be pulled downward out of the sheath.

A PRACTICAL BLEND

The Case Winkler Pack Axe is a wellintegrated blend of a combat tomahawk and a woodsman's hatchet. The tomahawk was indispensable for Native Americans, frontiersmen and early military units such as Roger's Rangers. It was the ultimate utility tool of the time and was lightweight and handy enough to carry on a belt. It was a close-quarters backup weapon vital in the days of single-shot, muzzle-loading rifles. In addition, the same tomahawk was used to clear trails, build shelters and rafts, split kindling, quarter and butcher big

K Near left: Here, once again using the hammer side of the Pack Axe, Todd Barlow pounds in a lashing post used to secure a tarp over a tent at deer camp.



The sheath covers the head of the Pack Axe and has two snap-on nylon straps for attachment to a belt or MOLLE gear. A knotted elastic cord secures the axe in the sheath.

game and many other tasks. The tomahawk often featured a friction-fit wooden handle that could be replaced easily when damaged; it could also be removed for using the head, alone, for skinning and other chores.

A woodsman's axe, or hatchet, has many of the same attributes. It's lightweight and handy, although it's typically geared more toward bushcraft duties than for use as a weapon. Sometimes, the head of a woodsman's hatchet will have a wider wedge to make it more suited to splitting wood. That head is secured to the handle; it's not meant to be removed.

When Case and Winkler decided to collaborate on such a practical tool, military vet Kevin Holland was brought in to provide his design input. (The Pack Axe is the second of his designs in the Case Winkler series. The first was the Case Winkler Skinner, a fixed-blade knife that quickly became one of my favorites after I tested it a couple of years ago.)

Many military axes designed for combat have a spike on the head opposite the cutting edge. This Case Winkler collaboration was intended more for woods use than for war. Holland chose a flat area at the rear of the head instead of a spike. That gives the tool the ability to pound nails and tent pegs, along with other uses for which a hammer is required.



Kevin Holland was the natural choice for working on the Case Winkler Pack Axe design. He's the one who first got Winkler involved in making military axes.

Holland entered the U.S. Navy upon graduation from high school. He became a Navy SEAL and served during Desert Storm. Back in the United States, he had more duties.

"I was tasked with finding a breaching axe," he said. "I saw the movie, *The Last of the Mohicans*, and found out who made those axes. It was a guy who lived about 30 miles from where I grew up near Boone, North Carolina. Daniel Winkler was his name."

Holland called him on the phone and explained that he was looking to get a breaching axe made for his SEAL team.

"A combat axe wasn't a common thing back then. I drew him a picture of what I wanted, sent it to him, and he made the axe. He sent it to me in the mail. That was the first one he ever made for a military person. I carried that the whole time I was a SEAL. When I got out, I was a wildlife officer in North Carolina, and I carried it in the door of my car."

Then, after the 9/11 terrorist attacks, Holland went back into the military, this time trying out and signing on with an Army Special Operations unit. When fellow soldiers saw his Winkler axe, many of them wanted one just like it.

From that time, a large part of Winkler's business has been crafting knives and axes for elite military units.



Far left: While
 setting up his
 seasonal deer camp
 last fall, the author
 quickly fashioned
 this replacement
 tent pole using the
 Pack Axe.

Near left: Todd Barlow took a turn with the axe to hammer in some tent stakes. A little more surface area on the hammer would have been preferable, but it got the job done.

CASE AND WINKLER-A DREAM PARTNERSHIP

The collaborations between Case and Winkler for the Case American Heroes series bring together two companies with reputations for making excellent blades.

Case has deep roots. They extend back to 1889, when the four Case brothers sold their handcrafted knives out of a wagon along a trail in southwestern New York State. Eventually, W.R. Case & Sons was formed.

While the company has made every type of knife over its history, it's especially known for its top-quality, American-made, traditional folding knives that are prized by collectors and often passed down from one generation to the next. Based in Bradford, Pennsylvania, the company is now owned by Zippo Manufacturing Company, makers of the famous windproof lighters.

Winkler Knives is a much more recent arrival to the world of edged tools. Daniel Winkler began making knives in 1975 and was doing it full-time by 1988. He was accredited by the American Bladesmith Society as a master bladesmith in 1993.

