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MODERN PIONEER

DEC./JAN. **2017**

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THE AMAZING PENCIL A TOOL THAT MADE HISTORY

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HOW-TO SKILLS

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FROM THE EDITORS OF AMERICAN SURVIVAL GUIDE
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Constructive Criticism is Complacency's Best Medicine

In every issue of *Modern Pioneer* we strive to empower you, our readers, to bolster your self-sufficiency skills by engaging in new pursuits related to a self-sustaining lifestyle. The magazine also has a strong how-to slant. The best way to learn is by reading and then doing, right? We promote living more naturally in modern times and carrying on the heritage our forefathers left behind.

That said, we go great lengths to present diverse topics in each issue. We want every reader—or potential reader—to find something (we hope several things) interesting and beneficial as they thumb through the pages. For the most part, our editorial lineup exhibits great diversity, thanks to careful planning and a great group of freelance contributors. But, we're not about to become complacent. Instead, we're continually seeking to improve the magazine and its contents. That means searching for fresh ideas and not beating one or two topics to death by running and re-running them. It also means we need your feedback.

Behind every successful magazine are great readers. Without you, *Modern Pioneer* isn't possible. So, I'm asking you what we can improve upon. Perhaps you've been waiting intently to read about a certain topic and just haven't seen it. Or, maybe you disagree with a tip or tactic that was discussed in one of the issues. In any case, we're all ears to hear what you have to say—compliments and complaints alike.

Why would I want to hear anything negative about a magazine with my name on it? Because it gives us room to improve. Without external feedback, we can only assume what is going well and what is lacking.

Let me relate this to launching my writing/editing career. I sold the very first story I ever wrote to a prominent bowhunting magazine. Not only was I on cloud nine, but I thought I automatically had the makings of a great writer. Selling the second story I ever wrote affirmed my complacency.

Soon, I had multiple story submissions rejected by different editors. I was frustrated with the editors who, in writing, ripped apart my pride with red ink. Who were they to cut down my work? After all, I was a published author.

I soon came to my senses and realized that maybe I'd become too complacent and needed the wake-up call. I went back to the drawing board and dissected my work with a fine-tooth comb. I even took to heart some of the editors' once-hurtful comments and saw them in a new light, which helped me begin improving my craft. From that point, I resolved to keep an open mind and look at things from multiple perspectives so that I could consistently deliver quality content. I've made that a routine in other non-work-related areas, too.

Now you can see why I'm welcoming your constructive criticism. At *Modern Pioneer*, we care deeply about our readers and your opinions. If you have comments, questions or simply want to request a topic you'd like to read about in the magazine, I'd love to hear from you. E-mail me at darronmcdougal@yahoo.com. Thanks for reading *Modern Pioneer*!

DARRON MCDOUGAL

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December/January 2017

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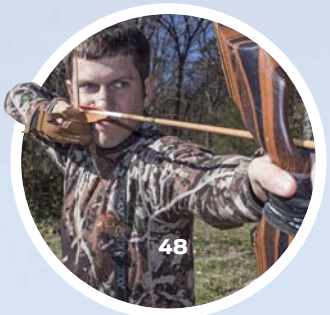

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news

Arkansas Native Seed Program Launches

In cooperation with Audubon Arkansas and with the assistance of volunteers, the Arkansas Natural Heritage Commission (ANHC) has collected seeds from native plants in Downs Prairie Natural Area, Railroad Prairie Natural Area and other areas to be used in habitat restoration projects in the Grand Prairie region. These efforts mark the beginning of the Arkansas Native Seed Program, a program ANHC staff has been hoping to establish for many years.

ARKANSAS NATIONAL HERITAGE COMMISSION

Planting native seed is often part of a habitat restoration or improvement plan. However, local native plant seed sources are limited. Out-of-state sources are relied upon, and although these seeds may be the right species, they will not have the same genetic make-up as local populations. Local plants have unique adaptations to specific soils and climate conditions, giving them the best chance of survival. They are the plants that naturally occur within a particular ecosystem, which benefits wildlife and preserves an area's natural heritage.

The Arkansas Native Seed Program reflects the ideals of the National Seed Strategy for Rehabilitation and Restoration. This national initiative, launched in August 2015 by the Bureau of Land Management, encourages preservation of native seed as a "critical national resource asset" for future generations. It began with the need for restoration after disasters such as wildfires and hurricanes caused extensive damage to large tracts of land. In such cases, reseeding with native plants is imperative to deter non-native invasive seeds from flourishing and displacing natives. The motto of the National Seed Strategy is "The right seed, in the right place, at the right time." The initiative is not legislation, but it provides an organized, multi-partner plan to have ample supplies of genetically appropriate native seed available when needed.

ARKANSAS NATIONAL HERITAGE COMMISSION

Several states now have native seed programs. In June 2016, ANHC hosted the first Arkansas Native Seed Program meeting with partners from federal, state and local agencies, and non-profit and private organizations. Working together, the group has established a plan to provide appropriate seed for projects across Arkansas. Collected seed will be stored and planted in spring 2017 by individual farmers in single-species, agricultural-style plots. In that way, enough seed can be produced to meet the needs of agencies, organizations and individuals for restoration purposes. The seeds of individual species can be mixed to meet the needs of a particular site and project. Future potential benefits are new market opportunities for private growers, improved and expanded wildlife habitat, new partnerships and research opportunities.

To learn more, visit naturalheritage.com/blog/native-seed-program-takes-root.

CSF Seeking Federal Relations Coordinator

The Congressional Sportsmen's Foundation (CSF) located in Washington, DC, is seeking applicants for a federal relations coordinator to assist with the organization's policy outreach efforts on Capitol Hill and through engagement with federal agencies.

Since 1989, CSF has become one of the most respected and trusted sportsmen's organizations in the political arena. CSF's mission is to work with Congress, governors and state legislatures to protect and advance hunting, angling, recreational shooting and trapping. The unique and collective force of the Congressional Sportsmen's Caucus, the Governors Sportsmen's Caucus and the National Assembly of Sportsmen's Caucuses, working closely with CSF, and with the support of major hunting, recreational fishing and shooting and trapping organizations, serves as an unprecedented network of pro-sportsmen elected officials that advance the interests of America's hunters and anglers.

The federal relations coordinator will report to the vice president and will be responsible for developing, coordinating and implementing outreach strategies designed to enhance the organization's engagement on federal policy issues. The ideal candidate will have one to three years experience working on federal natural resource policy issues through employment by a member of Congress or federal agency.

Log on to sportsmenslink.org and click on the "About" section to access a detailed description of the duties and responsibilities of the position and necessary qualifications.

Commission Approves Shed Hunting on State-Owned Lands

The South Dakota Game, Fish and Parks Commission voted to allow shed antler hunting on state-owned lands at its November meeting in Brandon in late 2016.

The rule only applies to lands owned by the department, including state parks, recreation areas and Game Production Areas. The rule change does not apply to Walk-In Areas or lands owned by other state or federal agencies.

Firearms Policy Coalition Vows to Keep Fighting California's Proposition 63

Recently, Firearms Policy Coalition (FPC) and its Stop Prop 63 campaign committee Director of Legislative and Public Affairs Craig DeLuz released the following statement:

The passage of California Proposition 63 and other anti-civil rights ballot measures across the country following tens of millions of dollars of signature buying and mainstream media-fueled propaganda shows that the democratic process is for sale to the highest bidder. Indeed, democracy in California and other states has been hijacked by radicalized millionaires who prey on uninformed voters and the extraordinary representation gap between well-heeled elitists and the people subject to their policy preferences ...

And while the wealthy, power-hungry interests behind Proposition 63 were temporarily successful in their ballot campaign to turn good people into criminals, the fight is far from over.

We and our supporters are unwavering in our commitment to continue fighting Proposition 63 using every legal means available. Law-abiding people who believe in the fundamental nature of Second Amendment rights will stand together and move forward in the fierce battle to defend individual liberties from the iron grip of wealthy constitutional terrorists.

Following the historic election of Donald J. Trump, we look forward to challenging Proposition 63 and many other extreme gun control laws in federal courts that respect the original public meaning of our great Constitution and the unambiguous text, history, and tradition of the Second Amendment ...

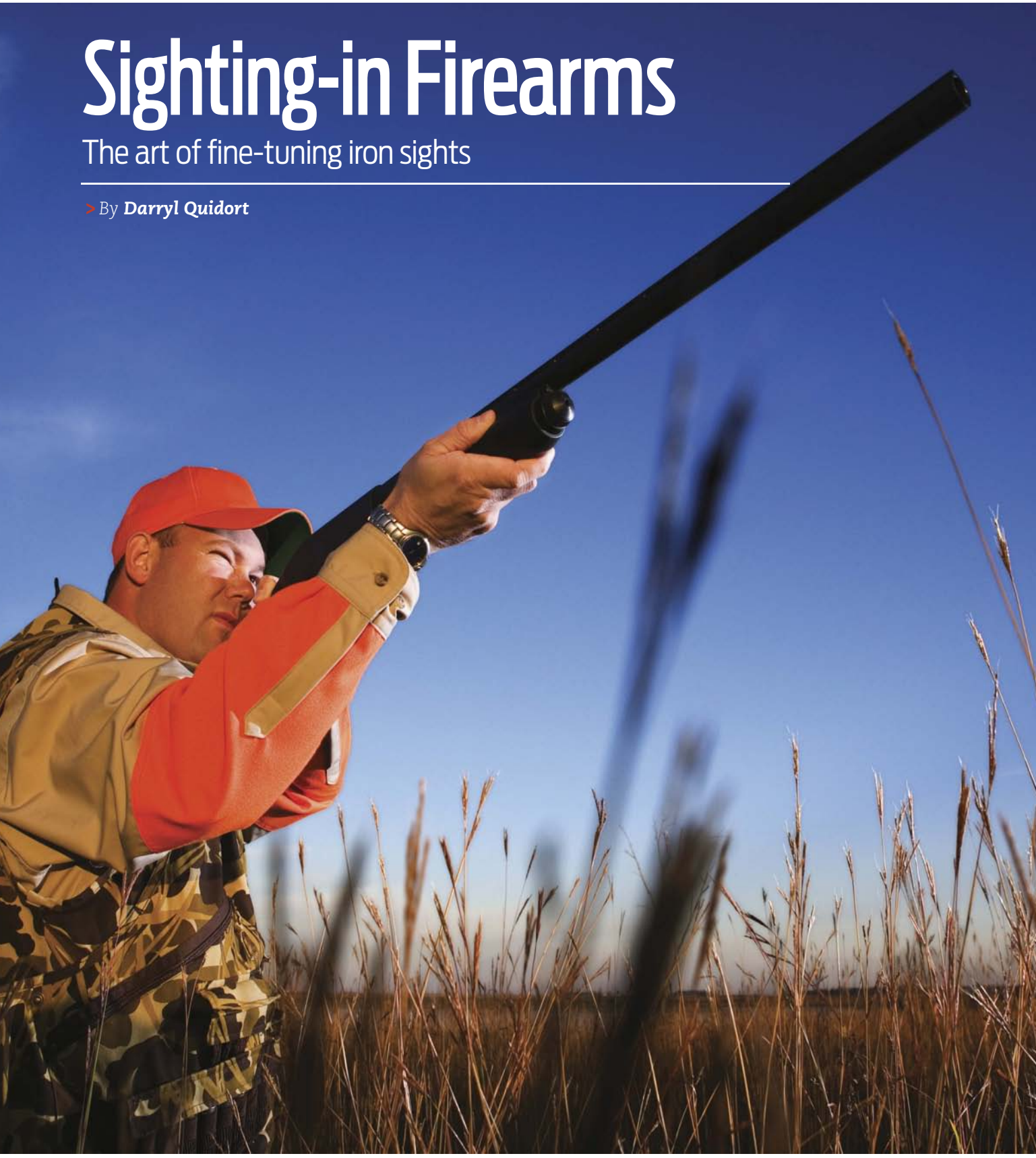
Firearms Policy Coalition [firearmspolicy.org] is a 501(c)4 grassroots nonprofit organization. FPC's mission is to protect and defend the Constitution of the United States, especially the fundamental, individual Second Amendment right to keep and bear arms.

Stop Prop 63 [stop63.org], a grassroots, common-sense effort for rational policy sponsored by Firearms Policy Coalition [FPPC # 1380746], is a political action committee formed to oppose California Lt. Governor Gavin Newsom's Proposition 63 'Safety For All Act' ballot initiative. MP

Sighting-in Firearms

The art of fine-tuning iron sights

> By ***Darryl Quidort***



Those of us who enjoy shooting or hunting with older rifles must know how to properly sight them in for accuracy. By "older," I mean single-shots, lever-actions, old military arms, traditional muzzleloaders or virtually any open-sighted firearm. Without question, an accurate rifle is essential for serious hunting and target shooting.

With open sights—often called iron sights—sighting-in is usually done by moving either the front or rear sight, or both, until the bullet's point of impact corresponds with them. Although it may seem complicated, there are no mysteries involved.

Know the Adjustments

If your bullets are hitting paper, follow these two basic rules for adjusting the front and rear sights:

Rule #1: Move the rear sight in the direction the bullet must impact in order to hit the bull's-eye.

Rule #2: Move the front sight in the opposite direction the bullet must impact in order to hit the bull's-eye.

For example, if bullets are hitting to the right, you want the point of impact to move to the left to hit the bull's-eye. Therefore, either move the rear sight to the left (the direction you want the bullet impact to move), or move the front sight to the right (opposite the direction you want the bullet impact to move).

Tools and Techniques

The tools needed to adjust sights depend upon the type of open sights with which the rifle is equipped. The rear sight may have a screw adjustment, a notched ramp or a sight that is dovetailed directly into the barrel. A small screwdriver will be necessary if the sight has a screw adjustment. A flat brass punch and a small hammer can be used to move a sight that's dovetailed into the barrel. Brass is softer than steel and won't mar the sight. Be sure to carefully tap on the base of the sight, not the upper part. The front sight is usually dovetailed in, so the brass punch can be used. A fine file may be used to carefully lower the top of a blade-type front sight.

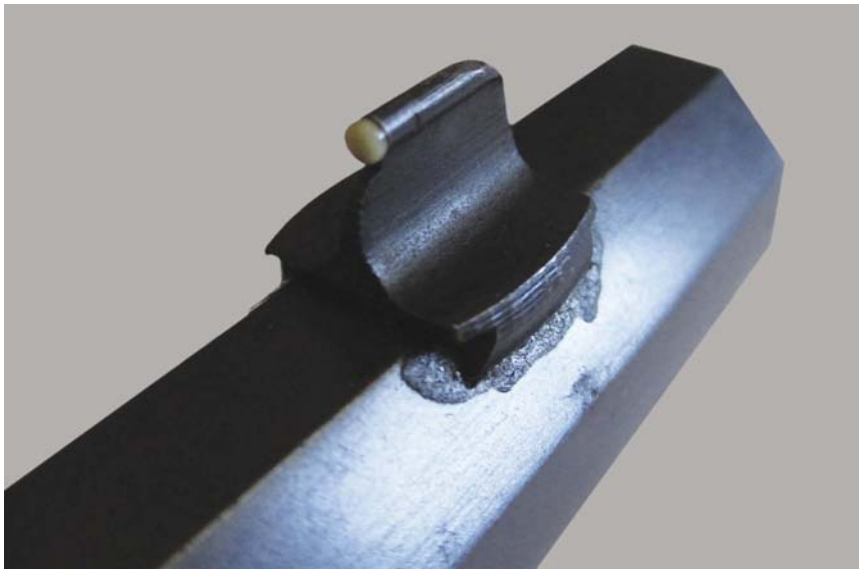
After gathering your tools, visit the range for a shooting session. Always use a solid rest—preferably a good bench rest—for sighting in. This removes as much human error from the shot as possible. I suggest starting at 25 yards and using a small aiming point on the target. Once sighted in at 25 yards, you'll be on the paper at longer ranges. Aim at your small dot or bull's-eye, and shoot at least a three-shot group; never base sight adjustments on only one shot. Then, use the center of your group as the point from which to adjust your sights.

I like to adjust for windage (left and right) first by moving either the front or rear sight—whichever seems easier and keeps the sights more centered on the barrel. Before I move a sight, I use a knife point to create a small index mark on the barrel. Without it, there isn't a reference as to how far the sight was moved. The index mark can be touched up with cold gun bluing after the rifle is sighted-in. A very slight adjustment greatly affects the bullet's point of impact, so go slowly to avoid overcorrecting.

When the windage is centered, I begin correcting the elevation (up and down). If the bullet's point of impact is high, the rifle needs either a taller front sight or a lower rear sight. If the point of impact is low, either file down the front blade or raise the rear sight.

When I built my .50-caliber flintlock rifle, I initially installed a tall front blade to allow room for elevation adjustment. It's easier to remove metal than to add it on. Of course, the tall front blade caused the rifle to shoot low. Filing the front blade down little by little soon raised the muzzle enough to shoot dead on at 25 yards. Since the rifle's iron sights are mounted low on the barrel, it's still on at 50 yards and even out to 75 yards or farther. In the wooded areas where I hunt, I've taken several deer with that flintlock rifle by simply holding dead on.

The rear sight on this old Winchester .22 rifle is equipped with a screw to adjust elevation.



The dovetailed-in front sight allows windage adjustments.

If the rear sight is adjustable by a screw or ramp, it's easier to move it than to mess with the front sight for elevation correction. To adjust a ramped sight perfectly, you might need to remove the ramp and carefully file a new notch between the factory notches.

I did exactly that with a little .22-caliber rifle I often use when hunting rabbits with my beagles. Shots were invariably close at still or slow-moving targets. The finely tuned open sights allowed head shots, which preserved meat on the tasty bunnies.

It's important to sight-in your own rifle. Every shooter has their own unique shooting style, and it's poor practice to hunt with a firearm someone else sighted-in, unless you've first fired it at the range and know how it shoots.

Pistol shooters may find one final sighting-in method valuable. This is useful on guns with immovable fixed or primitive-style sights. Filing a small amount from the side of the front sight will thin the blade. When centered in the rear-sight notch, this thinner blade will change the sight picture to correct the point of impact. To move the bullet impact to the right, file on the right side of the front sight. To move the bullet impact to the left, file on the left side of the front sight.

The rear-sight notch can also be filed slightly wider to correct bullet placement. To move the point of impact to the right, widen the right side of the notch. To move the bullet impact to the left, widen the left side of the notch by filing carefully. A very small correction on pistol sights makes a big difference downrange due to a pistol barrel's short sight radius. Go slow and carefully to avoid overcompensating.

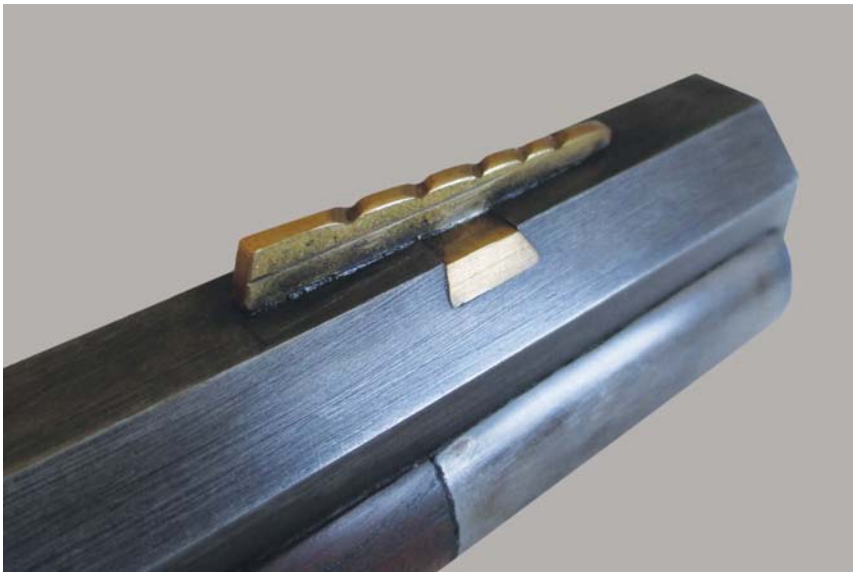
The Open-Sight Advantage

Once properly adjusted, iron sights seldom lose alignment. After being transported in the back of a pickup truck, in a scabbard on a horse, or on a sling hung over a backpack frame, iron sights will stay put.

Back in the day, I believe almost every American pioneer possessed the skills and knowledge to properly sight-in their own rifle(s). Peter Schoonmaker once wrote of America's pioneers that, "Most owners of Kentucky rifles were so pleased with their fine weapons and so determined to improve their marksmanship that they practiced regularly and entered shooting contests of all kinds."

In today's world of riflescopes boasting built-in range finders and instant compensation for windage and elevation, I feel many shooters are sacrificing the self-sufficiency Americans once had. I think it's important that we preserve the skill and knowledge to properly sight-in classic firearms. MP

The rear sight can also be moved by tapping the base with a small brass punch.



This flintlock rifle has a dovetailed-in front sight that adjusts windage.

Screw adjustment for both windage and elevation is provided via the rear sight on this Ruger target pistol. The front blade is fixed because no adjustments are needed.

review

Superb Activity Tracking

Garmin vivoactive HR

GARMIN HAS LONG BEEN A LEADER IN ELECTRONICS THAT HELP USERS ACCOMPLISH ACTIVE GOALS. FROM VARIOUS GPS UNITS TO FISH FINDERS TO WEARABLE ACTIVITY TRACKERS, GARMIN OFFERS A PLETHORA OF DEVICES CAREFULLY TAILORED TO VERY SPECIFIC USES.

My wife, Becca McDougal, tested Garmin's vivoactive HR, which was recently added to Garmin's growing line of activity trackers. Though the vivoactive HR tracks your heartrate and every step taken, it goes miles beyond that, providing second-by-second information crucial to an active lifestyle.

What it Does

Though the vivoactive HR is an activity tracker, let's not confuse that with what is more affectionately known as a GPS smartwatch. It comes with integrated sports apps—GPS-enabled running, biking, swimming, etc.—that are fully functional without a phone connection. It also tracks intensity minutes for your weekly goals. There are countless apps and widgets designed to help users target and accomplish individual goals, far too many to address in detail in this review.

Using Elevate wrist heartrate technology, the vivoactive HR accurately measures heartrate from the wrist, providing instant readouts. Using heartrate information, the smartwatch also provides data on calories burned. It tracks and provides sleep data, which can be accessed on the Garmin Connect app, a user-friendly interface. The app is virtually an online community that helps you thoroughly track, analyze, share and encourage, although you can be involved with others as much or as little as you like.

A healthy lifestyle is something everyone who's physically able should strive for, regardless of whether or not you're into fitness and weightlifting. Of course, this means being active. If you have an office job, the vivoactive HR can even benefit you. For example, it tells you to move if it detects you've been motionless for too long.

In particular, my wife has found it beneficial for tracking her fitness goals. Beyond that, it was part of her arsenal on a recent elk hunt in Idaho, where arduous days of chasing elk were confirmed by the smartwatch's data. It provided her with steps taken, miles hiked and vertical steps climbed, all without cell service in, literally, the middle of nowhere.

"While elk hunting in Idaho's vertical terrain, you know in your mind that you're pushing your body to its limits, but without a smartwatch, you can't confirm it," Becca said. "This year, I knew exactly how hard I worked each day by referencing the vivoactive HR."

Other Notable Attributes

Unlike some equally functional fitness watches, the vivoactive HR has a clean, trim look. The adjustable strap accommodates various wrist sizes, and the unit is completely waterproof.

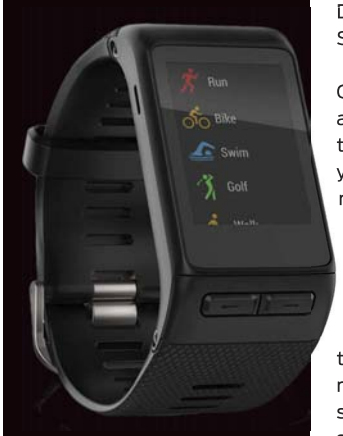
"One thing I particularly like about it is that when in cellphone service [range] it buzzes when my iPhone receives incoming texts, calls or push notifications," Becca said. "I don't have to keep my phone on me in order to stay informed. And, it hardly ever needs to be charged. It has exceptional battery life."

The vivoactive HR also has a "Find My Phone" app should you misplace your phone.

Closing Thoughts

Whether skiing, biking, running, hunting, golfing, swimming or canoeing/kayaking are your forte, the vivoactive HR is a well-designed device to track all of your activities and help you reach your fitness goals. I believe anyone who leads an active lifestyle will agree.

—Darron McDougal



GARMIN VIVOACTIVE HR SPECIFICATIONS

PHYSICAL DIMENSIONS (watch only): 1.19x2.24x0.45 inches (30.2x57.0x11.4mm). Regular fits wrist circumferences 5.39 to 7.68 inches (137 to 195mm), X-large fits wrist circumferences 6.38 to 8.86 inches (162 to 225mm)
DISPLAY SIZE: .80x1.13 inches
DISPLAY RESOLUTION: 205x148 pixels
TOUCHSCREEN: Yes
COLOR DISPLAY: Yes
BATTERY: Rechargeable lithium
BATTERY LIFE: Up to eight days in smartwatch mode, up to 13 hours in GPS mode
WATER RATING: 5 ATM
MSRP: $249.99
CONTACT: (800) 800-1020 or Garmin.com

gear SHOWCASE

50-YEAR SHELF LIFE

Blue Can Water is the world's number one emergency water. A shocking 50-year shelf life means this product is perfect for your disaster preparations. BPA- and plastic-free, Blue Can Water offers improved taste and stays fresh in heat, eliminating the need to rotate your water supply. Blue Can Water is sterilized and purified to <1ppm of total dissolved solids. Blue Can also uses a proprietary method to hermetically pressure-seal the cans to the highest standards to preserve freshness, unlike water sold in plastic bottles.

MSRP: varies according to supplier; available on amazon.com

> BLUECANWATER.COM

BE A PRO

High-definition lenses yield outstanding clarity in Leupold's BX-3 Mojave Pro Guide HD binocular. Fifty-millimeter objective lenses ensure optimal light transmission, even when daylight is waning. Specially coated extra-low dispersion lenses deliver sharp color and stunning resolution to help you identify game. The BX-3 Mojave Pro Guide is lightweight and ergonomic, offering the durability to withstand wear and tear. A 100% fog-proof and waterproof binocular, the BX-3 Mojave Pro Guide is covered by Leupold's Gold Ring full lifetime guarantee. Two magnification options are available, as well as three finish options.

MSRP: $809.99-$844.99 (10x50mm); $874.99-$909.99 (12x50mm)

> LEUPOLD.COM

THROWBACK STYLING, MODERN PROTECTION

Birchwood Casey LeatherLock gun cases are classically styled and provide outstanding protection for take-down shotguns. The LeatherLock series of gun cases incorporates pioneering features that perfectly blend tradition with state-of-the-art protection. Each case has ample padding, a soft, plush lining, hook-and-loop tie downs and a compartment for shooting accessories. The cases also include brass-finished handles, hinges and latches. Two keyed locks for security and a luggage-style name tag are included. LeatherLock gun cases are available with either a faux leather finish, or in a canvas-covered model with faux leather trim.

MSRP: $145.80

> BIRCHWOODCASEY.COM

COMFORT AND CONTROL

Ranching, farming, construction, landscaping and other rigorous jobs require aptly designed gloves. The Leather Utility Plus Wide-Cuff glove by Youngstown delivers. Not only is it built rigidly to withstand wear, it also provides superior comfort, dexterity and safety to protect your hands while completing tough tasks. The Leather Utility Plus Wide-Cuff features reinforced double-layered leather on the fingertips, knuckle, saddle and palm for improved protection and to resist wear. Goat-grain leather is both flexible and sewn into an ergonomic 3D pattern to optimize comfort and control. A traditional 7.5-inch lineman cuff makes the gloves easy to put on and remove.

MSRP: $39

> YTGLOVES.COM

KEEP YOUR PHONE DRY

Watersports or other outdoor activities that occur near water often require leaving your cellphone behind. Outdoor Products solves this problem with its Watertight Cellphone Dry Box. It's constructed of an ultra-clear polycarbonate shatterproof material so it will survival virtually anything. A durable latch closure and O-ring ensure a tight seal. Though not intended for full submersion, the Watertight Cellphone Dry Box calms worries by letting you keep your phone handy in case of an emergency.

MSRP: $9.17; available on amazon.com

> OUTDOORPRODUCTS.COM

FOLDING BLADE

Bear Edge, a brand under the Bear & Son Cutlery umbrella, introduces its new manual folder knife. Aimed at owners who carry their knives daily, the manual folder 61102 blade is contained within the G10 handle with a hidden liner to keep its 440 stainless-steel edge sharp. It features a knife trigger for rapid blade deployment. Ball-bearing washers provide smooth, effortless and consistent blade operation. The tip-up carry clip allows both right- and left-handed users easy pocket access. The knife weighs only 3.1 ounces, and the blade features a 58-60 Rockwell hardness.

MSRP: $59.99

> BEARANDSONCUTLERY.COM

Hope for the Best, PREPARE for the WORST

DON'T GET CAUGHT WITH YOUR PANTS DOWN

By Dana Benner

When a powerful storm happens and you haven't evacuated, you're probably on your own.

"I've lived through volcanic eruptions, earthquakes and tsunamis in Hawaii ..."

I decided to write this piece after watching the news. Day after day, stories of the massive wild fires and severe drought plaguing the western states abound. In other parts of the country, almost endless rain is causing devastating floods. Even though natural disasters have been happening since our planet's birth, it seems they're becoming more frequent. No matter how you look at it, the number of people affected by these disasters is rising. What are we to do? We can throw our hands in the air and do nothing, or we can prepare for the worst.

I've weathered my share of disasters. I've lived through volcanic eruptions, earthquakes and tsunamis in Hawaii; and Hurricane Sandy and a massive ice storm that happened about 20 years earlier, both of which crippled the entire Northeast's infrastructure. My family survived these disasters, and others, because we were prepared.

Don't Wait

Despite all of our technology, to make it through these events, we must think like the pioneers of old. They knew uncontrollable things would happen, so they prepared for them. In our modern world, maybe because of it, I'm continually amazed by how little attention people pay to the warnings, whether they're for a wildfire or a severe storm. Despite the warnings, some people simply do nothing. In many cases—Hurricane Sandy being a good example—people are left to fend for themselves because the emergency response system itself is crippled. Those who are prepared ride it out; those who aren't have a tough time. The time to run out and stock up on water and batteries isn't after the power has gone out and wind-struck trees are blocking roads.

We cannot predict when disasters will strike, so there are certain things we must do to prepare. I have two generators on hand, one powered by propane, the other by gasoline. Both are kept in top working order, full of fuel, and I always keep extra fuel on hand. If the power goes out, nearby gas stations will also be out, and no power to the gas pumps means no fuel. We also keep plenty of water and dried/canned goods on hand because you never know how long services will be disrupted. What follows are things that must be accomplished before calamity strikes.

This is an example of the amount of food needed for one person for five days.

FOOD

During a severe weather emergency, food and water are priorities. Don't wait until the last minute to collect food. If you do, you may not find what you need, and if you do, you'll pay top dollar for it. There's always someone looking to make a buck off of a bad situation.

To combat this, I recommend that you buy a little at a time throughout the year. Canned foods and freeze-dried backpacking foods have very long shelf lives. I always try to get food made for survival purposes, but grocery store food does the trick in a pinch. Pick up an extra can of food whenever you go grocery shopping. Take full advantage when canned goods go on sale.

Be aware that grocery store canned meats are often full of salt. Read the labels very carefully, and pick those with the lowest salt content. Too much salt will cause dehydration and increase thirst.

GENERATOR

Running a generator is important, but before you start one up, you need to do a few things. If it has been sitting for a year with the same gas, drain it into your vehicle and add fresh gas. This will help prevent fuel line and carburetor issues. Check all lines for cracks and leaks, and replace as needed. Before starting, always check oil levels. I drain the oil and change the filters on my generators regularly. The frequency will depend on how often you use them. Always refer to the owner's manual for your generator for proper maintenance procedures.

Once that's complete, I start the generator and let it run for about half an hour. This allows the oil to circulate, keeping all of the seals and gaskets working. A little time now will save many headaches when there is 3 feet of snow on the ground and the power goes out.

Several days before the storm arrives, have everything ready in case you need it.

A generator with extra fuel should always be kept on hand.

The SunJack portable solar charger can power up your communication devices when the grid is down.

Make a List, Check it Twice

Meteorologists have improved their long-term predictions regarding major storms, and while they aren't perfect, they do give people time to prepare. Seven days out, I create a checklist of things that need to be done.

❶ **Water:** I make sure our water supply is sufficient to last at least five days. You may not realize it, but that is a lot of water, and believe me, you can never have enough. I store water in 5-gallon Reliance Aqua-tainers, and I pick up extra cases of bottled water. Remember, you'll never have enough. This is especially true if you take in other people like we always seem to do. If you do that, make sure to secure any resources, no matter how small, that they may have.

❷ **Food:** I double-check the food supplies and, if I think I'll need it, I pick it up now. What isn't used during the current storm will be available for the next. If the authorities are predicting a big storm, don't buy perishable goods. Pick up powered milk, cereal, canned goods and freeze-dried food. If it needs to be refrigerated, don't get it. If you lose power and don't have a backup system, you may lose everything. Experts say that food will only last about four hours in the refrigerator and only 24 hours in the freezer when power is lost.

“If the authorities are predicting a big storm, don’t buy perishable goods. Pick up powered milk, cereal, canned goods and freeze-dried food.”

Make sure you have stocked up with pellets or firewood.

My emergency pantry is full of Mountain House, Paleo Meals to Go and Wise Company dried meals. I also have cans of fully cooked meat from Werling and Sons, and I keep plenty of The New Primal meat snacks, Lawless and Three Jerks jerky and Simple Squares on hand.

❸ **Fuel:** Now is also the time to double-check your fuel supply. I make sure I have extra gas for the generators, extra tanks of propane for cooking, and that the pellet shed or wood pile is full. Always store gasoline in dedicated gasoline containers. Never store them inside your home, place them in an outbuilding instead. I always have about 20 gallons on hand. Many people don’t realize that gas will go bad, so add stabilizer to fuel to prolong its shelf life. Every few months, I rotate my gas and refill the empty containers with fresh fuel. Make sure your vehicles are kept full of fuel just in case you need to move. Remember, no power means no fuel.

❹ **Medications:** Many people fail to stock up on medications (if needed). Pharmacies, if you can access them, may not be open. Even if you don’t need medications, you still must make sure that you have a substantial first-aid kit. I regularly go through my first-aid kit to make sure I have more than just a few bandages. Whatever I’m lacking, I get it now.

Stay or Go

Four days out, you should have a better idea of the storm track and potential conditions. If you are in the storm’s direct path, you must decide if you’re going to hold tight and ride it out or seek a safer

"... with my preparations complete, I can do nothing other than ... hope most of the storm misses me ..."

location. This is not the time to play hero. If you're located in a dangerous area, move. It's better to be safe than sorry. Many people disregard the warnings and end up needing to be rescued, thus endangering first responders.

If you decide to ride it out, you need to be prepared to take care of yourself. Start securing items that may move in a high wind. Flying objects cause lots of damage. Double-check pens, barns and stables used by your livestock and repair as needed. At this point, you still have time. If you need building materials, get them now. Stores will charge top dollar for building supplies the day before the storm, if they're even available. During this time, I also try to visit my neighbors to make sure they're all set, especially my elderly neighbors and those with young kids. In a situation like this, neighbors should look out for one another.

Two days out, you should be pretty much all set. This is when most people begin to panic. The grocery stores are usually mobbed and could be considered dangerous places as people literally fight over a loaf of bread or a gallon of water. Canned goods, bread and dried food can be nonexistent.

Alternative Power Sources

Generators, whether fueled by gasoline or propane, can be dangerous. If you're using a generator, make sure it is wired properly for use. Improperly installed generators can cause fires and damage your household wiring. They can also harm power crews by back-feeding power into the lines. Generators also produce carbon monoxide, which will kill you quickly in a non-ventilated area. Do not operate a generator indoors, and make sure there is plenty of ventilation.

What about charging cellphones and other devices? Unless you have alternative power, you won't be able to do that. To accomplish this, I have two portable solar-panel charging units, one by Bushnell, the other by Solar Jack. These two items have charged many cellphones during power outages.

Despite my preparations, I find it difficult to relax during large storms, but with my preparations complete, I can do nothing other than wait. I hope most of the storm misses me, but if it doesn't, I know I've done my part to keep my family safe. While nothing is ever guaranteed, I'm very confident that by being prepared we'll survive most deadly storms. MP

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Funneled Your Way

EXPLOIT A WHITETAIL BUCK'S WEAKEST LINK

By Randy Templeton

(above) **As a form of habitat improvement, you can create doe bedding areas in specific places by dropping trees and piling up brush.**

(opposite) **A little planning and preparation can turn a mediocre stand set into the ultimate ambush.**

While hunting whitetails, I've tried nearly every tactic imaginable to narrow the playing field. Some have worked, but others have fallen short of expectations. In the grand scheme of things, I've learned that success often hinges on planning and preparation so you can identify and create the ultimate ambush.

Some stand sites pay off almost immediately, while others take a year or two of tweaking to produce. In many cases, a little ingenuity can turn a great set into the ultimate ambush. This was the case for me a couple of years ago.

A north/south-running creek meanders through the particular property I visited. Throughout the years, heavy rains and spring melt off have carved a deep trench into the earth. The banks are a good 10 feet high, and there are only a couple of places where deer can easily cross it.

One crossing parallels timber on one side and a cedar thicket that serves as a bedding area on the other. The deer cross that spot going to the fields in the afternoon and in the morning when returning to their bedding area.

The other crossing is probably 300 yards away, and crop fields border both sides. Even if deer choose to cross there, they'll eventually travel past the crossing that parallels the timber.

The timbered side was the obvious choice, but required a little work. The biggest problem was the fork in the trail just after the deer come out of the ditch. One leg led to the front of the stand, but the other allowed the deer to get behind me. Given a north wind, they'd end up directly downwind. To bombproof the stand, my friend, Travis, and I cut brush and piled it over the trail. Within a few days, deer had cut a new trail around the barrier right where I wanted them. I had multiple opportunities to shoot bucks that year, but not the one I wanted.

The set would've been fine as it was, but the following year my friend, Andy, planted a ¼-acre alfalfa plot along the creek edge. Additionally, I created two mock scrapes along the edge. These small additions gave the deer two more reasons to funnel through. The payoff came the second week of November with a 14-pointer that grossed 158 inches.

Annually, I strive to create new ambush sites or improve existing ones. No doubt every situation is different, but with a little planning and preparation, you can turn a mediocre set into the ultimate ambush.

Post-Season Scouting

Understanding deer behavior is like peeling an onion. Each layer reveals new information that can be used for developing new stand sites or improving existing ones. You can learn the most about deer behavior once the season closes. Telltale sign like trails, old rubs, scrapes and bedding areas will help you understand how deer move. Then, you can begin to manipulate or alter their routines in your favor.

Designed Stand Sets

Each stand set should be designed with the common goal of funneling deer toward a specific spot. By design, each set should consider bedding areas, food plots, wind blocks, mock scrapes and both ingress and egress routes.