Winkler's design inspiration came from the knives and axes of America's frontiersmen. His designs attracted the attention of soldiers needing sturdy, practical blades, and Winkler has been supplying elite military units ever since. Of course, savvy civilians have also seen the value in his semi-custom blades. He intentionally stayed away from the wide wedge heads used in splitting or felling axes. "If you look at the frontiersman's or woodsman's axes, they didn't have these massive heads," Holland pointed out. "They didn't need a massive axe to carry on their belts or to throw in their packs. They needed a woodsman's axe, and this is really what the Pack Axe is based on."

He said he tailored the Case Winkler Pack Axe to be similar to those used by frontiersmen, because "those guys knew how to live in the woods." Overall, Holland was pleased with the final design of the Pack Axe.

"When you see a taper in the tang, that is the mark of a handmade knife or axe," he explained. "You don't usually see that on mass-production blades. The paracord at the top is because a lot of times, guys will be splitting kindling, and they'll nick the wood handle." While there's little danger of ruining the Pack Axe's handle—it features full-length steel construction—the paracord does add a measure of protection.

"If you do nick the cord on something, you could just rewrap it," Holland said. "It's also there to use in any kind of survival situation."

WOODS UTILITY

I brought the Pack Axe along when my brother, nephew and I set up our seasonal deer camp this past fall. We discovered we were missing a tent pole, so I went to work chopping a nearby downed tree branch to size.

The Pack Axe was extremely sharp when I first got it (you'd expect that from both Case and Winkler, so there was no surprise there!). And, I was very pleased at how easily the Pack Axe, as light as it was, chopped through the branch, which was 3 or 4 inches thick. I trimmed off smaller branches. Then, I choked up on the axe handle and took a grip on the paracord wrap. I found it made for a good gripping surface when making moreprecise cuts. I sliced the smaller end of what was now about a 7-foot-long staff until it was shaped to fit into the end of the aluminum pole for which we were short one piece. Problem solved.

We always rig nylon tarps over our tents as extra protection against potentially severe Northeast weather. My nephew took a turn with the Pack Axe and made some stakes and lashing posts to secure the tarp in a taut, inverted "V."

We discovered that we'd have preferred a larger surface area on the back of the axe head for pounding stakes, but it got the job done. Later, when we used the Pack Axe to split 2-inch, kindling-sized pieces of wood, it did a fine job. It has excellent balance and handling qualities that help you be more precise and, therefore, more efficient with your chopping strokes.

When I returned home, I wiped down the Pack Axe with an oily cloth, and it looked as good as new. It's not made of stainless steel, so you can't neglect it. Although we used the tool all that day, the edge showed no indication that it had dulled, even a bit. I imagine



C The Case Winkler Skinner fixed-blade knife was the first design of retired military vet Kevin Holland that Case introduced. Holland has the distinction of having served in elite units of both the U.S. Navy and Army.

The handle of the Case Winkler Pack Axe provides a secure hold
 and is long enough to give you enough leverage for good chopping
 power.

"THE CASE WINKLER PACK AXE IS A WELL-INTEGRATED BLEND OF A COMBAT TOMAHAWK AND A WOODSMAN'S HATCHET."

Case Winkler Pack Axe

Specifications

Construction: One-piece 80CRV2 steel
 Overall length: 14.25 inches
 Cutting edge: 2.57 inches
 Finish: Caswell, matte gray
 Handle: Canvas laminate
 Weight: 26 ounces
 Sheath: Kydex with two nylon attachment straps and elastic security cord

MSRP: \$499.99

Above: Two-thirds of the tapered, full-length tang is fitted with canvas laminate grip panels.
 Below: The more you carry the Case Winkler Pack Axe, the more uses you'll find for it. (Photo: Case Knives)







> Top: Splitting kindling proved an easy task for the handy Case Winker Pack Axe.

> Below, near left: The back side of the Pack Axe head features a hammer head instead of the spike found on many combat tomahawks. when it comes time for a touch-up, a few strokes on a Lansky Puck or similar sharpener will be all that's required.

SURVIVAL AT HAND

Remember, when you're relying on one tool for multiple tasks, there'll always be compromises. When it comes to the choppers, a larger, heavier tool might chop and split better. However, a larger, heavier tool is one you'd most likely leave back at camp. "I've been in situations before where I needed an axe," Holland said. He recalled a time in Norway when a snowmobile went off the trail and got hung up on a downed tree branch. He had a Winkler axe with him and was able to chop the branch to free the machine.