Although spring and summer are likely the best times to make major habitat improvements, it doesn't mean you can't make minor adjustments in the late summer and early fall that will funnel deer your way, too.

Bedding Areas

Second only to food, bedding areas are one of the most important features for holding resident deer on your hunting property. It's best to create bedding areas 100 yards from a predetermined stand site. In doing so, you'll also create better access and exit routes and avoid violating safety zones.

Play the Wind

Playing the wind game will be the key to maintaining the element of surprise and keeping your stands fresh. Whether you're creating a new stand set or tweaking an existing set, design each one for a seasonal phase and a given wind condition.

Ingress and Egress

The wind also plays an equal role in selecting ingress (entrance) and egress (exit) routes. The goal is to choose the routes that allow getting in and out undetected.

Take, for example, one of my stand sets just inside the tree line bordering an agricultural field. First, I only hunt the stand in afternoons with a northwest wind. I approach the stand from the field edge, but my exit route takes me through the timber on a path I cleared. By clearing away sticks and leaves, I can leave the stand quietly and avoid bumping deer off the field.

Downwind Blocks

Too often I find stellar places to ambush deer, but without a suitable tree for particular wind directions. The solution might be as simple as creating a barrier across an established trail to encourage the deer to change their travel routine.

(above) **You can learn the most about deer behavior shortly after the spring melt off. The tracks and trails are never more prominent.** *(below)* **Trail cameras are likely the most widely used scouting tool for locating and identifying deer to target.**

My friend, Dan Nordstrom, has been using downwind blocks to funnel deer toward specific stand sites for years. He begins at a known doe bedding area and drops trees (blocks) across the trails he doesn't want deer to use. Over time, a natural travel route is created that both bucks and does will follow.

Creating a downwind block can also funnel deer away from one location and redirect them toward another. For example, let's say I have a stand site designed for a specific wind, and I don't want the deer to travel behind the stand. In this scenario, I can create downwind blocks over the trails behind me, thereby funneling the deer toward the front of the stand.

In another instance, let's say deer are approaching straight on. In this case, I create a frontal block that alters their approach angle to one side or the other of the stand site. Whatever the case, wind blocks can transform a poor setup into a great one.

Plant Food

Destination food plots are the secondary food source to agricultural crops and typically range anywhere from 1 to 3 acres. Deer can be finicky, so it pays to plant multiple foods in the same plot. For example, planting corn (six-12 rows) and soybeans (six-12 rows) in alternating strips will give the deer both an early- and late-season choice. To top it off, consider planting a strip of alfalfa or winter wheat around the outside perimeter.

Micro Food Plots

As you plan out stand sets, consider planting micro food plots within range of your stand. A small ⅛-acre food plot of oats, clover or winter wheat will encourage deer to stop by before moving on to the primary or secondary food source(s).

Waterholes

Waterholes are also a great addition to stand sets. Ideally, the waterholes should be aligned with established trails in a way that, when a buck approaches to drink, he offers a broadside or slightly quartering-away shot.

Natural Funnels

Obviously, some funnels are better than others, but a couple might be classified as super-funnels. Take, for example, the bottleneck, also called a pinch point. In layman's terms, a bottleneck exists where two pieces of thick cover or timber neck down to a narrow point in the middle. In many cases, a stand positioned in the narrowest point will allow shooting across the entire swath. Bottlenecks typically require little work, if any, to become the ultimate ambush.

This reminds me of the Bermuda Triangle, a

bottleneck I've hunted several times on a piece of property owned by friend Andy Timmerman in Iowa. Basically, there's an east/west hillside that parallels a steep bluff, then funnels down to a low spot where the fences form a triangle. Because the property lines are somewhat unclear, it's often referred to as the Bermuda Triangle. At one corner of the triangle, a narrow tree line juts across the cornfield following an old riverbed. The stand is located just inside the tree line to provide clear shooting across the entire width. After a couple of years of tweaking, it became the ultimate ambush. In fact, in the past four years, three 160-plus-inch bucks have been taken there.

Timbered points that jut into agricultural fields are another natural funnel. My wife, Pamela, has a point stand she hunts mainly in the evenings during the early season with south winds. Throughout the years, volunteer trees have grown up and formed a secondary point that eventually became a staging area. The deer begin queueing up to feed about an hour before sunset. In the past four years, she's killed two Pope-&-Young-class bucks from that stand.

Another favorite ambush site are saddles. Why? Deer habitually follow the path of least resistance. The saddle between two (or more) ridges offers the easiest travel route. You'll often find a primary trail running across the saddle, a great setup when the rut starts rocking.

Building Barriers

Many times the best trees and cover are either too close or too far from the trails deer use. In such cases I create barriers that funnel deer in the direction I want, and it's not difficult to do.

For example, let's say the primary trail deer use runs parallel on a ridge but too close for a lethal broadside shot. The solution might be piling brush on the trail 20 yards from the stand site on both sides. In doing so, the deer will typically divert around the barriers and unknowingly offer a better shot angle.

In a similar scenario, let's say the primary trail is below the stand and allows deer to travel downwind. In this case, consider dropping junk trees across the trail so they fall perpendicular to the stand site. This will cause deer to change course and travel above the ambush, thereby surrendering the downwind advantage.

Final Words

Don't assume the stand set you created was a waste of time based on the results of a single season. Think of each set as a work in progress and make incremental changes until you get results.

The season might be months away, but it's never too early to begin planning. Use a few of the aforementioned tips to build new stand sets, as well as to tweak existing ones. The payoff will come when your dream buck funnels your way. MP

"... I cut brush and piled it over the trail. Within a few days, deer had cut a new trail around the barrier ..."

CREATE A FENCE FUNNEL

Deer often follow the path of least resistance, and you can exploit that weakness by manipulating their travel routes. Fences are one of the easiest ways to do this. If you have an existing fence, perhaps one that leads to a feeding area, consider tying strands together with wire to create an easier place for deer to jump. If you don't have an existing fence, but have plenty of deer funneling through a somewhat large area, build fence sections to constrict the funnel movement so deer must file through within bow range.

Deer tend to seek the path of least resistance. By tying down the upper strands of barbed wire, or tying up the lower strands, you can create a preferred crossing.

Snaring in the Snow

FOR CATCHING FOXES, COYOTES AND BOBCATS, IT'S HARD TO BEAT A WELL-PLACED SNARE

By Bernie Barringer

Snares may be one of the oldest methods for catching game and furbearing animals. But today's snares look nothing like the ones used by our early ancestors to procure food and clothing. These days, snares are made of galvanized aircraft cable and have foolproof locking mechanisms that securely hold the caught animal. And, if the trapper prefers, the snare will dispatch the animal with minimal suffering.

I began experimenting with snares in the early-'70s. At the time, snares were crude and ineffective. By about 1980, I was manufacturing my own, and I made a living snaring fox, beaver and raccoon during the '80's fur boom when a guy who rose before dawn and hustled until after dark could make $1,000 a day during trapping season's three-week window. I was living in Iowa at the time, and I wrote books on snaring and catching these furbearing critters mostly before the winter snows hit.

(above) **The author with a red fox caught in a snare.** *(below)* **Here, Rick Hines skins a big bobcat. Despite poor fur prices, trapping still has a lot of appeal.**

In 2001, I moved to Minnesota and discovered that I could add coyotes and bobcats to my list, but I had a learning curve to battle since the best time to catch them is during the dead of winter when their secretive movements are visible on the snow-covered landscape. I soon met Rick Hines, who helped me shorten the learning curve and adapt what I knew from open-land snaring to snaring in the snow.

These days, I'm catching a lot of fur, and once again, Rick and I are making our own snares. We use 5/64-inch cable and mini-cams for locks. We also use a system of tying off to a nearby object with soft, annealed wire so the animals tangle up and succumb quickly to lack of oxygen. In my opinion, this is one of the most painless ways to die; they just go to sleep. The main advantage is that I need not shoot the animal and deal with the associated blood. Blood at the site makes it nearly impossible to make a second catch because the next animal along will stop to sniff it.

The central reason snares are effective is their element of surprise. The target animal simply walks through it, and before it realizes something's wrong, it's too late.

Trapping and snaring have a lot of appeal despite low fur prices. In some areas, studies have shown that coyotes annually kill up to 80% of deer fawns. Plus, it's good exercise, and there's a great deal of satisfaction that comes from learning an animal's habits and outsmarting it on its own turf. Let's take a look at the basics of successful snaring, from location to setting and fastening the snares.

Location

Critters move about the forest unpredictably. During winter, trails develop in the snow. The deeper the snow, the more animals will travel the path of least resistance, which means the trails become even more distinct. Some animals use trails more than others. Foxes, both reds and grays, are quite likely to travel the same path each time they go through an area, but coyotes, not so much, because they have longer legs.

Bobcats cruise about more randomly, but they do frequent predictable areas. A bobcat will rustle about in thick cover looking for grouse or rabbits, but they tend to enter and exit the thicket at the same place each time. That's their main vulnerability to the snareman. Additionally, bobcats love beaver ponds. They'll use a beaver slide to enter a pond and move around the edges where walking on the ice is easy. Once again, they tend to enter and exit at the same place each time. Find the tracks and set it with a snare. It may be a week before the bobcat returns, but the snare is patient and the cat is predictable.

Because foxes travel trails, it's an easy set. Find the trails with fox tracks and set them up anywhere an area necks down with something to tie off to. Unlike bobcats, foxes may use the same trail almost nightly. If there is a maze of trails, choose intersections to increase your odds.

One of the best ways to catch coyotes is to create

This scouting-camera photo of a coyote moving along a trail will help you understand how high to place a snare.

MAKE YOUR OWN SNARES

Making your own snares can be a fun family project. You just need some cable, a C-7 cable cutter, the right locks, swivels and a crimping tool. You can find all the supplies you need at one of many trapping-supply dealers online or through their catalogs. Most will send you a free catalog, and some specialize in snare parts and accessories.

Once you've snared a few animals, you'll get a feel for the size and length of cable needed in your area. If you're only trapping coyotes, you may want to go with 3/32-inch cable, but fox and bobcats may refuse that larger cable, so 5/64-inch is better in areas where a combination of furbearers will be encountered.

The length of your snare will vary depending on how much you need to tie off nearby, or if you're using a stake in the ground to secure it. At first, make some in lengths varying from 40-60 inches, then modify as you learn what works best for your terrain. It's satisfying to catch an animal in a snare you built yourself.

FUR MARKETS

It's pretty tough to turn much profit from trapping and snaring these days, but there are some bright spots. There is always some demand for long-haired furs like those of foxes and coyotes because they're used as trim for coats. These days, red and gray foxes do little more than pay for gas, but they're worth expending some time and effort.

Bobcats bring a nice paycheck, but most states limit the number you can catch. Bobcats and coyote pelts, more than any other species, bring widely varied prices depending on color. Here in Minnesota, we have a yellowish coyote, which nets far less than the silver/gray color found in the mountain states.

The most important value-determining factor in a bobcat is the belly. The right color and spots can mean the difference between a $50 pelt and a $300 pelt. Most of this is regional, but some areas produce some of each. Talk to local fur buyers about which animals produce the biggest paychecks in your area.

a bait station; coyotes will return often to free food. Once coyotes find the bait station, trails will develop around it like wagon-wheel spokes. Bait stations can be established a couple of weeks before trapping to entice the coyotes into regular visits (where legal, of course). The leftovers of a deer carcass will attract them, but I also use beef scraps I get from a local supermarket.

Setting

There are a few key factors to successful snaring. Most importantly, the snare must close quickly and smoothly. The predators we're targeting have incredibly fast reflexes. If the snare hangs up at all, the critter may put on the brakes and back out. Cam locks are smooth and they close very fast, which means that you cannot put them at the top of the loop. If your snare looks like a teardrop with the lock at the top, it may fall down in a little wind or be brushed aside by a non-target animal. Put the lock off to the side so it remains in place until the time is right.

For coyotes and bobcats, I like a loop about 10 inches in diameter, about 8-10 inches off the ground. This should put their nose right into the middle of it. Make sure to account for snow depth as you place the snare, because their feet will sink in soft snow.

For both red and gray foxes, a smaller loop, about 8 inches in diameter and about 5 inches above the ground, is effective. I wish there was a way to set a snare that would consistently catch all three furbearers, but if you put your loop high enough to consistently catch bobcats and coyotes, most foxes will travel underneath it.

I dye my snares black to disguise them. Still, if they're right out in the open, animals may refuse them. Few things in nature appear round in shape, and it may tip them off that something is amiss. Choose an area with some brush on the sides of the trail to blend the snare into.

Many times you'll find that furbearers follow deer trails. Deer can get in your snares and make a mess of the set, plus a deer with a cable on its leg is not good for the deer or the image of trappers in general. I avoid setting deer trails unless I can use an obstruction to avoid catching deer. A jump stick right above the snare will cause most deer to step right over the snare. It's an essential component of any snare set where a deer might travel.

Fastening

Fastening is the central key to making sure your snare closes quickly. The snare must be rigid in

place right above the loop. This way, the only thing that moves is the lock travelling down the cable, which tightens quickly around the animal. If your snare is properly placed, it'll close around the neck, and the animal will quickly wrap up and expire.

I use #11 annealed wire, which is easy to twist with pliers. I always have a roll handy so I can cut off the desired length. I like to tie the snare off high so the animal wraps up more easily without the snare hanging up on debris. Remember that the fewer disturbances created by a caught animal, the more likely you can reuse the site successfully.

Tightly tie the end of the snare to a sapling. Don't rely on the wire alone to hold any animal. They can twist it off much faster than you can imagine. You want them to pull on the cable, not the wire. Your wire is used to secure the cable tightly and support the snare in place.

Refine Your Skills

The best way to get good at snaring is to get out there and do it. Spend your time following trails, and examine where the critters go and where they're coming from. This will help you understand their daily routines. You'll begin to see areas that look good for a set. There's no substitute for experience when it comes to catching furbearers. Don't become frustrated if you have little success right away. Like most trappers, I invested a lot of time with little success before things began to click.

In my early days, I was thrilled just to catch an animal on any given day. Within five years, I was catching 40-60 per day. I attribute it all to experience and replication. Once I figured out what worked and where to set snares, I just started extrapolating it and found more and more spots, hanging snares in dozens of locations.

The days of making a good living trapping furbearers are gone for most of us who have families and mortgages, but snaring in the snow will get you outdoors where you can learn about animals' habits in a way few people understand. And, it might provide you with some gas money and the cash to put a few more presents under the Christmas tree. **MP**

AUTHOR'S NOTE: The video "Snaring in the Snow," produced by Bernie Barringer and Rick Hines, goes into much more detail on snaring furbearers. It's available at bernieoutdoors.com or most trapping-supply dealers.

(above) **Catching furbearers in the wintertime beats watching TV.**

(opposite) **This crossing between two beaver ponds is a perfect place to snare a coyote or bobcat. They will take the path of least resistance, and this trail is it.**

Ice Fishing for Trout

HARNESS THE SEASON'S FASTEST ACTION

By Lou Phillippe

Deer seasons have passed or are winding down, rivers and lakes are frozen or soon will be, and cabin fever is tightening its steely grip on many woodsmen. Couch potatoes we are not. So what better way to chase away the winter doldrums and provide a tasty meal than ice fishing for trout?

Most think of ice fishing as a Midwestern panfish sport, with some buddies holed-up in permanent shacks, playing cards, smoking cigars and watching satellite TV while waiting for a bite. Likewise, trout fishing is presumed to be an open-water pursuit. But for those who live in trout country, some of the year's best and most exciting fishing comes after lakes are capped. It seems strange to think of ice fishing as exciting, but when a 2-foot trout is sharking around your lure just a few feet from your nose as you peer down a hole, his fins flaring with electric anticipation, it can produce an adrenaline rush comparable to a big buck strolling into view. Well, almost.

“I landed my largest rainbow ever while watching him inhale a cocktail shrimp down a hole I’d chopped with a steel spud.”

(top) **No special gear is needed to enjoy a fine day on the ice.**

(bottom) **Debbie Alazari traveled from Florida to discover that ice fishing can be a blast.**

(opposite) **On milder days, it’s more fun to sit outside and enjoy the sunshine and scenery than stay cooped up in a hut.**

Some of my fondest memories are of my friend’s dad loading a bunch of us kids into a big station wagon and heading to a frozen lake. We would fish in the morning, drink cocoa and roast hot dogs over a charcoal grill at noon, play pond hockey in the afternoon, and catch the last bite before sunset. Bringing home a couple of fat trout for mom to fry was the bonus prize for a great winter day.

Tackle

Ice-fishing gear for trout can be as simple as a short rod, a handful of panfish jigs and some grubs, a bobber, skimmer and either a simple hand auger or even a sharpened spud bar. I landed my largest rainbow ever while watching him inhale a cocktail shrimp down a hole I’d chopped with a steel spud. I then wrestled him onto the ice—after a buddy enlarged the hole with the same spud—with an old fly reel taped onto the top section of a casting rod. That was decades ago, before I became serious and invested in a heater, power auger, sonar flasher, two-man portable hut, dozens of different jigs—many I tie myself—and short rod-reel combinations capable of landing 20-pound lakers through a 10-inch hole.

Some folks use regular-length rods for this, but the bites are often soft, and a 5- or 6-foot spinning rod puts the angler too far away from the action, besides the inability to feel bites or watch the bobber dip. Sensitive rod-and-reel combinations made for this purpose are very inexpensive, but you can easily make your own by drilling out a section of broom handle or dowel, then cementing the tip section of an old rod. Tape on your favorite small spinning reel, spool it with 4- to 6-pound line, and you’re ready to go. I prefer fluorocarbon line because it virtually disappears down the hole. Plus, it’s tough and resists abrasions from sharp ice edges. I’ve fought 3-foot-long lake trout for more than 20 minutes with a good fluorocarbon without any fraying.

Many trout fishermen use bait of some sort: grubs, worms, salmon eggs, dough bait or mealworms. These can be effective, but a small plastic or marabou jig tipped with a bit of bait, or a small jigging lure like a Rapala, Kastmaster or Tasmanian Devil, is a better choice.

Equipment

As I mentioned in the beginning, little more is needed than a rod, a bucket to sit on and to carry gear and a thermos, plus something sharp to make a hole. But, ice-fishing popularity has spawned a large array of equipment to keep anglers warm, mobile and comfortable. My outfit is a plastic sled with tent attached via sliding aluminum rods. It has two comfy bucket seats and holds all of my tackle, including rods, heater, fish finder, power auger and lunch cooler, and it stores neatly in the back of a small SUV. When I get to a spot and drill holes, the tent canopy instantly flips over the top. I turn on the small propane heater, scoop out the hole, and within minutes, I’m warm and catching fish. Windy? No problem. Two small anchors can be dropped into holes on the windward side to hold the hut in place, and whatever happens outside doesn’t affect us.

To get through the ice, using something as

ICE SAFETY

Assessing the safety of ice can be tricky, so it always pays to err on the side of caution. Early and late in the season I often wear a flotation vest and tie a long rope around my waist—if fishing alone—and carry a coiled rope attached to a throw device when fishing with others. I also have a pair of ice picks on rope threaded around my neck and through my sleeves to pull myself up if the ice gives way. If someone does fall through, call 911 and attempt to toss the floatation device to them from a distance. Do not get close to the person or the hole, or you may find yourself in the water, too.

As a general rule, hard, clear ice is stronger than cloudy ice. But thickness doesn’t always indicate safe ice. A warm spell with lots of sun can cause ice to honeycomb and soften. Once when fishing a mountain lake in March, the ice was 10 inches thick, but because of the bright sun and warm nights, we were literally able to kick holes in the ice with the heel of our boots—definitely not worth the risk.

On the other hand, early clear ice that looks spooky can be very safe even if it’s only a few inches thick. When walking out onto the ice for the first time, drill or chop test holes every few yards just to be sure. If ice is cracking or booming when you are fishing, that’s usually a good sign. It means the ice is strong and expanding. I’ve had cracks run right under my hut when sitting on 2 feet of hard, clear ice.

"... a man slipped and hit his head on the ice on the lake below my cabin. He died from a brain hemorrhage ..."

simple as a sharpened spud or rock bar will work, but the job will wear you out quickly if the ice is thick. A hand auger with sharp blades is affordable and speeds the task. Once the ice-fishing bug hits, though, most people acquire a power auger. Gas, electric and even propane models are available and will save arms, lungs and shoulders, and make moving from spot to spot a breeze.

Many varieties of portable fish finders are available, too. Some even look off to the side to show fish cruising elsewhere. The LCD model used on your boat can be fitted to a small rechargeable battery and serve dual purposes during winter. I prefer the old-fashioned (and now very popular) flasher type, which is so sensitive that it will show a bug swimming past or an air bubble rising to the surface. I can watch my jig move up and down on the screen and know when a fish follows it. When the thin green line (jig) disappears into the thick red line (fish), a strike happens. With a flasher and a fish alarm, I'm always ready, even when sitting back and enjoying a cup of coffee.

People often overlook ice cleats or creepers for the bottom of boots. I've slipped and fallen hard, and it happens so quickly that it cannot be prevented. Several years ago, a man slipped and hit his head on the ice on the lake below my cabin. He died from a brain hemorrhage before the local EMTs could respond. With a set of inexpensive ice cleats, he'd still be fishing today.

Techniques

Early in the season, fish are very aggressive, and an actively jigged bait or lure can attract trout from a distance. But as the fish settle into their winter feeding mode, they often want something sitting still, as a bug or shrimp would suspend itself in cold water, or with a slow lift-drop-stop motion, like a minnow feeding before dropping back down to rest.

One great thing about winter fishing is that trout—browns, brookies, rainbows and cutthroats—often feed in relatively shallow water anywhere from 3 to 12 feet deep, which makes sight fishing from inside a darkened portable hut both exciting and educational. By watching the fish, you can learn if they prefer something sitting still or moving on any given day. There's also nothing quite like seeing a big speckled head inhale your jig or bait a few feet away.

When sight fishing isn't an option, my go-to method is to suspend a small jig tipped with half a mealworm beneath a tiny bobber. The line is folded in half so the bobber clip actually holds a loop in the line. I slowly lift the jig a foot or two, let it settle naturally, then sit still. Most strikes happen after the drop when the lure is stationary. The bobber pops free when a fish strikes, and the fish can be fought without the bobber on the line. This method has produced thousands of dollars in prize winnings for me and my partner in ice-fishing tournaments. Some anglers use a panfish-style wire or spring bobber on the end of the rod to detect strikes. In my experience, it often moves the lure too much and spooks fish, where a tiny bobber holds it still and detects even the lightest bites.

All trout and chars can be caught through the ice, but different species have different habits. Rainbows often cruise in schools. It can be slow fishing until a school moves into

(top) **Ice fishing can be a great social event.**

(bottom) **Dean Staberg and Bob Chestnut enjoy a fun day on the ice.**

(opposite) **A sharp hand auger is a great way to open holes when the ice isn't too thick.**

MINNESOTA DNR GENERAL GUIDELINES FOR ICE THICKNESS

ICE THICKNESS	ACTIVITY
2 inches or fewer	Stay off!
4 inches	Ice fishing or other on-foot activities
5 inches	ATV or snowmobile
8-12 inches	Car or small pickup
12-15 inches	Medium truck

NOTE: Remember, these are only general guidelines for hard ice, and ice safety can vary due to many factors.

(top) **Steve Clark and Janet Stellema enjoy a great day with a simple setup.**

(right) **Young Finn Rose is all smiles behind his first brook trout through the ice.**

(top) **Late afternoon sometimes brings the fastest action of the day as fish feed before darkness falls.**

(left) **Sue Chestnut and Deb Cavender are warm and cozy inside an insulated portable sled hut.**

(bottom) **Today's modern portable huts set up in a flash, are mobile and provide comfort with the ability to watch down the hole.**

"Twice I nearly lost my rod on hard strikes when pouring a cup of coffee or unwrapping a snack."

an area, then nonstop action until they leave. My best rainbow fishing is in 6 to 12 feet of water. If I don't get a bite within 10 minutes, I move to a different spot. Sometimes they suspend in the middle of the day, holding halfway down over deeper water. This is where a fish finder or a flasher can make the difference between a slow day and fast action.

Brook trout tend to prefer structure and are more territorial. If you find brookies, you'll find a bunch. Brown trout will usually feed where minnows are schooling or crawdads are lurking. Sometimes that's in very shallow water, other times in very deep water. Cutthroats like to cruise over weed beds, picking off bugs and scuds clinging to weed tops. Some of my largest cutts have been caught where the weeds are only 2 or 3 feet below the ice. Lake trout are a subject for an entire article, requiring specialized gear and lures. They're usually found on deep structure breaks and strike large lures fished very actively.

Generally, the best fishing is between sunrise and about 11 a.m. Then the fish seem to take a break from feeding before starting up again shortly before dusk. They often feed after dark, too, and a favorite method of night fishermen is to sink a gas or propane lantern partway down into the ice outside the portable hut where it lights up the area below like an aquarium. Where legal, this can be great fun and extremely effective.

Throughout the years I've learned that shallow-water trout are very spooky, just as in open water. People walking or skating nearby can chase the fish out of the area, so if a restless group moves in nearby, I generally relocate. I've seen way too many instances of a trout inspecting my lure, ready to inhale it, when someone walks over and the fish races away.

Few people realize that trout feed actively beneath the ice. Early in the season is better because deep snow that comes later can shut out light and deplete oxygen levels, making the trout sluggish, but even then, they still feed. Last New Year's morning I fished a nearby lake for a couple of hours and landed 17, the biggest just over 18 inches, and missed at least that many more. Sometimes small schools darted past and several would race to hit the tiny pink tube jig. When I landed one quickly enough, I was able to drop back down and catch another from the same bunch. Twice I nearly lost my rod on hard strikes when pouring a cup of coffee or unwrapping a snack. My buddies were joking that coffee seemed to be the best fish attractant that day. There was continuous hooting and hollering coming from the portable huts within earshot. I kept one chunky rainbow for dinner and released the rest.

Final Thoughts

If you live in trout country, winter offers some of the year's finest fishing. Go down in the basement and tape a reel to a spinning-rod tip, grab a bucket and a handful of your favorite panfish jigs, a bobber or two, swipe a skimmer-strainer from the kitchen (don't tell your wife), sharpen up the rock bar and head to the lake one morning. When the first trout is flopping on the ice, you'll be hooked! **MP**

Cook With the Sun

A SENSATIONAL CULINARY METHOD

By Kristi Cook

“Solar ovens, also known as solar cookers, utilize various types of enclosures ... to harness the sun’s energy to prepare delicious, slow-cooked meals.”

Fire-pit burgers, Dutch-oven stews and grilled steaks are some of my favorite dishes. Yet, prepared indoors, they just don’t satisfy quite the same way. Maybe it’s the outdoorswoman in me, but I believe cooking meals the old-fashioned way, with a bit of fire and smoke, is the way nature intends us to eat. Much to my delight, food cooked with the sun is no exception. Requiring little more than a pot, a couple of boxes, a bit of aluminum foil and some glazing, solar ovens are the way to go when fuel is scarce and temperatures high, or you simply want a change of pace.

What is a Solar Oven?

Solar ovens, also known as solar cookers, utilize various types of enclosures such as pots, tubes, boxes and plastic bags to harness the sun’s energy to prepare delicious, slow-cooked meals. Practically anything you can cook in an oven or slow cooker—stews, roasts, grains, cakes, veggies and even bread—can be cooked in a solar oven. Additionally, solar cooking’s slow pace preserves nutrients, produces moist, tender meats and, after a little experience, usually requires minimal attention during the cooking process.

How Does it Work?

Solar cookers work on the same principle that heats your car to excruciating temperatures on a hot summer day. Sunlight enters the cooker through glass or plastic glazing—similar to vehicle windows—and becomes trapped. This trapped sunlight converts to heat energy, which then cooks the food. On a bright, sunny day, temperatures in the most basic box cooker can easily reach 250°F. Cooking temps are maintained by occasionally refocusing or reorienting the cooker to the sun.

However, to achieve safe cooking temperatures, solar cookers depend on the sun being high in the sky. Therefore, just as your vehicle stays cool and comfortable on a cold winter day, solar ovens can’t work if there isn’t enough sunlight or the sun is too low. Unfortunately, this dependence on solar

DIY SOLAR BOX COOKER

While other versions of solar cookers exist, it's easiest to begin with a box cooker using readily available materials, which will vary somewhat depending on whether you want a temporary or more permanent cooker. Both versions require the same guidelines and cooking methods.

Materials

- Enough wood/plywood (permanent) or cardboard (temporary) to build two topless boxes—one larger than the other—including floors for each box. Note: Actual dimensions will vary depending on your specific cookware (see, "Determine Your Dimensions," pg. 46).
- Insulation material to pack between the two boxes for heat retention: foam sheets, corn husks, wadded newspaper or old clothing/sheets/towels; even hay or dried grass may be used
- Black, non-toxic spray paint or black cardboard to fit into the bottom of the smaller box
- Aluminum foil
- Glazing material sized to the larger box's outside dimensions like a lid; this may be glass, Lexan, Plexiglas or turkey-roasting bags
- Cardboard or wood to build a simple frame to hold the glazing (optional)
- Hinges (optional)
- Nails/screws if using wood
- Duct tape or packing tape
- Cardboard to make a reflector the same size as the opening of the larger box
- Sticks or rods to prop reflector at correct angle

Assembly

1. If using wood/plywood, build the two boxes according to your chosen dimensions.
2. If using cardboard, you may work with the dimensions of your boxes, or you can cut and tape boxes together to obtain the desired measurements.
3. Apply either black non-toxic paint, or black cardboard across the bottom of the smaller box.
4. Line all four inside walls of the smaller box with aluminum foil, avoiding wrinkles and tears, if possible. Secure with tape or glue.
5. Line the bottom of the larger box with approximately 1 to 2 inches of insulation material.

6. Place the small box on top of the larger box's insulated floor.
7. Stuff insulation between the walls.
8. Optional: Build a frame according to the larger box's outside dimensions and secure glazing with silicone adhesive, duct tape, etc. (use caution around sharp edges).
9. Place glazing on outer box like a lid. You may wish to add hinges to one side or simply allow the glazing to rest on the outer edges.
10. Cut cardboard to outer box's dimensions for the reflector.
11. Line one side of the reflector with aluminum foil, avoiding wrinkles or tears. Secure with tape or glue.
12. Attach the reflector to the outer box with the aluminum-foil side facing the glazing. Secure with duct tape, hinges or additional cardboard as though making a flap/lid for the outer box.
13. To adjust the reflector's angle, use sticks or rods of varying heights to prop the reflector at the desired angle.

Determine Your Dimensions

- The smaller box must be able to accommodate the largest cookware you intend to use while sitting on a rack. Allow for at least 5 inches of airflow around the sides of the cookware, ¼ inch or more underneath the rack and 2 inches or more between the lid of the pot and the glazing. (If the box is too small to allow for airflow, cooking will be slower or nonexistent.)
- The larger box must be approximately 1 to 2 inches taller, wider and longer than the smaller box to accommodate insulation.
- Don't forget to plan for each box to have a floor.

(above) **This is Cook's permanent solar cooker with the glazing, reflector and wooden prop. Varying lengths of rods may be used to adjust the reflector's angle.**

(opposite) **This is the inside of the wooden box cooker. Place a small rack in the bottom of both types of cookers to keep cookware off the floor and to promote airflow. The sides of this cooker are angled with the back wall higher than the front, which promotes faster heat buildup and potentially higher temperatures.**

energy makes many areas of the U.S. incapable of year-round solar cooking. Still, most regions have enough sunlight to cook for at least four to six months out of the year.

To determine the sun's cooking capability in your area at any given time, check the length of your shadow. If it's shorter than you are tall, the sun is high enough that solar cooking should be possible.

Cooking Basics

Cooking with solar ovens is very forgiving. The slow heat of the sun allows for long, slow cooking that almost never overcooks your food. Meats left longer than expected continue to tenderize with the added benefit of retaining moisture due to a near lack of evaporation. Vegetables often require little to no additional liquid since moisture tends to build much like it does in a slow cooker. Blended dishes—stews and chilis—meld flavors together in such a way that you'd swear they were cooked the day before.

There are, however, some guidelines to follow that will optimize your cooker's potential. When selecting cookware, it's best to use the thinnest material and the shortest pot possible. The outside walls and lid of the cookware must be black, or at least a very dark color, to help the vessel absorb and retain heat. Since most dishes will be covered, you also need tight-fitting lids to prevent heat from escaping and to reduce evaporation. For recipes such as cookies or pizza that don't require a lid, you still want to choose thin, dark-colored baking sheets for faster, more even cooking.

When cooking multiple dishes or very large meals, divide food into smaller pots rather than one large pot because smaller sizes heat faster and cook food more evenly. Place larger meats and longer-cooking foods towards the back of the oven, which tends to run hotter than the front in many cookers. When mixing different foods into one dish, such as stews or roasts with vegetables, load the pot with meats and root vegetables first, and add faster-cooking veggies, such as asparagus, corn or greens, once the pot is boiling. To trap heat, try not to stir or check

on food unless absolutely necessary.

When ready to cook, put food in the cooker as early as possible. If you're making lunch, for instance, you'll likely need to begin cooking close to 9 a.m. in most regions. If you're planning an early evening meal, you can usually begin at noon or possibly later, depending on the food type and sky conditions. The goal is to allow enough time for the food to properly cook before the sun begins to go down and the temperature begins to fall. Should the meal be ready to eat a little too early, just leave it in the oven for a while, keeping an eye on it to ensure it doesn't overcook, although this is rarely a problem.

Position Correctly

Positioning the box cooker takes a bit of practice. As a general rule of thumb, when cooking for three hours or less in optimal conditions, many box cookers don't require refocusing. Just position the cooker so the sun is directly in front of the oven halfway through the anticipated cooking time while angling the reflector(s) to direct as much sunlight as possible directly onto the cooking vessel (this will often be a 45-degree angle). However, with longer times or in less-than-ideal conditions, you will likely need to refocus periodically to keep the sun in front of the oven to maintain ideal cooking temperatures. It's helpful to monitor the inside temps with an oven thermometer placed within clear view to get a feel for how your particular setup functions in varying conditions.

Give it a Go!

Experience is the best teacher when learning a new skill. Over time, you'll learn which sky conditions and cooking times work best for each meal type. To get started, remember that blue sky with little to no clouds offers optimal conditions, while white sky and/or lots of clouds equates to slower, and at times, unfavorable cooking weather. However, after a few meals you'll gain the confidence to test the limits of nature's free energy source to create satisfying, mouth-watering meals with little effort. MP

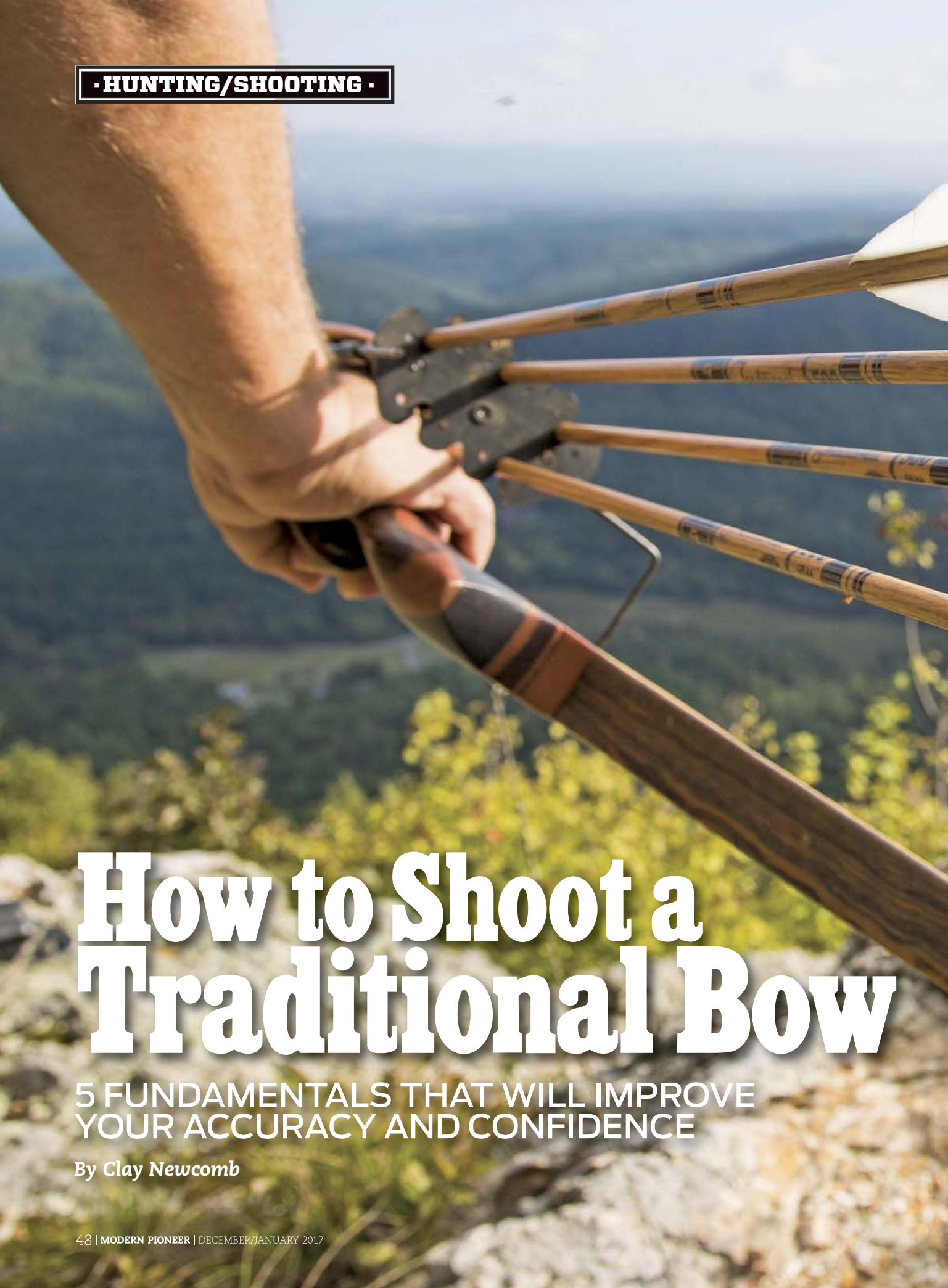
General Cooking Times

Several factors affect cooking times, such as food size, density and amount; intensity of sun and wind; and type of cookware and cooker. Therefore, the following cooking times are general guidelines only. You should always cook food to the recommended internal temperature rather than for a specific time.

1-2 hours
Chicken (boneless), eggs, cookies, fish, fruits, grits, oats, rice, pasta and fast-cooking vegetables such as asparagus, broccoli, corn, English peas and greens

3-4 hours:
Bread, lentils, black-eyed peas, whole chicken, pork chops (most average-sized cuts of meat), pizza and root vegetables such as potatoes, carrots and turnips

5-8 hours:
Dried beans (soak overnight to shorten cooking times), large roasts or hams, soups and stews



How to Shoot a Traditional Bow

5 FUNDAMENTALS THAT WILL IMPROVE YOUR ACCURACY AND CONFIDENCE

By Clay Newcomb

(above) **Author Clay Newcomb places three fingers under the arrow nock rather than one over and two under. This increases his proficiency monumentally.**

(opposite, top) **To shoot a traditional bow accurately, you must choose and use a consistent anchor point.**

(opposite, below) **Most who've shot a compound bow have heard of using back tension to trigger their mechanical release aid. A traditional bow is shot most effectively using a similar approach. Squeeze your shoulder blades together while relaxing your release hand, and the shot will happen naturally.**

To me, traditional archery is one of our ancestral hunting heritage's greatest treasures. Hunting with a traditional bow is a way to connect with an ultra-primitive human activity that, in many ways, has changed very little since the beginning. No doubt the first stick bows were rough and unrefined, and I'm sure humans struggled to shoot them accurately. They probably discussed and shared their methods, strategies and practice routines with one another, much like we do today.