Yes, this axe is expensive. It lists at a penny under \$500. But if it's cared for and not abused, this tool is an heirloom possession that can last several lifetimes. A good chopping tool that's sufficiently light and compact to be included in your essential gear when you're traveling light and staying highly mobile can be invaluable.

Nevertheless, don't think its usefulness ends at quartering an elk, splitting kindling or making an emergency shelter. A tool such as the Case Winkler Pack Axe can be a lifesaver in more "civilized" environments too. For instance, extricating a motorist from a wreck or chopping your way out of a room that's ablaze are just a couple of uses that come to mind. **Asg**

SOURCES

Case Knives (for Case knives and the Case Winkler Pack Axe) (888) 442-1932 CaseKnives.com

Winkler Knives (for Winkler knives and axes) (828) 262-3691 WinklerKnives.com





> *Above*: Despite the Pack Axe's light weight and small size, the author found that it cut through tough hardwoods with ease—thanks, in part, to its sharp blade and efficient geometry.

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SURVIVALIS ATEANSPORT

IMPROVE YOUR CHANCES BY ENHANCING THE SKILLS OF THOSE AROUND YOU.

BY DANA BENNER

really hate labels. Labels have a tendency to give people generalized views ... and often, erroneous assumptions.

Take the word, "prepper." What *is* a "prepper" anyway? And, how about a "survivalist"? These two words mean different things to different people. Both carry connotations, often negative, and can promote an "us-against-them" mentality. So, what do they mean, and how can we drop those divisive labels and work

with others inside and outside "the community"?

PREPPER VS. SURVIVALIST

Merriam-Webster defines a "prepper" as "a person who gathers materials and makes plans in preparation for surviving a major disaster or cataclysm (such as worldwide economic collapse or war)." Going by this definition, if you stock up on extra food and

 Opposite: An instructor at a Fieldcraft Survival (FieldcraftSurvival.com) training event leads a class on basic survival skills. (Photo: Fieldcraft Survival)

> Right: What do you do when your GPS stops working? Here, Fieldcraft Survival (FieldcraftSurvival.com) instructors give an orienteering class so students can eliminate their reliance on technology that might not be available after a disaster. (Photo: Fieldcraft Survival)



> Above and below: Members share the workas well as the benefits-by pulling together on maintenance chores at the Groveton Fish & Game Club in Groveton, New Hampshire. "LONG AGO, PEOPLE ALL OVER THE WORLD KNEW THAT IN ORDER TO SURVIVE, THEIR GROUP NEEDED TO WORK TOGETHER AND LEVERAGE EACH PERSON'S STRENGTHS AND EXPERTISE ... THIS IS HOW WE MUST ACT TODAY AND WORK TOGETHER."



fuel in the days prior to a hurricane, plot an escape route in case of a wildfire or have a supply of sandbags in preparation for a flood, you're a prepper.

To many people, "prepper" stirs up images of fortified underground bunkers, caches of weapons and people who've watched way too many episodes of *The Walking Dead* or *Mad Max*. This image, which has been endorsed by some who claim to be part of the prepper community, has helped fuel its negative stigma. In actuality, true "preppers" are nothing like this.

"Survivalist" pre-dates the term "prepper" and is another word that's been stigmatized. Again, ask people what a "survivalist" is, and they will describe a person or group living out in the woods, eating tree bark and wearing animal skins. Having lots of guns and ammunition is also part of the common assumption when this label is used. Once again, I turned to *Merriam-Webster* for its definition. A "survivalist" is defined there as "a person who advocates or practices survivalism; *especially*: one who has prepared to survive in the anarchy of an anticipated breakdown of society."

I don't need to turn to the dictionary to define "survivalism." Simply put, it's the act of staying alive. I hope we're all survivors.

DROP THE STIGMAS AND STEREOTYPES

I've been following the teachings of my Native American ancestors, as well as a host of other people, my entire life. Preparing for tough times (drought, storms, sickness and other challenges) has always been a way of life for me. Does that make me a prepper? I guess it does, although I never labeled myself as such.

When it comes to being a survivalist, aren't we all survivalists? I don't know anyone who doesn't have the drive to stay alive. I utilize a multitude of resources to keep my family fed and safe. I don't eat tree bark or wear animal skins, because I plan and execute better than that. I hunt, fish and forage. I grow some of my own food and often barter for those items I can't provide on my own. I conserve and reuse resources whenever I can. This is what being a survivalist is all about.