Traditional archery is a category of bow shooting in which a self-bow, recurve or longbow is used without release aids or sights. Most traditional bows are made of wood, but some are built of manmade materials. A self-bow is the most primitive, hewn from a single piece of wood. Archery in its simplest form, a self-bow is basically carved out of a single section of a select tree type. The choice of wood varies all over the world, but many in North America are made from yew, maple, hickory or Osage orange. Most modern recurves and longbows are made of multiple wood types and fiberglass laminated together. Bowyers—people who build bows—laminate bows to increase performance and enhance beauty.

It's important to understand the methods in which traditional bows are aimed and shot. The two most common are instinctive shooting and gap shooting. We'll cover instinctive shooting in this article, and it could be compared to throwing a baseball. You don't really aim; instead, you focus on a certain spot and throw the ball. The more you throw it, the more your mind, body and instincts collaborate to build accuracy. For gap shooting, you use reference points on the bow and arrow to aim. Basically, you estimate the distance to your target, then use predetermined points of reference in your sight window to aim. Gap shooting is like using a primitive sight.

Traditional bows are readily available and increasingly popular. Getting one in your hand isn't the issue; however, shooting it accurately enough for hunting is. People with limited exposure could view hitting your target almost as luck, because arrow flight can seem so random in an untrained hand. As you learn, though, you'll see that shooting instinctively is a lot less magic and a lot more physics than it first appears. The bow will perform flawlessly and identically every time if shot the exact same way. A compound uses technology to help the archer consistently

draw, aim and anchor in the same place. In traditional archery, these systems don't come naturally.

The following five points are the fundamentals I use in my draw cycle. Master them and you'll improve your proficiency.

FUNDAMENTAL #1: Straight Bow Arm

Your bow arm is the one that holds the bow. Typically, it's your non-dominant arm. The bow arm is a critical component for aiming. Envision holding the bow out and extending your pointer finger directly at the target. The bow arm directs the arrow's flight. Additionally, the arrow is flying slowly enough that if you drop your arm during or after the shot, you'll shoot low. The arrow simply doesn't get off the riser that quickly. It helps me to mentally recite, "Keep the bow arm in place until the arrow hits." Envision your bow arm pointing at the exact spot you want to hit. Much like shooting a compound bow, your bow arm should be slightly bent and your grip light and open.

FUNDAMENTAL #2: Consistent Anchor

The anchor is the furthest point to which you draw the string. It's one of the most critical components in shooting consistently. Essentially, you must pull the string back to the same spot every time. How far you pull it determines the amount of energy that will transfer to the arrow, which affects trajectory. Find a comfortable place on your face to which you can consistently pull.

Your anchor point and bow arm are connected and create the draw cycle. You can be anchored in the correct place, but if your bow arm is bent too much, you aren't pulling the bow back far enough. Finding a consistent anchor is critical. I anchor with my middle finger dug into the corner of my mouth. This puts the arrow directly underneath my eye, allowing me to look down the arrow to aim.

What Type of Traditional Bow and Arrows do you Need?

The type of traditional bow you choose is a personal preference. Recurve bows are the fastest, longbows are the second fastest, and self-bows are the slowest of traditional bows. Typically, they follow this order in ease of shooting, too. Speed aids in penetration when it comes to hunting, but accuracy is far more important. If your goal is to simply hunt with traditional equipment, you might start with a recurve. However, if you're looking for the ultimate archery challenge, start at the bottom with a self-bow.

Often, a new shooter's second question is where to get a traditional bow. Several mainstream archery companies offer traditional lines. Bear Archery and Martin Archery have good selections, but many new companies make them, too. For instance, a company called Samick makes traditional bows that are getting good reviews. However, custom-made bows are very popular, and bowyers are everywhere. I'm amazed by the number of people who make traditional bows in their shops and garages. No doubt, you've likely got a bowyer near you.

I prefer to shoot carbon arrows—not that traditional, I know. Many traditional archers still shoot wooden arrows, which fascinates me. However, after several years of shooting them, I've found they break too easily. I simplified my traditional archery by shooting Gold Tip Traditional carbon arrows. They're wrapped in a natural wood casing for a traditional feel. However, when I miss, the arrow usually survives. I add weighted inserts made by Gold Tip to beef up my arrows to between 550 and 650 grains for my 64-pound bow.

Note: As far as draw weight goes, less is usually more. Many of the best hunting archers I know shoot less than 50 pounds.

TRADITIONAL BOWS ARE EFFECTIVE HUNTING WEAPONS

One of the biggest challenges I had to overcome in traditional archery was mental. After years of shooting compound bows that hit velocities higher than 300 feet per second, it was difficult for me to understand how a traditional bow could be an effective hunting tool.

However, traditional bows will ethically kill any animal on the planet. The focus on arrow speed in the bow market is primarily a marketing tool, not a hunting necessity. Shot placement and accuracy are far more important than velocity.

Momentum is the correct equation to use for calculating the energy an arrow has for penetration (not kinetic energy, which doesn't calculate directional vectors). Mass x velocity = momentum. Why does this matter? In this equation, arrow weight (mass) is as important as the velocity. A heavy arrow is the key to good penetration.

I love shooting a compound bow and will continue to hunt with one. However, when I'm holding my traditional bow, I switch gears and become a lot more selective with my shot angle and shot distance, and I pay closer attention to the animal's attentiveness. In October 2016, I harvested six animals with traditional equipment. Four of six arrows completely passed through the animals, two of which were bears. None of these animals traveled farther than 75 yards after the shot. Honestly, I can't remember the last time I had those stats shooting my compound bow.

"A poor release is the most common reason for hitting left or right of your intended target."

Some people anchor for a few seconds before they release, while others prefer to release as soon as the string touches their anchor.

FUNDAMENTAL #3: Pinch Your Shoulders

I use this phrase to help me visualize how to release the string. A correct and smooth release is more about your back and shoulders than your fingers. To me, it feels like I'm trying to pinch my shoulder blades together as I slowly release tension from my fingers, allowing the string to release cleanly. A poor release is the most common reason for hitting left or right of your intended target. This is critical: When releasing the string, don't spring your fingers open; rather, relax them and allow the string to pull away from your hand as it naturally springs free once tension is released. Your release-arm elbow should move straight backwards after the release.

FUNDAMENTAL #4: Three Fingers Under

My accuracy increased noticeably when I started shooting three fingers under the arrow nock. Many prefer to shoot with one finger over and two under the nock. Originally, I shot this way, but I struggled with accuracy. Try both ways to see which one works best for you. I once saw Gene Wensel (a legendary traditional archer) shoot with three fingers under, anchoring with the nock right under his eye. This revolutionized the way I shot, increasing my accuracy substantially. By drawing the aiming point directly in the line of sight, aiming comes more naturally.

FUNDAMENTAL #5: Pick a Spot

We've all heard this adage, and we all think we do it, but we all have room to improve. With instinctive shooting, this is a powerful piece of the equation and, perhaps, one of the

(above) **At the shot, keep your bow arm in place until the arrow reaches the target.** *(below)* **Employing the tips discussed in this article, the author has tightened up his proficiency and shooting accuracy throughout the years, greatly boosting his confidence each time he hunts with traditional archery tackle.** *(opposite)* **Traditional bowhunter Clay Newcomb put his shooting fundamentals to good use on this beautiful Arkansas buck in October 2016.**

most difficult. You'll hit where you look. You can be fairly accurate at close range by subconsciously memorizing the sight window and gap shooting (using the arrow as a reference point for aiming). However, this is the human side of the equation where focus and concentration can play a big part in accuracy.

I try to train myself to pick a spot, even outside of archery practice. For practice, don't just look at a leaf, but look at a certain spot on the leaf. Don't merely look at the white wall, but pick a specific spot on the wall to concentrate on. This can be good practice to tighten up your mental accuracy. You'll find that when the other shooting components are aligned and consistent, the arrow will hit where you're looking. It does almost seem like magic sometimes. **MP**

Hunting Coons With Plott Hounds

THE NIGHT PURSUIT OF PROCYON LOTOR

By Clay Newcomb

The whole concept of being a modern pioneer is a breath of fresh air in today's digitized, computer-based, indoor-oriented, give-it-to-me-now pop culture. Though technological gadgetry has increased, the basic needs of humans have not. And, for many of us, that means staying connected with our rural roots. While many people spend their nights and weekends watching Netflix and pay-for television, my family and I engage in a much more rewarding pastime when the sun goes down: raccoon hunting with hounds.

The author is with his prized coonhound, a Plott named Newcomb's Ozark Bluff Creek Fern, and a big Ozark Mountains coon.

"Plotts are known for their grit, drive, bold trailing instinct and for being great tree dogs ..."

(left) **Fern trees a raccoon near the Arkansas River in Lincoln County, Arkansas. Raccoons like to be around bodies of water, even in the winter.**

(below) **The author's daughter, River, kneels with the Newcombs' well-conformed, young female Plott hound before a hunt in southern Arkansas.**

Honestly, I never thought I'd get back into raccoon hunting. In 1998, after graduating high school, I sold my two dogs for $150 each, gave away my dog box, and put the coon light in the closet. That same winter, I met a fur buyer at the Walmart parking lot in Mena, Arkansas, and sold eight coon hides for $8 each. I walked away with $64 cash and felt like I'd done something.

Acquiring those hides provided a good measure of adventure, which I craved. As I look back, I realize that I never really had good dogs or fully understood hound training. Regardless of my lack of hound power and prowess, I developed a deep appreciation for the hound sports. Hound hunting is such a niche endeavor.

As a young man, the adventure of nighttime coon hunting was radically different from all other types of hunting I'd ever participated in. It's not comparable to deer or bear hunting; it's a totally different category. However, my grandfather was a bird-dog man and trained pointers and setters most of his life. We didn't have many quail, so the hunting-dog theme translated for me into hounds and raccoons. Coon hunting also gave us some wholesome fun to participate in after the sun went down in rural Arkansas. I often hunted to keep some of my would-be-hooligan friends out of trouble for a weekend or two.

Old-Time Coon Hunting

Historically, hunting raccoons with hounds is a very American pastime. In past economies, fur-bearing wild animal hides were very valuable because they were used for clothing, hats, leather goods and various necessities. Native Americans have used furs since before recorded history. However, the "modern" North American fur trade began with the French in the 16th century, followed

FIVE TIPS FOR HOUND TRAINING

1. GOOD BREEDING IS EVERYTHING.

You won't likely teach a hound more than its genetic capabilities allot. Start with a dog that has solid tree dogs in its pedigree and a strong desire to hunt. Just because it's a hound doesn't mean it will make a coon dog. You can't train a hound to tree a coon. Rather, you put the dog in scenarios where it can be successful. Then you praise it for good behavior and discipline it for poor behavior. Over time, it will develop a love for treeing raccoons.

2. LET IT RUN LOOSE WHEN IT'S YOUNG.

Most hunting dogs are kept in pens or chained up because they'll wander off and get into trouble. However, when a dog is young, it's beneficial to let it run loose if you've got a big enough place. A dog learns many important things about being a hound, things it won't learn in a pen. They learn to navigate rough terrain, cross creeks, trail rabbits and chase birds. All of these experiences will help them become better hunters when they're older.

3. START YOUR HOUND ON CAGE COONS.

Catch a raccoon in a live trap to get your hound started in the right direction. The hound can't hurt it, and the raccoon can't hurt the young dog. Allow the dog to bark at the cage. Use a rope to hoist the trap in a tree to get the hound looking up and barking. Basically, you want to give the hound some confidence and get it interested in raccoons. I like to use a cage coon three to four times between the ages of 6 and 10 months.

4. START HUNTING THEM AT 1-YEAR OLD.

There's a lot of debate about when you can expect a hound to start treeing raccoons. Anywhere from 8 to 14 months, you can anticipate the hound will "turn on." They all start showing interest at different ages. Some start early, others start late. Be patient and let your hound develop at its own pace. I like to start seriously hunting my hounds when they're about 1-year old.

5. TURN 'EM LOOSE.

The best thing you can do for your coonhound is to simply take it hunting and turn it loose. Dogs learn to hunt by hunting. Coonhound training is more about giving your dog opportunities to express its genetics than teaching it commands. A good coonhound trainer knows when to praise and when to discipline. Coonhounds must be broken of running non-game species. An electronic training collar works great for deterring them from running things other than raccoons.

Raccoon hunting is a very social sport that allows for lots of interaction between friends and family. It's a great way to get kids involved in the outdoors and participate in some much-needed raccoon management.

by the English establishing trading posts on Hudson Bay and in present-day Canada. The fur trade peaked in the 19th century, but the market for fur continues to this day. Even into the early-'80s, the price for a raccoon pelt was around $20, and prime hides could bring as much as $60.

To help put this into perspective, consider this scenario: Imagine you work at a sawmill in West Virginia in 1980 making a minimum wage of around $3.35 per hour. You can work a 10-hour day and make around $35. However, you've got a cracker-jack coonhound and access to good hunting land. On any given night, you can go and tree a raccoon or several. Do the math, and it's easy to see that you could substantially supplement your income in the wintertime through coon hunting. A good hound would quickly become more than just a pet, it could be a pathway to greater financial stability for your family. It's no wonder the coonhound became a cultural icon for rural America.

The Tables Have Turned

Today, fur prices are at all-time lows. A prime raccoon pelt at the time of printing is worth $2-$6. Modern coon hunting has little financial benefit, yet that's exactly why it's a great time to be a coon hunter. Fur prices have pushed most hunters out of coon hunting. This has helped raccoon populations surge to all-time highs in North America. Raccoons are agricultural pests, causing widespread financial loss to American farmers.

Raccoons are predators, particularly, nest predators. They predate on all of the fragile ground-nesting bird populations like quail and wild turkey. Not only that, but raccoons are just all-around varmints. They're notorious for raiding trashcans and emptying bird feeders. Except for a few places in the western United States, raccoons are almost everywhere on the continent. They're equally distributed between rural places and even in inner cities.

There's never been a better time to be a coon hunter. Aside from helping to manage the raccoon population, coon hunting adds a

counter-cultural and traditional flavor to the lives of participants, which is the aspect I love most.

Current Coon Hunting

I fell back into coon hunting almost by accident in 2015. As a family, we hadn't owned a dog in several years because we didn't feel we could give one adequate attention. However, in summer 2015, my family was excited to get a registered American Plott hound.

Plotts are known for their grit, drive, bold trailing instinct and for being great tree dogs, meaning they'll stay at the tree and bark at game that has climbed. They're also known for their loyalty and intelligence, both unique traits to the coon-dog breeds.

The Plott breed is truly American and was developed in the Smoky Mountains of Bute County, North Carolina. The hounds are descedants of German Hanoverian hounds, and they were brought over by Johannes George Plott in 1750. Plott was only 16 years old when he sailed the Atlantic with hunting dogs given to him by his father that would become the foundation of this powerful big-game coon-hunting breed.

Like many other things, the New World was a breeding ground for innovation that became the bedrock of American identity. The Plott hound breed was just that. Recognized by the United Kennel Club in the '40s as a pure breed, Plotts are one of five dog breeds developed in the United States. Of all the breeds, they've got a unique and amazing history.

Plotts were originally used in North Carolina as bear dogs and for catching feral hogs. In fact, they're best known for bear hunting. Their strong treeing instinct, however, caught the attention of coon hunters as the breed's popularity grew. They're the only tree-hound breed that didn't descend from European fox hounds, thus the unique brindle black look.

Great Family Fun

Throughout the last year, our Plott hound has come on strong, treeing raccoons consistently. As a family, we've had some tremendous hunting adventures, and the process has branded my kids with an appreciation for hound hunting that won't soon fade. Last winter, we went hunting three or four nights per week. The beauty of coon hunting is that you can go out for short hunts and be home by bedtime—no need to stay out all night.

All in all, I love getting out in the evenings when I know most people are watching TV or sleeping. I feel like I'm stealing adventure with a historical pastime that most people know nothing about. MP

BASIC HIDE PREPARATION

When you start coon hunting, you'll need to learn some basic skinning techniques. Most hide buyers prefer to buy their hides "green," meaning skinned and frozen. This is easy. You'll need to case skin your raccoons and pay close attention so you don't cut the hide. Case skinning involves making one primary cut from the inside of the back feet down to the anus. This will be the primary and only major cut. Start by cutting around all four feet at the ankles. Next, hang the raccoon from the back feet using a rope, then peel the hide over the animal all the way down to the nose. You'll need a sharp skinning knife. You also must be careful around the eyes and ears. It'll take you a few times to get it just right. After the hide is detached from the carcass, freeze it.

The author demonstrates a duffek stroke. With practice this maneuver can quickly turn a canoe around up to 180 degrees.

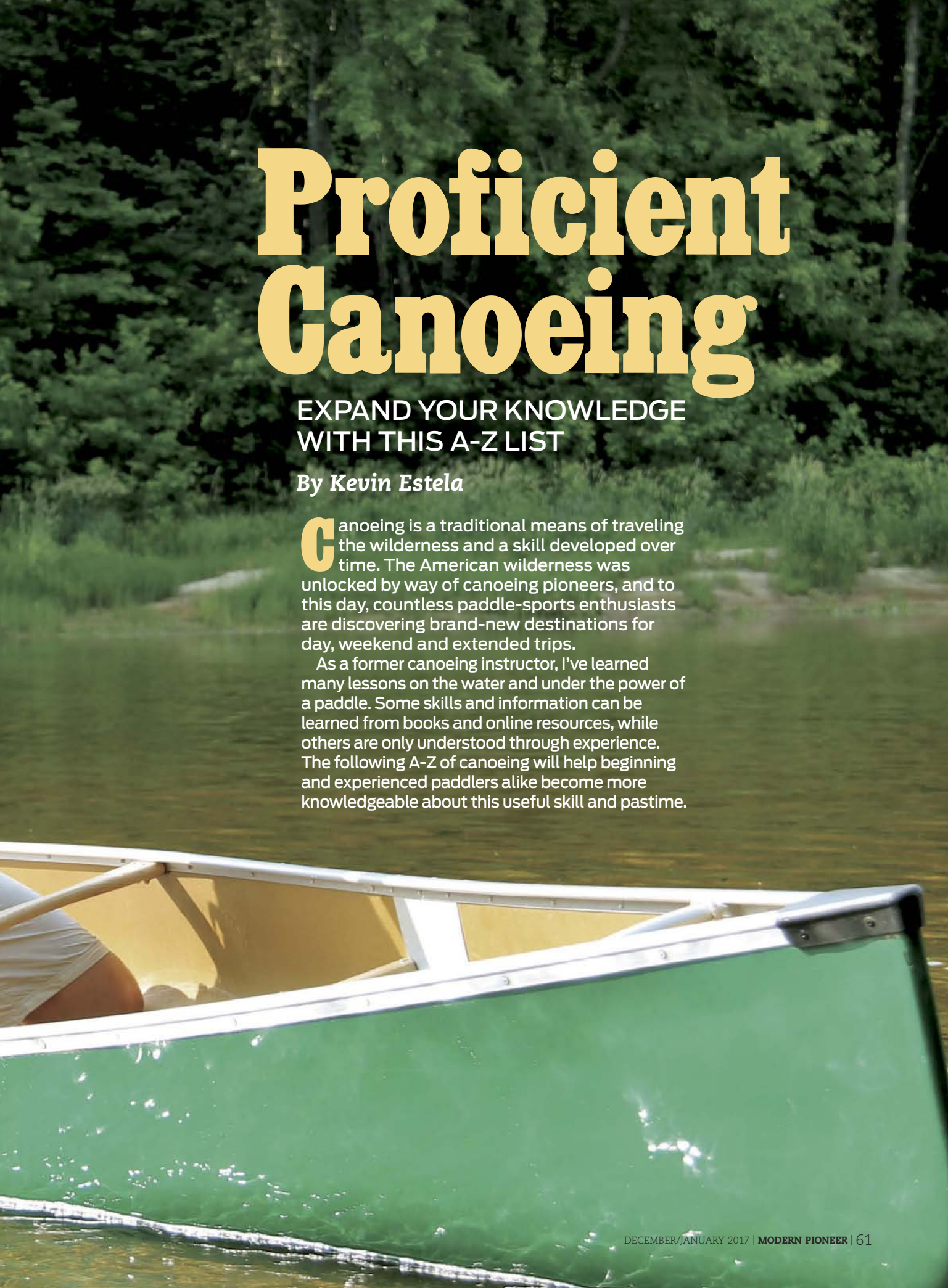
Proficient Canoeing

EXPAND YOUR KNOWLEDGE WITH THIS A-Z LIST

By Kevin Estela

Canoeing is a traditional means of traveling the wilderness and a skill developed over time. The American wilderness was unlocked by way of canoeing pioneers, and to this day, countless paddle-sports enthusiasts are discovering brand-new destinations for day, weekend and extended trips.