As my ancestors did, I freely share what I know with others. Those of us who have useful knowledge need to take the lead and teach those who don't. Will everyone listen? Heck, no; but we have to be a ready resource for those who will. After all, if we don't, who will?

Today, we live in a world in which people like to polarize themselves. The thinking seems to be, "If I don't agree with you, then I can't (or won't) work with, and learn from, you."

This isn't the way it ought to be. No two people are ever going to see eye to eye on everything, but we all have the drive to survive, and all of us can learn from each other. My father often said, "As long as you have one apple and two people, you'll have a disagreement."

Work out the disagreement, even if you have to agree to disagree. Then, move on.

WORKING TOGETHER

We currently face a worldwide pandemic, climate change, overpopulation and food

These heads of Chinese cabbage were grown on a co-op farm, whose members work together for everyone's benefit.



A wide variety of crops is grown at co-op farms, including chickens and eggs.



> The author is shown teaching a class on Native American methods of survival.





shortages. Add to that increased drought, forest fires and more frequent, more severe storms than we've had in the past. And, don't forget all the wars over political, ethnic, racial and religious differences. Let's face it: We're in a world of hurt, and there's no time like the present to work together and do what's best for all of us.

Long ago, people all over the world knew that in order to survive, their group needed to work together and leverage each person's strengths and expertise. Not everyone was an expert farmer or hunter; not everyone was an expert at making tools and weapons. But everyone had *something* to offer. This is how we must act today and work together.

"Preppers" and "survivalists"—if that's how you identify yourself—must be willing to teach others with no prepping and survival skills what they should know to increase their level of self-reliance and readiness for emergencies. Who knows how to do this better than those of us who live that life?

"THOSE IN THE PREPPER COMMUNITY TEND TO PLAY THEIR CARDS CLOSE TO THE VEST. THEY DON'T GO AROUND BOASTING ABOUT HOW MUCH THEY HAVE STOCKED AWAY OR HOW THEY PLAN ON DEFENDING WHAT THEY HAVE IF THE NEED ARISES."

> Above, top right and bottom right: Co-op farms give people who don't have suitable land the opportunity to learn through work. Experience is the best teacher, and their rewards are knowledge and sharing in the harvest



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Captain David Bourgeois, of Big Dog Fishing Charters in Lafitte, Louisiana, teaches a client to cast for redfish. Sharing his experience and tips will make her a more productive fisherman.

"REMEMBER: PREPARED PEOPLE ARE LESS DANGEROUS. (RECALL THE OLD SAYING: 'GIVE A MAN A FISH, AND YOU FEED HIM FOR A DAY. TEACH HIM TO FISH, AND YOU FEED HIM FOR LIFETIME.' THERE'S A GREAT DEAL OF TRUTH TO THIS STATEMENT.)"



> Right: Randy Sigler, of Sigler Guide Service, teaches the author the proper way to process a flounder.

THE FEAR OF BEING COMPROMISED

Those in the prepper community tend to play their cards close to the vest. They don't go around boasting about how much they have stocked away or how they plan on defending what they have if the need arises. This is because doing so puts their lives and the lives of their families in jeopardy from those who would rather take than work. There have always been people such as this, and there always will be, but that doesn't mean we can't share knowledge with those who really want to learn.

The good news is that we generally know who our threats are: They're the ones who talk a good story. They brag about how much gear they have, often including in their boasts their weapons and ammunition. They're the ones who have no idea about blending in. In some cases, you



see them doing their grocery shopping dressed in full camo and complete with a sidearm strapped on their hip, seemingly looking for a confrontation.

Occasionally, these folks want to be noticed—probably to ensure that other people see, and might be intimidated by, them something most of us don't want. Many of us carry firearms. (I have a concealed-carry permit but don't flash my firearm, because I don't want to draw attention to myself.) The "attention" they get might not be what they bargained for ... because their actions make them targets if something does go down.

In the spirit of sharing knowledge and experience, and under the right circumstances, you might be able to advise these folks to take their public displays down a notch (if possible) for their own well-being. Otherwise, keep your family and yourself safer by staying away from these people. They often have no clue about how they're perceived by others. And, in fact, when the SHTF, they might be the first ones at your doorstep, looking to take what you've stored, because they weren't making appropriate preparations.