As a former canoeing instructor, I've learned many lessons on the water and under the power of a paddle. Some skills and information can be learned from books and online resources, while others are only understood through experience. The following A-Z of canoeing will help beginning and experienced paddlers alike become more knowledgeable about this useful skill and pastime.



CAPSIZE PROOFING

A common fear among new paddlers is the fear of capsizing. Canoes and kayaks feel tippy at first, but in reality, that's just the boat's primary stability. Most can be tilted drastically on their sidewall until secondary stability kicks in and the boat seems to stabilize. Still, despite the inherent stability of the boat, every year countless people unintentionally end up in the water. This cannot be attributed to boat design, but rather to user error. Here are five simple tips to keep your boat right side up.

1. STAY LOW: Rather than sit on the seat or inside the canoe against the hull cross-legged, you should kneel with a wide base. You control the boat with your hips and lower your center of gravity this way.

2. PACK ACCORDINGLY: It's easy to throw all of your gear into a canoe and hope for the best. What matters is how it's distributed. Keep it centered over the axis of the boat and not unbalanced left or right.

3. RUN PARALLEL TO THE CURRENT: Canoes tend to tip over when turned perpendicular to the current. When fast water catches the inside of the gunwale or when the boat hits a rock, the river's full force will flip it. Keep your boat angled to run with the current, not against it.

4. WORK IN UNISON: When paddling with a partner, make sure to coordinate your efforts to prevent moving in a manner where the boat is unevenly balanced. The aft paddler can more easily call the shots than the bow paddler and must adjust his/her actions to prevent the boat from rolling over.

5. LEARN TO BRACE: A brace uses the surface area of the paddle to push forcefully against the water in the direction the boat is rolling. Novice paddlers tend to let go of the paddle and put their hand down in the same way they would break their fall on the ground. A good low brace in a canoe will prevent a boat on edge from rolling all the way over.

"Taking a swim is inevitable, and knowing the proper body position in a river will save your butt—literally."

Anchor

While not a canoeing necessity, it's nice to have an anchor handy. These are available in miniature versions, which consist of a #10 can filled with concrete. A length of paracord is all that's needed to hold your boat steady. You'll use it constantly to maintain a position while fishing. It's worth its weight in panfish fillets.

Bannock

Bannock is nothing more than flour, baking powder, a pinch of salt and whatever other ingredients you want to toss in for flavor. From cinnamon-raisin bannock to cheesy bacon bannock, this traditional camp bread is a staple when canoe camping. It sticks to the ribs and is easily fried in a cast-iron pan.

Cutlery

No boater should be without a knife. In addition to my usual belt knife, I have a knife attached to my life jacket to cut line, if necessary. I also carry an axe and a saw while exploring the backwoods in my canoe. Sometimes you just need to clear a waterway for the next boater. Of course, a good Swiss Army knife or multi-tool will be used regularly, too.

Dry Bag

You don't need to invest in the most expensive dedicated dry bags when quick-release knots in garbage bags and zip-top bags work fine. Of course, the disposable variety doesn't last as long, so if canoeing is a passion, consider investing in some dedicated bags. The best on the market are made by Watershed Bags (drybags.com), and their zippered seal on steroids won't fail you.

Exposure

Exposure can kill you. Cold is bad; wet is bad. Combined, they're really bad. Canoeing is a water sport, and you could end up wet. Make sure to have dry, warm clothes to change into if the weather turns or if you go into the drink. Hypothermia is possible even during the summer. Wind-resistant shells offset the wind's convection-cooling effects. A closed-cell sleeping pad placed on the bottom of your canoe will insulate you from the hull and its chilling conduction cooling.

Fire

Fire is life, especially so when cold-weather canoeing. Carry an immersion kit with a fire starter, candle and other means to create a fire. Also, carry means to make fire in a compartment or ditty bag in your boat, somewhere on your person and redundantly in your pack. Always have fire-starting materials within reach, just in case.

Gloves

Gloves will save your hands in cold weather. In the summer, they can protect your hands from the sun and from stinging mosquitoes. A grip that's too tight restricts circulation and will make you feel cold. If you find your hands are always cold, loosen your grip. If that little trick works for you, you may not need warm gloves after all.

Hauling

Nothing beats a canoe for payload. Either pack 20% of your bodyweight on your back and hike, or carry upwards of 1,000 pounds in your canoe. Just remember, if you portage—fancy word for "canoe carry"—you'll still need to haul your gear on your back. There's always a tradeoff.

(below, left) **A good bailing device will help rid your boat of excess water. These can be as simple as a sponge, a bailing cup or a hand-held bilge pump.**

(below, middle) **Invest in a quality canoe-carrier system. The THULE portage rack is purpose-built and the most solid way of transporting a canoe at highway speeds.**

(below, right) **It's advisable to carry a dedicated river knife meant for cutting cordage. The Spyderco Atlantic Salt Rescue has an oversized opening hole and a blade that won't rust. The Spyderco serrations rip right through webbing, safety ropes and boats, if necessary.**

(opposite) **A wooden paddle will warm to the hand faster than an aluminum shaft. Care is needed to protect the paddle from damage while paddling in rocky waters.**

(above) **Gear should be packed carefully and distributed evenly in your canoe to prevent capsizing.** *(below)* **A Swiss Army knife, wooden paddle and wool shirt are traditional accessories for the cool-weather paddler.** *(opposite)* **Canoes allow paddlers to haul cast-iron pans, coolers and heavier camping kitchen gear into the backcountry.**

Illumination

Depending where you are, even canoes may be required to have a white-light-emitting device onboard for night travel. If you share the water with powerboats, let them know you're there with a good light. Don't forget an LED battery-powered lantern if you plan on night fishing from your boat.

J Stroke

How do you paddle on one side? Look up this stroke. That's your answer.

Keel Guard

Hearing the sound of a high-end composite canoe scrape bottom is worse than nails on a chalkboard. A keel guard is usually a piece of Kevlar attached to the keel at the bow and stern with epoxy. Maintain your boat's value and integrity with this inexpensive accessory. If you're too cheap to buy one or wish to keep the lines of your canoe clean, simply walk your boat out into deeper water before boarding.

Life Jacket

Wear one and keep it zipped. Plenty of people have died when their unzipped jackets have come off in the water. A proper-fitting jacket will keep you afloat, but remember, it may not keep your mouth out of the water or face you up if you're knocked unconscious. Life jackets, also known as PFDs, have come a long way since the Mae West design. My personal choice is the Sea Wolf from Astral, which has since replaced the Lotus Designs Rio Grande PFD pictured in this article. It has all the buoyancy I need to stay afloat and no extra bulk to impede my movement.

Mosquitoes

Paddle in Maine at the wrong time of the year and you'll learn what the state bird—cough—I mean insect is. Paddling jackets and head nets will keep them off you. Bug dope helps, but you're doing a water sport and it will wash off. Invest in some quality insect-proof clothing.

Navigable Waters

You'll be able to access waterways navigable only to shallow-draft boats like canoes. Canoes are fantastic craft for getting into hard-to-reach places.

Oar

Oar? Nothing drives me crazier than when someone calls a paddle an oar. You row a boat with an oar; you propel a canoe with a paddle.

Poling

Years ago, Maine guides were required to demonstrate proficiency poling their canoes. Get a good brass foot and a 12-foot ash pole. You'll find you have better visibility standing in your boat, and attaining (fancy word for "moving back upstream")

is much easier pushing off the bottom than paddling in the water. This is a classic skill that separates novices from pros.

Quiet

You will see more wildlife in a canoe than you will on foot. There's almost no presence in the water, and if you learn a proper stroke, you'll minimize the sounds you make as you paddle. This stroke is often referred to as the Indian stroke, and it requires slicing the paddle back into the water to avoid slapping it. Canoeing can be very quiet and an activity perfect for clearing the mind. Keep a camera and/or binocular handy, because your stealth will pay off.

Roof Rack

You can use closed foam blocks, or you can invest in a quality roof rack; each has its benefits. One is less expensive, but the other will last forever. When you latch your canoe to your roof, you should be able to wiggle the car. Protect both your boat and your car with a quality roof rack. The THULE Portage #819 is a dedicated canoeing roof rack I feel comfortable with latching my high-end canoes to and driving at highway speeds. Don't even think about putting a rolled blanket down as a really horrible substitute.

CANOE OR KAYAK?

A well-rounded outdoorsman should be versed in multiple means of transportation. Canoes are a traditional way of exploring calm waters, but when Arctic tribes needed a vessel for hunting mammals in nearly freezing temperatures in open water, they used kayaks.

Today, the modern kayak is a great option for exploring the backcountry and far more durable than their wooden-framed, seal-skinned body predecessors. There are varieties for sea travel, river-running and day-tripping. Offering lower center-of-gravity body position, better water resistance to swamping, improved handling and "twice the paddle, twice the fun," a kayak may be the right choice for you. While there are plenty of advantages over an open canoe, there are also limitations.

Pros: A kayak can be paddled in water normally unsuitable for open boats like canoes. The double-bladed paddle is used more naturally than a single blade. If used with a spray skirt, a kayak can be sealed off from cold weather and water. Kayaks can be lighter, smaller and more easily transported overland by a single person. Kayaks can be easily righted if capsized with an Eskimo roll without exiting the craft.

Cons: More confined space. Less carrying capacity. Slower entrance and exit than a canoe. Self-rescue techniques require practice and skill. The use of a spray skirt can cause an entrapment concern. A wet boat limits what can be carried on the deck.

The question always comes up, "Which is better?" The answer depends on the circumstances and the paddler's preferences. Be versed in both methods of water travel, and your preference will gravitate toward one or the other.

(above) **The author is in a Riot Kayaks Magnum on the Tariffville Gorge in Connecticut. Don't try this in your average open canoe.** *(opposite)* **The Saco River is easily navigable and a great trip for canoers of all levels. The author is pictured here on his last trip there in 2014.**

Swimming

If you don't swim at some point in your canoeing career, you aren't pushing your skills enough. Taking a swim is inevitable, and knowing the proper body position in a river will save your butt—literally. Keep your hips up to prevent your tailbone from hitting and your feet down river to act like shock absorbers off of rocks. Scull, another "S" word, with your hands to safety, and don't stand up until you reach calmer water.

Throw Line

Reach, throw, row and go! This is what I learned as a lifeguard, and the same continuum applies to paddler rescue. Reach out a paddle or an arm, throw your line, paddle out to them, and if nothing else is available, swim for them. Risking two lives is senseless when you have alternative means to save one.

Underwater

Underwater features called hydro-topography will determine the nature of a river and its rapids. Learn what causes upstream and downstream Vs. Remember, downstream Vs point in the direction you want to go and represent the best way down. You'll always find the deep water and never have an issue paddling downstream.

Volume

A gallon weighs slightly more than 8 pounds, depending on sediment. Your canoe will hold almost 500 gallons. Learn to displace volume with float bags, and learn how to self-rescue your boat, even when filled. Respect the force of the river, or you'll learn a painful lesson.

Wetsuit

You'll find a wetsuit may sound like the right solution to cold water, but they do restrict movement and are uncomfortable. I prefer regular clothes with dry or semi-dry barriers over them. Proper clothing can extend your paddling season for months. Try out a wetsuit just to experience it, and you'll likely discover that you want something that doesn't chafe so much.

X-Shaped Paddles

X-shaped paddles can be used to prop up boats or even support a tarp for a quick shelter. Crossed paddles also make a great wall decoration for your cabin.

Yoke

That cutout brace in the center of your boat is a yoke. It's meant to carry the canoe and shouldn't be used as a seat. As a 14-year-old boy, I learned to carry a boat using one. Once you learn to shoulder a canoe, you'll find carrying this way is very comfortable and perfectly balances the boat's weight.

ZZZs

Some of the best nights' sleep I've ever had were underneath a canoe with a tarp draped over the top. Canoe camping is a great way to blend the passion for sleeping outdoors with the exploration possible in a canoe. Paddle hard and you'll zonk out easily at the end of the day.

Canoeing skills and knowledge enhance your time outdoors. You can learn a lot from this A-Z list, but so much more comes from experience. Harness your sense of adventure and curiosity with some liquid therapy aboard a canoe. **MP**

The trick to finding more deer during late season is often a matter of hunting where others don't and where deer have remained undisturbed. Swampy areas or rough topography often harbor such spots.

Late-Season Whitetail Strategies

SAVE YOUR SEASON FROM A NOSEDIVE WITH THESE TACTICAL TIPS

By Patrick Meitin

Every August I begin inventorying velvet bucks via trail cameras, swearing this will be the season I finally tag a buck wearing gorgeous velvet antlers following Idaho's Aug. 30 opener. So far that goal has eluded me. My attention then shifts to preparing for the Oct. 10 general-season opener. When all else fails, I'll get my deer in November when hormone-addled bucks are traveling widely during daylight hours. If I fail in November, well, I'm more or less hooped. Or am I?

I still have December's muzzleloader season to redeem myself, and more importantly, put venison in the freezer, but only if I play my cards right. I'm guessing my situation mirrors that of many other whitetail states. Successful whitetail hunting, regardless of how well

The author takes every opportunity during late seasons to track deer on fresh snow. This reveals movement patterns that have kept deer alive so long, helping future hunts, but also putting you into the action right now.

you've planned and how promising a particular situation appears, is all about carefully constructed plans, backup plans and backups for the backups.

The serious whitetail hunter never puts all of their eggs in one basket and never gives up. They have a solid plan for opening morning and for the rut, but they also plan for late season, just in case.

Feed Reserve

Late-season bucks are rundown and exhausted. With winter coming, survival hinges on fueling up for cold days ahead. Late-season bucks must eat.

When I was attending college in Texas, everyone had corn feeders. That's just how it's done in the Lone Star state. However, by late season, every single one of those feeders had been hunted out and become anathema to deer. I always wondered why guys running several feeders wouldn't leave one in reserve, a single feeder left completely alone until needed during desperate times. If that feeder is never used, no harm done, but with a season winding down and a tag still in your pocket, that feeder becomes your ace in the hole.

Of course, corn feeders are illegal in most states, but we can plant and nurture food plots, or pay a farmer to leave a certain corner of his corn or soybean field standing to create a late-season deer magnet. Small food plots differ little from corn feeders (no matter how superior we get to feel for hunting over clover instead of corn). And, just like those Texas feeders, I believe in always reserving one for dire emergencies, like three days remaining in the season and still no venison in the freezer. Without hunting, it becomes a sanctuary, a

WARM HANDS KEEP YOU IN THE GAME

One of the biggest problems while plying late seasons is keeping hands functioning, especially while bowhunting. I've tried everything, including fingerless gloves, mittens tethered together so I can pull them off when a shot opportunity arises, and clumsy glove mitts. All have inherent flaws.

I've since developed a system that keeps my hands and fingers functioning well enough to shoot traditional bows well with fingers. I start with thin fleece or polyester gloves. I add a waist-mounted, insulated hand muff (Hunter Safety System, huntersafetysystem.com, and Sitka Gear, sitkagear.com, make my favorites). Drop in a chemical handwarmer, and you're ready for action in the nastiest weather.

place where deer feel secure, which is entirely the point. Allow deer a place where they feel safe, and it can save the day when the season runs short.

Tracking Snow

It took me a long time to accept the idea of sitting in treestands and blinds for deer. I'm a child of the West, where hunting has always meant hunting on foot. So though I've now tagged many good bucks while sitting, I'm still not averse to stretching my legs during deer season, especially if I awake to fresh tracking snow.

Even during the rut, I regularly skip a morning on stand to do some tracking. There are some real benefits here. Fresh tracking snow lays everything bare, allowing more revealing scouting, say, backtracking deer to discover bedding areas, giving me a jump on future evening hunts, discovering scrapes and rub lines (important in the big-woods settings where I hunt), and generally revealing concentrations of deer sign. I can learn more in a morning of tracking atop fresh snow than in a month of scouting dry land. Deer are also far more visible when white snow blankets the landscape.

I especially enjoy tracking in conjunction with trail-camera intel. Let's say I have a particular buck appearing on a trail camera as regularly as clockwork, but always well after shooting hours. Tracking allows me to follow that buck into his secret daytime digs and, if lucky, get the drop on him and a shot to save my season. If I don't catch up with him, I at least gain a better idea where to begin on subsequent evenings. Obviously, this works best on large, public-land areas with room to roam, less so on patchwork private lands where walking more than a ½ mile puts you on someone else's property.

Another good place to begin trailing missions is at the edges of agricultural fields, picking out a big-buck track to follow, or weaving along concentrations of doe sign. If I'm lucky, I might find a buck standing in those tracks.

Still-Hunt Bedding Areas

Ninety-eight percent of the time, I'd tell you to treat bedding areas as sanctuaries. This aligns with that security thing I noted earlier. Known bedding areas provide starting points while setting stands for point A to point B interceptions. Interrupt that security and deer will quickly relocate, leaving you guessing once more. Yet, desperate times call for desperate measures. Late-season bucks, especially pressured bucks, are often highly nocturnal. Penetrating the places they sleep during legal shooting hours can be the

The wise hunter, whenever possible, leaves one food plot in reserve for late season. This means not hunting it at all during earlier seasons so deer remain secure there and continue arriving deep into a long deer season.

(below) **In the right terrain, where it's easy to get above deer along river bottoms or bluffs, spot-and-stalk hunting can prove quite productive during late seasons. Leaves are off trees and moving to high ground can help you locate bedded bucks.**

(opposite, below) **Where legal, offering bait can be an excellent way to lure a late-season buck into range. White-tailed bucks are run down and hungry after the rut, meaning they must replenish depleted calories.**

only way to find them.

This obviously works best while firearms hunting, though I've certainly tagged many deer while still-hunting with archery tackle. However, many have a false sense of what still-hunting is all about. Moving slowly and quietly is certainly part of it, but only part. The whole is a little more involved and mentally exhausting. I can only still-hunt effectively for a couple of hours consecutively. Proper still-hunting requires deep concentration with all of the senses engaged. The still-hunter pauses to soak in their surroundings as much as they move, employing binoculars liberally. The savvy still-hunter doesn't expect to see an entire deer, but smaller details, like a flicking ear, shining antler tip or the horizontal outline of a back against vertical trees. Further, they listen intently for any clues to a deer's presence, even engaging their nose in hopes of catching a whiff of deer on a gentle breeze. Crunching leaves or a sneeze are obvious auditory clues, but also listen to what other animals are telling you, a scolding jay or chattering squirrel often signals approaching deer.