As a writer for numerous publications, I put myself out there every day. The readers all know I'm prepared to survive, whatever comes my way. Have I compromised myself? Yes, to a certain extent, but I do it because I believe in what I do. Trust me: It isn't for the money! Rather, my reward is in the opportunity to share useful information. Education and information are power—power over the adversity that we face or will face. We all have something to offer those who are less informed.

Does teaching someone how to shoot, hunt, fish, grow food or raise livestock threaten your family's safety? How about teaching them how to prepare for storms or emergencies? No, it doesn't. On the contrary; it might help ensure it: That person you teach is now someone who's not a threat, because they have the skills to provide for themselves. They might even become a friend you can count on when you need help.

To give you an example, I'm friends with Christopher Nyerges, Kevin Estela, Jim Cobb, Joshua Swanagon and other writers in this community. We all compete for the limited space in magazines > Above, left: Rick Warbin leads a class for the New Hampshire Fish & Game Department about how to process a deer.

> Above, right: Most of the attendees in this class have probably hunted in the past. Nevertheless, it never hurts to take a refresher class on important topics such as how to process a harvested deer. but, as friends, we're willing to share our "expertise"—not only with the readers, but also with each other. Sharing information doesn't compromise any of us and makes us all better in the end. It can be the same with you. Sharing what you know doesn't have to compromise your situation.

Teaching others doesn't have to be limited to food-gathering skills. For instance, I really stink at small-engine repair, welding and a host of other things—all important things to know—and there are people in the prepper community who are experts at it. If you're one of those people, teach those skills to others who want to learn. Your students don't even need to know you're a "prepper" unless you want them to.

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The Advertiser Index is provided as a service to American Survival Guide readers. American Survival Guide is not responsible for omissions or typographical errors on names or page numbers > Right: Mike Glover of Fieldcraft Survival (FieldcraftSurvival.com) teaches a fire-starting class. This is one of the most essential skills to have in a survival situation. (Photo: Fieldcraft Survival)

GETTING INVOLVED

The question now is, *Where do you start?* There are untold numbers of people who want to learn, as evidenced by the growth in the interest in prepping since the pandemic struck.

How do you find these people? Start by approaching the types of organizations that are already working with interested people (see the sidebar below).

Contact these organizations and explain what you have to offer and how you'd like to share it. Volunteer to give a class or two, and word will get out. Adult education programs are always looking for people to give talks and seminars. Some will even pay you for your time. Even so, while getting paid is nice, it shouldn't be your motivating factor. You should be driven by the fact that you're helping others and simultaneously reducing potential threats

GET INVOLVED

There are many opportunities to share the skills that we know. Here are just a few:

American Red Cross RedCross.org

Boy Scouts of America Scouting.org

Community Emergency Response Team (CERT) Ready.gov/CERT

Community Supported Agriculture LocalHarvest.org/CSA

Girl Scouts of America GirlScouts.org

Salvation Army SalvationArmyUSA.org



"TODAY, WE LIVE IN A WORLD IN WHICH PEOPLE LIKE TO POLARIZE THEMSELVES. THE THINKING SEEMS TO BE, 'IF I DON'T AGREE WITH YOU, THEN I CAN'T (OR WON'T) WORK WITH, AND LEARN FROM, YOU.""

to your own safety. Remember: Prepared people are less dangerous. (Recall the old saying: "Give a man a fish, and you feed him for a day. Teach him to fish, and you feed him for lifetime." There's a great deal of truth to this statement.)

The world is being ravaged by the COVID-19 pandemic. Our economy is in a world of hurt. There are protests bubbling up all over the place. And, at this writing, I can only guess at the aftermath of the November election. Now, more than ever, we need to pull together as one people if all of us are going to survive. We need to drop the "us-versus-them" attitude. We need to share our knowledge instead of withholding it. **ASG**





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PREPPER PLANT ADVISOR

WILD APPLES POPULAR AND PLENTIFUL ACROSS THE COUNTRY AND GREAT FOR COOKING AND BAKING

TEXT AND PHOTOS BY CHRISTOPHER NYERGES

Name: Wild Apples

(Malus pumila and Malus hybrids)

Description

Worldwide, there are about 25 species of the *Malus* genus, which includes all our domestic apples. According to botanists, all our apples come from the wild crab apple (*Malus pumila*) and two distinct forms—*M. sylvestris* (from northern Europe) and *M. mitis* (from southern and eastern Europe). The apple has been popular as far back in time as we have records and has been domesticated and cloned going back at least as far as ancient Roman times. According to the USDA, there are around 7,000 varieties of that domestic apple.