Spot-and-Stalk

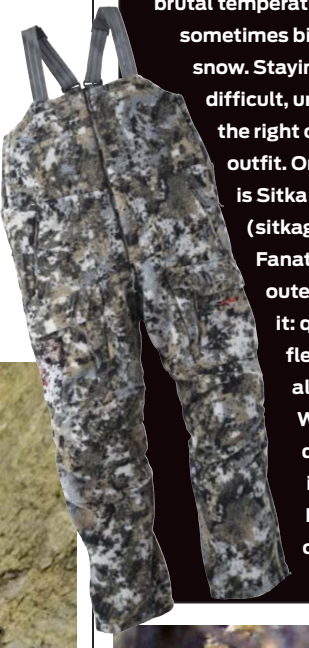
Hand in hand, spot-and-stalk hunting can also bring rewards during late seasons given the right terrain. Trees have shed their leaves, and visibility has never been better. Spot-and-stalk ploys work best in broken terrain, however subtle, as getting above deer allows you to cover more ground more efficiently. For me, this has worked best in Idaho's

mountain terrain, in northern Nebraska's Sandhills or the Missouri Breaks of North Dakota. Lesser topography, such as river bluffs, large haystacks and structures such as grain silos or windmills, can also act as effective glassing perches.

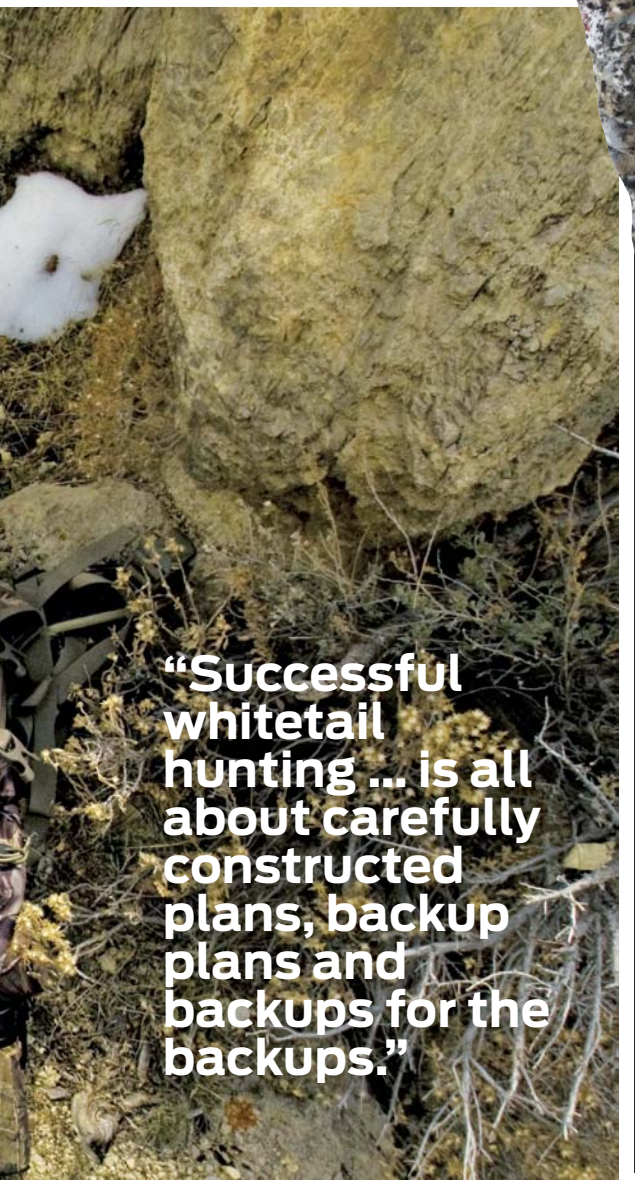
Once you've located a commanding vantage, employ a systematic glassing approach. Shirt-pocket binoculars have no place here. Something steadier and farther reaching—a quality 10x42mm, for instance—is better suited.

You must then learn to look with your binoculars, not merely through them. Train your binoculars on a swatch of habitat, holding them still and moving only your eyes within the field of view. And really look, as if your

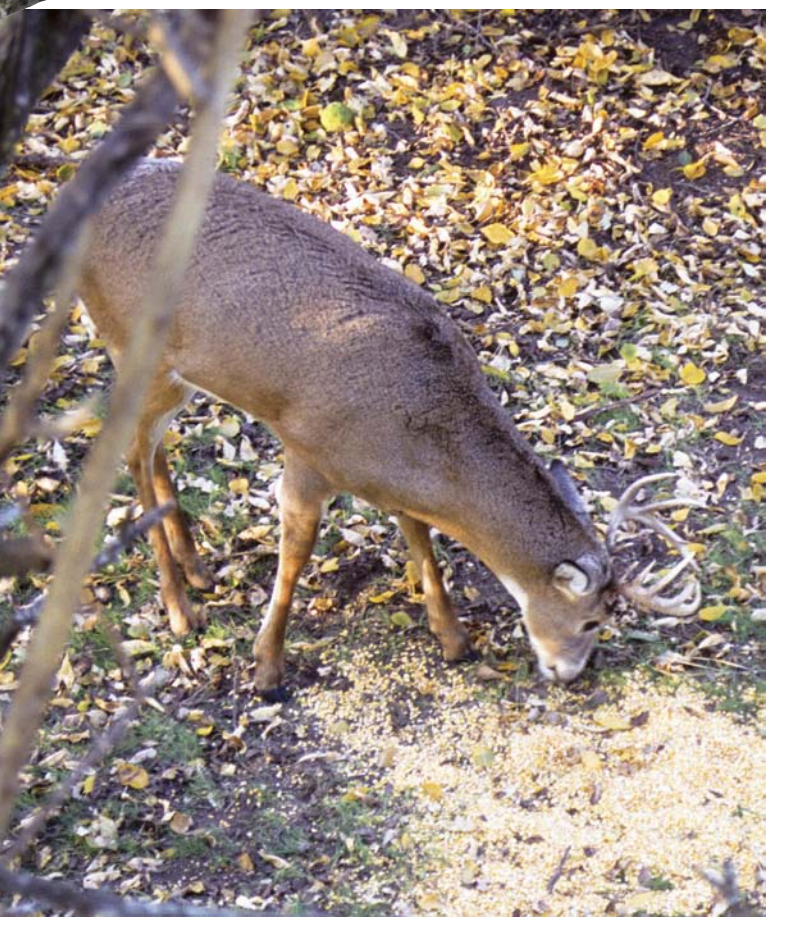
A LATE-SEASON OUTFIT



Late deer seasons typically bring brutal temperatures and sometimes biting wind and snow. Staying warm is difficult, unless you have the right cold-weather outfit. One of the best is Sitka Gear's (sitkagear.com) Fanatic series outerwear. Check it: quiet Berber-fleece shell that won't alert ultra-wary late-season bucks; Gore's WindStopper membrane to stop heat-robbing wind chill during late seasons; and unmatched Primaloft insulation that works even when wet. Combined, Fanatic wear provides unparalleled warmth during the coldest whitetail hunts.



"Successful whitetail hunting ... is all about carefully constructed plans, backup plans and backups for the backups."




Team
REALTREE
Nikon
HOYT

(above) **Simply surviving is sometimes the key to success in late-season deer hunting, because sometimes the colder it is, the more deer move. The author saw three shooter bucks in two hours the afternoon he arrowed this gorgeous Idaho buck.**

(opposite) **In big-woods settings like the extreme northeast, in states like Maine and Vermont, tracking deer in snow is a time-honored practice. It can also work for you in any whitetail habitat. All you need is some fresh snow.**

"... spot-and-stalk hunting can also bring rewards during late seasons given the right terrain."

wife has dropped a diamond earring into shag carpet. Only when you're certain nothing is present in that patch of ground, move your binoculars slightly and begin anew.

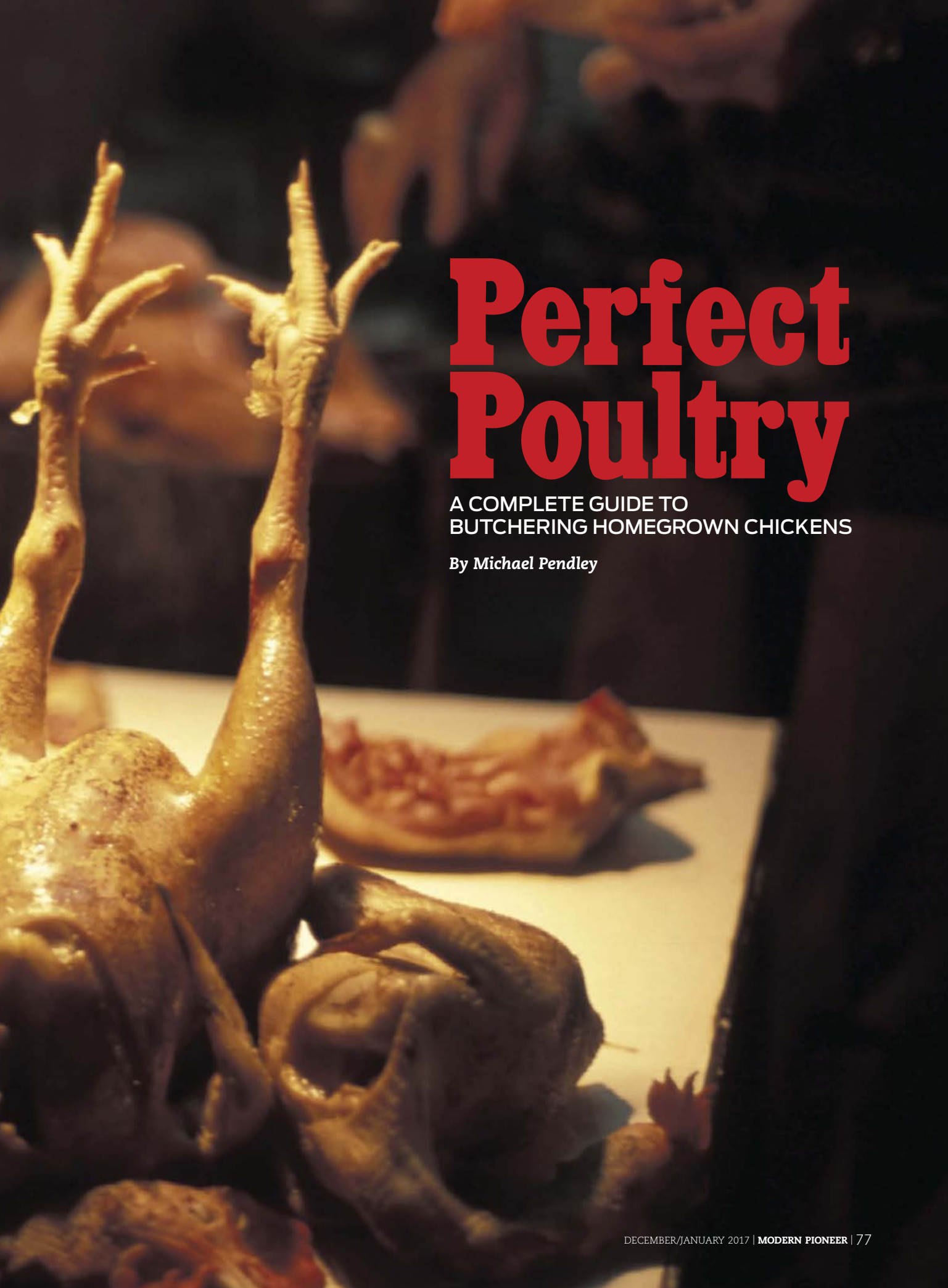
I glass like I read: left to right, top to bottom. When I run out of glassing ground, I return to spots appearing especially "gamey" and look again. Like still-hunting, you're looking for hints of game, not whole deer. Only when I'm completely sure nothing is living in a patch of habitat do I move to another vantage.

Drives

Full disclosure: I'm not really a fan of drives, especially their often circus-like atmosphere. That said, with time running short, sometimes a hunter's gotta do what a hunter's gotta do. Especially in thick cover and hard-hunted areas, drives can be the only option remaining to get late-season deer moving during legal shooting hours.

Now, there are drives—"India-tiger" affairs involving armies of pushers armed with pots and pans and creating a racket—and there are drives: simple two-man pushes. I prefer the latter. Quiet drives include a pusher and a stander and normally work best in defined topography or vegetation: isolated creek beds, windrows or small woodlots. The stander quietly slips into one end of defined cover, finding a comfortable stump or tree to slump against (rifle hunting) or toting a climbing stand to gain some elevation (bowhunting). The pusher gives the stander ample time before quietly still-hunting through the strip of cover. This slow-and-quiet approach allows deer to slip out ahead of the pusher and toward the stander. It has two distinct advantages: pushed deer pass the stander at a leisurely pace, ensuring better shot opportunities, and deer are less likely to bust out across open fields or run back over the driver in panicked abandon.

Persistence is the name of the game in all deer hunting. But with time running short and nothing but failures behind you, this perseverance must be doubly steeled. Bundle up, keep your enthusiasm high, and use these straightforward tactics to find late-season success. **MP**



Perfect Poultry

A COMPLETE GUIDE TO BUTCHERING HOMEGROWN CHICKENS

By Michael Pendley

A.

B.

A. All it takes to butcher a chicken are a few simple tools from your kitchen and tool kit. The thin boning knife is used for detailed cuts, the heavier butcher knife for coarse chopping and bone, and the shears for removing heads.

B. A restraining cone helps calm and immobilize the bird before processing. This results in faster, more humane kills, less mess and improved meat quality.

PHOTOS BY CHERYL PENDLEY

Whether you buy a flock with the intention of filling your freezer, have extra roosters that you just don't need, or have a few older hens that no longer produce eggs, nearly every chicken owner eventually must kill and butcher live chickens to provide dinner for their family. With a few basic tools, anyone who can cut up a store-bought chicken can butcher their own chickens from start to finish. If you plan on butchering several chickens, or butchering several times on a fairly regular schedule, a few specialty tools will simplify the process.

The Equipment

Knives and Garden Shears

I prefer a pair of knives for processing. The first is a heavy-bladed butcher knife. Handy for heavy cuts, the butcher knife offers the heft to chop through bone when necessary. The second knife is a thin, flexible-bladed boning knife; use this for finer cuts, like separating joints or cutting around the vent for removing entrails.

Use a pair of garden shears to cut through the neck bone when separating the head from the body. This step can be accomplished with the butcher knife, but the shears make the task easier and faster.

Restraining Cone

While your grandparent's method of lopping off a head or wringing a neck have worked for as long as people have been processing chickens, restraining cones are considered the most efficient and humane method of dispatch today.

A restraining cone is simply a metal or plastic cone that attaches to a tree or wall at a convenient height. The chicken is placed headfirst into the cone so the body is held in position by the cone, and the head and neck extend out the bottom. This allows the processor to simply slice the carotid artery, letting the chicken bleed out quickly with minimal movement and no flopping.

If you're butchering several chickens, commercially produced restraining cones made from metal or heavy plastic are available from suppliers like Meyer Hatchery (meyerhatchery.com). These cones will withstand years of use.

If you're only doing a few chickens, you can make your own restraining cone from any plastic gallon jug that tapers gradually to the neck. Jugs from vinegar or windshield-washer fluid are perfectly shaped as well. Simply cut the narrow neck at a point that leaves a 1 ½- to 2-inch opening. Remove the wide bottom of


C.


D.

“You’ll need running water for rinsing away loose feathers, washing hands and tools, and rinsing the cleaned carcass.”

the jug by cutting around the base to create a large opening. Invert the jug so that the narrow neck is at the bottom, and attach the jug to a tree or board. Slide the chicken in from above so its body is held inside the cone and its neck extends out the bottom.

Water

Water is an important part of the process. You’ll need running water for rinsing away loose feathers, washing hands and tools, and rinsing the cleaned carcass. It can be from a garden hose or from a portable sink like those designed for camping or fish-cleaning stations.

You’ll also need a hot-water pot for dipping the chickens before plucking. A tall stock pot and a portable heat source, like an outdoor propane burner, work well. Propane turkey fryers provide the perfect combination of heat and a large pot. The water must maintain a temperature right at 150°F to properly loosen the feathers without cooking the skin. Use an instant-read thermometer to monitor the water temperature, increasing or decreasing the heat level to maintain 150°F.

Chicken Pluckers

While not mandatory, chicken pluckers are extremely handy if you’re doing several birds at once. Pluckers come in many forms, from handheld models that fit into a drill to large models that’ll pluck several chickens at once, but they all work similarly. Rubber fingers spin at high speeds to pull the feathers from the chicken carcass. You can find plans to build your own online, or order a complete system from sources like Meyer Hatchery.

Cooler With Ice

If you process during warm weather, a clean cooler with ice is handy for storing

C. Using an extremely sharp knife to pass cleanly through the feathers, sever the main artery that runs down either side of the neck just below the ear, avoiding the windpipe. This allows the chicken to bleed out quickly and humanely.

D. A pair of sharp garden shears makes the process of separating the head from the carcass easier and faster than using a knife. Leave as much neck attached to the carcass as possible for use in stocks or soups.

PHOTOS BY CHERYL PENDLEY

E.

F.

"Once you cook and serve chickens you've raised and processed at home, you'll be amazed at how much more flavor they have than commercially raised and processed chickens."

E. A large pot and an outdoor gas burner work well for heating the water to the proper scalding temperature. Adjust the flame height to maintain the proper temperature throughout the entire process.

F. Once the chicken has been dipped into the scalding tank, test the feathers to make sure they pull easily from the bird. If they resist, simply dip the bird back into the hot water for a few more seconds. Pull the feathers against the grain of the quill, using a snapping motion to tug them cleanly from the skin.

PHOTOS BY CHERYL PENDLEY

cleaned birds while you work on the rest. Keeping the birds cold prevents spoilage and insect contamination, plus it improves the finished product's flavor.

Storage

If you plan on freezing your chicken for long-term storage, there are various ways to protect it from freezer burn. The traditional method of wrapping tightly in freezer paper and sealing with tape will keep the bird tasting fresh for up to three months in the freezer. Wrapping tightly in plastic wrap before wrapping in freezer paper will extend storage life by a couple more months.

Another method is to use a zip-top freezer storage bag. A good trick when using this method is to place the chicken in the bag, zip the top almost closed, and roll the chicken up in the bag, forcing out as much air as possible before completely zipping the bag closed. Chickens stored like this will taste fresh up to six months in the freezer.

The best method for long-term freezer storage is to use a vacuum sealer like the many models available from Weston (westonsupply.com). These sealers employ a vacuum pump to remove all of the air from around the chicken before sealing the heavyweight plastic bag with heat. Chickens stored this way will still taste fresh after 12 months or more in the freezer.

The Method

If possible, withhold food from the chickens starting the day before you plan to process. This ensures their crop will be empty, making cleaning easier. Start the process by placing the chicken headfirst into the restraining cone. This calms the chicken, and preventing


G.


H.

stress before killing keeps glycogen levels high and lactic acid low, improving both the meat's flavor and texture.

Locate the ear on the side of the chicken's head. The main artery is just below it. Using a sharp knife—dull knives don't slice through feathers well and will prevent a good cut—slice through the side of the neck, severing the artery but not the windpipe. Be prepared for a copious blood flow to spurt from the cut, causing almost instantaneous death and quickly draining the carcass, which improves the chicken's flavor. Some home processors cut both sides of the neck to further speed the process.

Once the chicken has bled out, remove the carcass from the restraining cone and, while holding by the feet, dip it into the hot-water pot. I prefer to dip for three seconds, remove for three seconds, then dip again. Swirl the chicken around in the water so it completely penetrates the feathers.