If you've ever seen a domestic apple tree in an orchard or backyard, you know what the tree looks like. In the wild, these will be small trees, often in thickets. You'll look at the leaves and the fruit, and you'll say to yourself, "Boy, that sure looks like an apple." It would be a wild, small crab apple, and it could be any of the many varieties of apples that have gone feral.

Each leaf is lanceolate to ovate-lanceolate, 1.5 to 4 inches long, pointed, serrated, occasionally with a lobe on one or both margins. It's deep green above, paler beneath.

The floral inflorescence (group or cluster of flowers) typically has five to 12 flowers and is flat topped. There are five white petals, 20 stamens (shorter than the petals) and usually three styles. The fruits are fleshy, round to obovoid and about 10 to 16 millimeters long. The color can range from yellow to purplish red.

Where It's Found

It can be found in Alaska, south to California and from the west coast to the east coast. It's found in moist woods, swamps and open canyons from sea level to moderate elevations in the mountains. Apples do best where there's a winter frost.

Uses

Remember, if you know what an apple looks like, you'll recognize wild apples or crab apples as well. Probably everyone who has seen one for the first time has picked one, chewed on it ... and spit it out because it was too sour. These aren't great to eat raw as you'd eat a regular domestic apple. Even so, they're still a great find.

Properly prepared, these can be quite good. I've cooked them, run them through a sieve to get rid of the seeds and skin and made a great crab apple sauce. You can sweeten this sauce with a bit of honey.

These fruits can be dried as a snack for later or mashed and added to other baked goods. They can be cooked, mashed, strained and used as the basis for an apple drink. The cooking mellows the flavor, but you still might want to add some honey (and this goes particularly well with a cinnamon stick).

You can do almost anything with wild apples that you'd do with cultivated apples, such as cooking and mashing up a batch, spreading it thin in a pan and drying it for fruit leather. If you're good in the kitchen, you can cook up a batch of the small crab apples to make jams or jellies.

The fruits that might remain on the trees will lose a bit of their tartness and will even sweeten up a bit if you harvest them in winter.

You might be surprised how many gone-feral apple trees you can find that still produce fruit. Some of the best apples I've ever eaten were picked in orchards that had been abandoned at least a decade earlier. Yet, they still consistently produced quality fruit.

Processing

Processing feral or wild apples is the same as for commercial apples: Use standard kitchen appliances to make juice, butter, cider, sauces and other food items. Before you begin, quarter the apples and remove the seeds. However, because the skin is so nutritious, you might want to leave it on.

When to Harvest/Availability

Some fruits begin to ripen in late summer. Generally, the best time to collect the ripened fruits is autumn.

Medicine/Nutrition

A medium apple, with a diameter of about 3 inches, equals 1.5 cups of fruit. (Two cups of fruit daily are recommended as part of a 2,000-calorie diet.) One medium apple (about 6.4 ounces) offers the following nutrients: 95 calories, 25 grams of carbohydrates, 4 grams of fiber, 14 percent of the RDI of vitamin C, 6 percent of the RDI of potassium and 5 percent of the RDI of vitamin K. It also contains lesser amounts of manganese, copper and vitamins A, E, B1, B2 and B6. To get the greatest nutritional benefit out of apples, leave the skin on. It contains half the fiber and many of the polyphenols.

Apples have been linked to a lower heart disease risk. One reason might be that apples contain soluble fiber—the kind that can help lower your blood cholesterol levels. They also contain polyphenols, which have antioxidant effects. Many of these are concentrated in the peel. One of these polyphenols is the flavonoid "epicatechin," which might lower blood pressure.

Advice for Growing

It's very easy to plant an apple seed and get a tree to grow. However, your fruit isn't likely to be the same as the parent fruit from which you got the seed. So, yes, growing from a seed is easy, but you don't know what sort of fruit you'll get until the tree fruits after a few years.

However, you can also make a vegetative clone with an apple branch from a tree whose fruit you like. Just take a cutting, place it in a rooting medium and keep it moist. I often soak the cuttings in water for a few days before planting. You can also experiment with rooting hormones, because they're supposed to increase your chances of success.

Cautions

The seeds of any apple are toxic because they contain a small amount of a cyanide compound. Even so, you'd have to eat a lot of apples to cause sickness; and, if you don't chew the seeds, they'll just pass through your body. An adult could die if they chewed up about half a cup of pure seed at one sitting. Fortunately, cooking and drying help break down this chemical, significantly reducing any danger.

It's possible to get diarrhea by eating a lot of raw apples. "A lot" can vary from person to person, so if you enjoy eating crab apples raw, go slowly at first and monitor what happens to your body.

History

Was "Johnny Appleseed" a real person? Yes! John Chapman was born in 1774 in Massachusetts and traveled throughout the Ohio Valley area, where he established nurseries as he traveled and made some money from his plantings. He planted seeds and sold the young trees to farmers along the way.

Chapman trained under an orchardist (by the name of Crawford) to learn the art of raising trees, and this gave him the knowledge and inspiration to do so on his own. Contrary to folklore, he didn't simply wander in a happy-go-lucky manner; rather, he used the money from his apple trees to support his desire to travel and preach the Swedenborgian religion. He died in 1845.

> *Above, near right:* Wild crab apple trees can be found all around the United States. (Photo: Jean Pawek)

> *Near right:* These wild crab apples are ready to be picked.

> *Bottom right:* This is a 2-year-old apple tree grown from a seed. We won't know what sort of fruit this tree will bear for a few more years.

Recipes

As stated above, you can substitute wild apples in virtually any recipe you have for domesticated apples. Some adjustments might be required for taste.

WILD APPLESAUCE

Core a dozen wild apples. Cook them until tender and then blend them coarsely. Pour into jars and chill before eating. Sweeten with wild elderberries or strawberries.

About ASG's Plant Advisor

Christopher Nyerges has been teaching ethnobotany since 1974. He's the author of *Guide to Wild Foods and Useful Plants, Foraging Wild Edible Plants of North America* and other books on the uses of wild plants. He can be reached at **SchoolofSelf-Reliance.com.**

> *Below:* Another cultivated apple, this green variety is one of the many that have descended from wild crab apples after centuries of selection and grafting.

Ms RDS

I HAVE MADE FIRE! THERE ARE TIMES WHEN THESE CAN BE THE FOUR MOST SATISFYING WORDS YOU'VE EVER SAID.

Fire is essential for survival. It might not be the top priority right off the bat but, eventually, fire is a requisite part of human life.

It provides light and, more important at this time of year, warmth. It makes questionable water safer to drink and cooks our food. Fire gives us bacon, bourbon and S'mores. Need I say more?

Fire can be used to sterilize a needle or cauterize a nasty wound. It's often employed as a way to reduce the spread of, and eradicate, disease.

Fire can summon help, either on its own at night or by creating smoke during the day.

Fire can provide light to allow us to do many important tasks deep into the night.

It can be a welcoming beacon to friends and help us lose our fears and concerns, raising our spirits with its hypnotic flames. It's also used to mark events and holidays (in fact, our word, "bonfire," is derived from the Middle English "banefyre"—literally, a fire using bones as fuel during religious celebrations).

Fire is often used to help prepare a garden for the next growing season. It consumes the leftover old growth and weeds, as well as harmful pests of all sorts. It cleanses the surface of the soil in anticipation of the new plants that will sustain us for the coming year.

Fire is also one of the most destructive forces on Earth. Natural forces, such as lightning, volcanoes and the sun, can ignite fires that consume everything in their path.

Humans have learned how to use fire as a weapon and a form of punishment. There are few more fearsome sights than seeing your home, block or city go up in flames, and there's no telling how many people have succumbed to a fiery death because of their beliefs or crimes—real or perceived. In addition, there's no way to count all those innocents who were the victims of fires, whether they started by accident or were set on purpose. Hopefully, we'll be seeing fewer reports of these types of fires in the new year.

It's important for humans to be able to conjure fire when it's needed. Because it's cold outside, it's a good time to take a look at some highly effective ways to add fire-making to your list of skills.

Steve Barlow's article, "Essential Fire-Starting Gear" (page 12), shows us many of the better products available today that take the guesswork and difficulty out of this important task.

It got me thinking about how pervasive fire is in our lives—even though it might be underrated by many, especially those new to prepping and survival skill-building. If you're looking for a last-last-minute gift idea for Christmas, one of those fire starters might make someone very happy. May your tinder always be dry and the winds never blow smoke in your face!

> Take care. Mike McCourt

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