Grab a handful of feathers and use a quick, backwards tug to remove them. If the feathers still hold tightly, dip the chicken again. Once the feathers begin to pull freely from the carcass, begin the hand-plucking process, or insert the chicken into the plucker. Clean all feathers from the carcass. A small propane torch can sear remaining hair-like feathers from the carcass.

Once the skin is cleaned of feathers, use the shears to remove the head from the carcass (this step can also be done before scalding). Cut the neck near the point where it meets the head to keep as much neck attached to the carcass as possible.

Next, remove the entrails. From the front of the chicken, make a slice in the skin around the neck. Reach in to remove the crop and windpipe, cutting them once you get them pulled free from the carcass. Now, cut just above or below the vent, being careful to cut only the skin and not an intestine. Using your fingers, gently enlarge the hole until you're able to insert a couple of fingers into the body cavity. Rake the ribcage to loosen the heart, liver, gizzard and intestines. Pull the loosened organs out through the hole. To make sure everything is out, I like to insert the fingers of one hand through the slit in the front of the bird and the fingers of the other hand into the slit at the rear of the bird until they meet in the middle, feeling around with both to ensure nothing remains inside the body cavity.

Rinse the cleaned carcass well under running water until the body cavity is also clean. Place the finished carcass in an

G. A small, handheld torch is handy for searing away any of the fine, hair-like feathers that remain on the skin after the plucking process. Quickly pass the flame back and forth over the carcass, taking care not to remain in one spot long enough to cook the skin.

H. Running water is the key to keeping chicken carcasses clean during processing. Use it to rinse loose feathers from the skin, as well as to rinse the cavity after the entrails have been removed. Clean your tools regularly to prevent contamination when switching from one part of the process to another.

PHOTOS BY CHERYL PENDLEY

Keep the cleaned birds in an ice-filled cooler until you're ready to package them. Only remove as many from the cooler at a time as you can package in a few minutes. Your goal is to keep the meat chilled at all times once the birds are processed.

PHOTOS BY CHERYL PENDLEY

"Considered a delicacy throughout the Far East, chicken feet aren't as common on the American dinner table."

ice-filled cooler for short-term storage while you work on the next chicken.

Move the process indoors for the final wrapping of the finished chickens. Give the cleaned carcass one more thorough check to remove any residual feathers or other debris. If the skin is wet from the cooler, use a clean cloth or paper towels to pat it dry. Pack the finished bird using the storage method of your choice and freeze.

The Reward

Once you cook and serve chickens you've raised and processed at home, you'll be amazed by how much more flavor they have than commercially raised and processed chickens. Commercial birds are kept indoors in a confined space and fed a grain mixture designed to make them grow as quickly as possible, resulting in a flavorless, rubbery piece of meat.

Homegrown chickens enjoy a varied diet and get to move around the yard to find it. They also take longer to reach processing size than commercial chickens. These conditions allow the chicken to reach its peak, with a depth of flavor not found at the supermarket. Couple this with the satisfaction of providing your own meat and the knowledge that the food you're serving your family is additive- and chemical-free, and you'll quickly see why raising and processing your own chickens just makes sense. MP

USE IT ALL

If you're going through the trouble to raise and process your own chickens, it stands to reason that you want to use as much of the birds as possible. While American palates normally include only the basic cuts and maybe livers, gizzards and hearts, other countries around the world use nearly everything from the bird. Try these parts to expand your culinary horizons and make the most of your hard work.

HEART, LIVERS AND GIZZARDS: Save these bits when processing your birds. The standard method of cooking all three is to dredge them in flour and pan fry. For an added treat, make country-style gravy from the stuck-on pieces left in the pan after frying and serve it over the fried meat.

While frying is probably the most common method, chicken livers, in particular, add tons of flavor when finely chopped or ground and added to soups, stews and other dishes. If you have several, try a chicken-liver pâté to spread on toast or crackers.

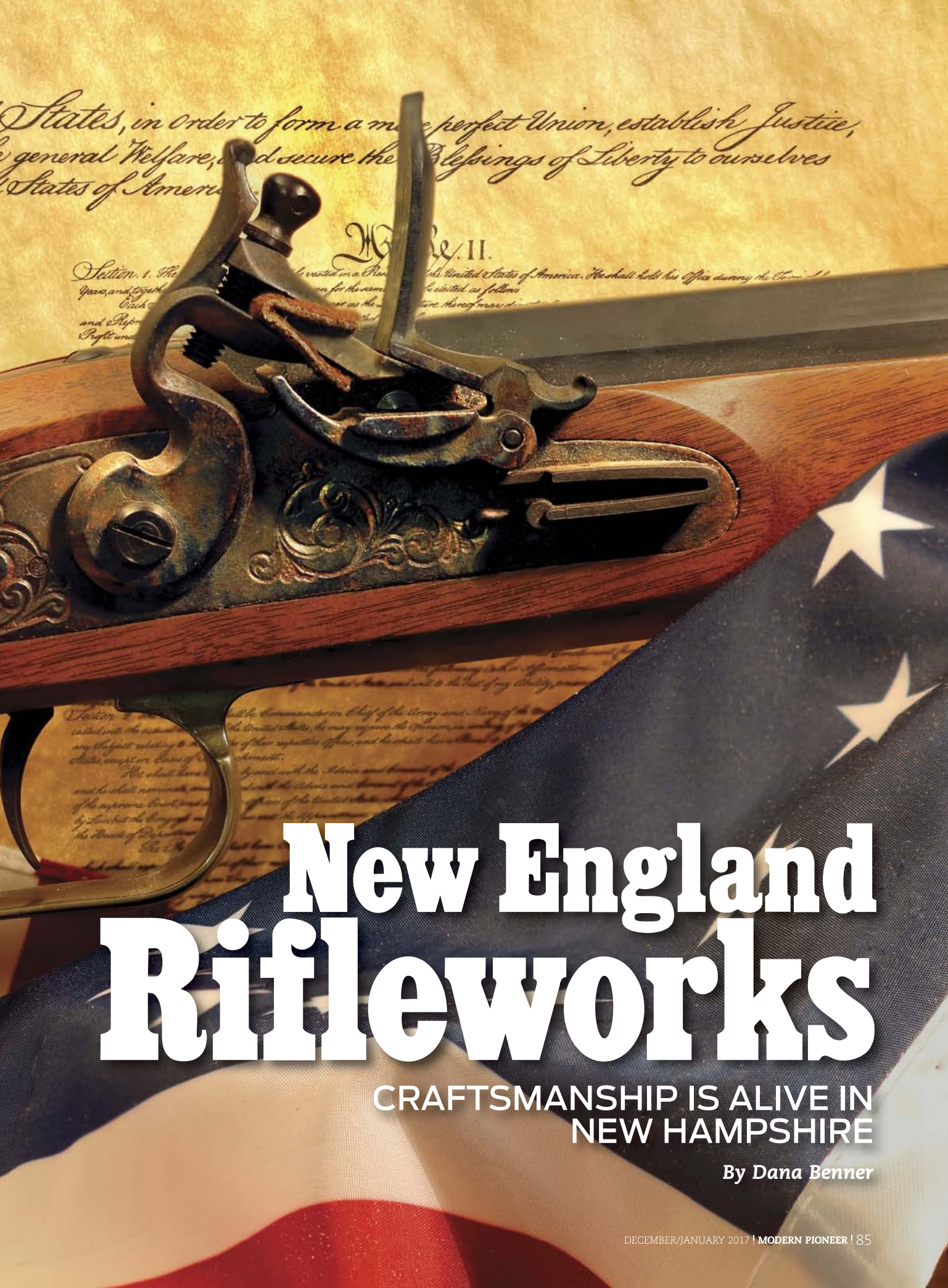
FEET: Considered a delicacy throughout the Far East, chicken feet aren't as common on the American dinner table. To clean the feet, simply soak in a water-and-white-vinegar solution for five to 10 minutes. Rinse them well under running water, and add them to a pot of boiling water for 20-30 seconds to scald the skin. Transfer the feet from the boiling water to a bowl of ice water to stop the cooking process and loosen the skin. Peel the skin from the feet, and remove the toenails by bending them upwards until they pop off.

Add the cooked feet to a simmering pot of water for bone broth, use them in a pot of chicken soup for extra flavor, or stir fry them in a hot wok with your favorite vegetables. Serve with a bit of soy sauce.

CHICKEN NECKS: If you saved as much of the neck as possible while processing your chicken, remove it and use it to make chicken stock or chicken soup. The neck contains lots of cartilage and connective tissue that breaks down to add an enormous amount of chicken flavor to the broth.

CHICKEN HEADS: I'll admit, this last one is really out there, but folks in Africa, Mexico and Thailand absolutely love them. The preferred cooking methods for chicken heads are roasting on a spit over an open fire or dipping in batter and deep frying.


We the People
of the United
insure domestic Tranquility, provide for the common defence, promote the
and our Posterity, do ordain and establish this Constitution for the United
Article. I.



New England Rifleworks

CRAFTSMANSHIP IS ALIVE IN NEW HAMPSHIRE

By Dana Benner

Flintlock Anatomy

LOCK
The lock refers to a mechanical device. In this case, it's a device that, when the trigger is pulled, sets forth a motion where gunpowder lights, causing an explosion that pushes a projectile out of the barrel.

STOCK
The stock is the wooden part of the firearm. In some cases the stock would run the barrel's length. In others, it would only go halfway.

BARREL
This is the metal tube that the bullet or round ball travels through.

FRIZZEN
This part covers the pan and is the steel that the flint strikes, creating the spark that ignites the powder.

PAN
The shallow depression that holds the priming charge is called the pan. The spark created from the flint striking the frizzen ignites the powder in the pan, sending fire through a small hole in the barrel, which then ignites the main charge.

"There are craftsmen today who're working to resuscitate the art of traditional flintlock-rifle production."

Nothing changed the American landscape more than the introduction of firearms by the early European visitors to our shores. It was the firearm that made for early European settlement. It was the firearm that paved the way for westward expansion, and to this day, firearms are a major part of the American mystique. Today, the firearms industry is a big business, with manufacturers annually producing thousands of rifles, shotguns and handguns. This wasn't the case during the American Revolution.

In the 1600s, British, French and Dutch firearms could be found throughout the country's northeast, southeast and mid-Atlantic regions and into Canada. Many of these firearms started out as military weapons and as trade items for native people and settlers. Besides the European-made arms, there were also craftsmen here in the colonies building the first American-made firearms. While many of the European firearms were the standard mass-produced (relatively speaking) cookie-cutter firearms, the American-made firearms were really functional works of art. Each one was lovingly created one at a time, lock, stock and barrel. Metal parts were either made by the gunsmith himself, or by another local craftsman who specialized in that field. Stocks were made from local American hardwoods such as maple, walnut or cherry. The finished products were made to last a lifetime—or longer—of hunting and defense.

While many of those early firearms—smooth-bore and rifles—have long since disappeared due to use and abuse, there are still a few that have been lovingly cared for and passed down through the generations. Though some aren't safe to fire, they're cherished as family heirlooms and remind us of the past, a time when men and women needed good firearms for hunting and protection.

Reviving a Fading Art

There are craftsmen today who're working to resuscitate the art of traditional flintlock-rifle production. They aren't putting together rifles from kits readily available on the market. Instead, these craftspeople are making each

gun, one at a time, using the same techniques past gunsmiths used, treating each one as the functional work of art it is. One of those craftsmen is George Morrison, owner of New England Rifleworks in Mason, New Hampshire.

I recently met with Morrison at his nondescript shop in Mason. His shop location isn't denoted by signage or big fancy ads. Business comes to him mostly by word of mouth, because he excels at his craft.

When he opened the door, the sight that greeted me was simply amazing. On the back wall were four flintlock rifles, and they were beautiful. Morrison quickly shared that these weren't kit guns or replicas. He'd made each one from scratch, and the end products are known as "contemporary originals." They're called this because, as in the colonial days, each one is made individually and reflects the individual gun maker's style. No two rifles are ever alike; each one is truly one of a kind.

Morrison makes rifles to order, and he specializes in making guns that represent those used by the working man. He doesn't deal with cap-and-ball or modern inline rifles. He's strictly a flintlock builder. He also noted that he doesn't make firearms for display purposes only, commonly called "wall hangers." If he wouldn't use it, then he won't sell it to you.

It was clear that Morrison, like the old master gun makers, is passionate about his craft. He has a wealth of historical knowledge, which is necessary in order to make historically correct firearms.

Details and Differences

While visiting Morrison, I mistakenly called one of the rifles in his shop a Kentucky rifle. It actually was a Tennessee Mountain rifle. Morrison said the two rifles are often confused, and he proceeded to explain the differences. I learned that each area of the country, from Kentucky, Tennessee, Pennsylvania to numerous places in New England, made their own style of rifle. While some of these rifles looked similar, each one was unique.

To further confuse things, even rifles made in the same area—Pennsylvania, for instance—were different depending on the county in which they were made. Every county seemed to have its own gun maker, and each gun maker did things differently. Some guns had double triggers, while others had one. Woods used to build stocks varied, as did hardware, and the list of variations was long. Morrison knows these differences and makes sure every gun he builds correctly exhibits them. Because he doesn't make replicas, his guns may have period-correct differences, too.

All of the rifles on Morrison's wall featured handcrafted stocks made of sugar maple, and while this wood is common in many areas, it isn't in others. The type of wood used also

(top, left) **Barrels are fitted to the stocks.**

(top, center) **Rough-cut wood is ready for use as rifle stocks.**

(top, right) **The stock for a .32-caliber squirrel rifle is marked and ready for shaving.**

depends on the type of firearm being made.

Another small, yet very important detail involves the lock. In pre-American-Revolution rifles, the lock was round-faced. After the American Revolution, the round-faced lock was replaced by the more popular flat-faced lock. This is something I wouldn't have known, or noticed, but a good gun maker knows it. It's this attention to detail that Morrison incorporates into each and every firearm he makes.

To show me the differences, Morrison pulled two rifles from the wall. The first one was a big rifle. It had a curly maple stock and a round-faced lock. The stock's butt end wasn't curved; rather, it was quite flat. There was also a patch box built into the side of the stock. All of this indicated it was meant to represent a pre-American-Revolution rifle, about the time of the French and Indian War. The second rifle was smaller and lighter. It had a walnut stock, the lock was flat, and there was no patch box or anything else ornate decorating it. The stock butt had that trademark curve to it. Unlike the first gun, which was a .50 caliber or better, this gun was a .32 caliber. All of this indicated it was meant to represent a firearm from the late-1700s to early-1800s.

As conditions changed in America, so did the rifles. Prior to the American Revolution, lead and powder were abundant. When the war started, those items dwindled, and what was available was very expensive. American gun makers stopped producing big-bore guns, and began making smaller ones, mainly in .32 and .40 calibers. These smaller rounds used less lead and powder, with the .32 caliber being the squirrel rifle we all hear about. Gun makers didn't begin building the heavier guns until people started moving west where buffalo and grizzly bears roamed.

Historically Correct

What does it take to be a historically correct gun maker in addition to an intense knowledge of the craft and history? Morrison told me that it takes time, dedication and a true love for the craft. This doesn't come easily. It takes a great deal of time to make each gun, from carving the stock from a solid block of wood to forging the hardware. Then, there's learning and researching. Morrison has worked with and learned from many of the country's top gun makers. He also spends countless hours visiting museums and special collections, and poring over innumerable printed materials to ensure the rifles he makes are correct.

Making these firearms has been Morrison's passion since 1970. Since then, he's learned to hand-forge all of the iron on each firearm,

from the period-correct screws to the patch-box hinges. The only exceptions to this are the locks and barrels. Though he could forge these pieces, he prefers to buy them from exceptional American metalsmiths, just as gun makers of old did. Besides the iron work, all of the pewter and brass pieces are made in-house as well. Morrison told me it takes approximately 200 hours to complete one rifle.

During my visit, I commented that Morrison's rifles were so beautiful that I'd be afraid to use them, and that I'd be content to admire them as the works of art they are. Morrison stressed that all of his flintlock rifles are made to be used. In fact, he uses one to hunt deer every year in New Hampshire. It's a great compliment to the craftsman to see customers enjoying and using his creations for their intended purpose.

To emphasize his point, Morrison took down the Appalachian-Mountain-style squirrel rifle, led me out back, set up a target, loaded the rifle, and we began to shoot. I must admit that my first shot was way off. I flinched when I saw the flash from the pan. Morrison said this is typical, and that most modern shooters struggle with flintlocks. He reloaded and gave me another shot. This time, I focused on shooting and forgot about the flash. My shot was right on the money.

If you're one of the many hunters who enjoy hunting with traditional firearms, then you owe it to yourself to check out the rifles at New England Rifleworks. While Morrison has rifles on hand for sale, he'll also custom-build a flintlock rifle to your specific needs. You can reach George Morrison at theflintlockman@yahoo.com. MP

(above) **George Morrison shoots the squirrel rifle.**

(opposite, top) **Master gun maker George Morrison built this Appalachian squirrel rifle. Notice the basic hardware.**

(opposite, below) **This is a hand-forged butt plate and patch box on a New-England-style rifle representing the pre-American Revolution period.**

Historical Phrases

Modern day American English is full of phrases that date back to America's establishment. Here are just a few.

GOING OFF HALF-COCKED: Today, this refers to someone overreacting to something before learning all of the facts. It also refers back to a time when black-powder firearms were the norm. A flintlock's half-cock position is the "safety." If the firearm isn't working properly, the gun won't fire, even if the trigger is pulled. If not, the firearm could go off prematurely.

FLASH IN THE PAN: This is something that happens suddenly, but nothing significant comes from it. It refers to when someone shoots a flintlock and the primer powder in the pan ignites, but the main charge doesn't go off.

KENTUCKY WINDAGE: This refers to shooting a firearm and adjusting for the shot pattern. It goes back to a time when firearms sights weren't adjustable. If the rifle was shooting high and to the right, the shooter would hold low and left of center.

TO CLOSE RANKS: Today this means working together as a unified front. It harkens back to the days when muskets were in general use. It's a military move when troops would stand shoulder to shoulder to put as many rounds in one spot as possible.

PRE-OWNED FIREARMS

IN THE MARKET FOR A GUN? CONSIDER BUYING USED

By Thomas C. Tabor

I'm always intrigued by new firearms that appear on the market, but a quick glance at their price tags often redirects my attention to the used-gun rack. Secondhand firearms frequently come with lower price tags, and many times they feature better quality and craftsmanship than their brand-new, higher-priced counterparts.

In fact, some of the finest guns I've ever owned were purchased second hand or, in some instances, even third or fourth hand. But buying used does involve risks. In order to avoid a bad case of buyer's remorse, you must approach these purchases cautiously and knowledgeably.

COLLECTABLES AND ANTIQUE FIREARMS

Antique-firearm collectors prefer their guns to be totally original. If a stock has been refinished or the metal reblued, it can severely jeopardize the gun's value as a collectable. Despite your overpowering urge to spiffy up an old rifle or shotgun's appearance, consider the gun's desirability as a collectable item before you destroy genuine beauty or value. Even simple, although irreversible, alterations can sometimes reduce the collectable value by as much as 50% or more.

On the other hand, if your interest lies only in having a serviceable rifle or shotgun for hunting and target shooting, modifications to better enhance a gun's appearance or improve its performance can actually add value to the piece in question.

Just because a firearm is older doesn't make it inferior to one of the current models. In fact, it might be better than new. The two side-by-side shotguns on the left are actually brand new (left to right): CZ Sharptail 20-gauge and Beretta 486 Parallelo 20-gauge. The 12-gauge A.H. Fox shotgun on the far right was built nearly a century ago and appears new and is in pristine condition.

Cosmetic vs. Serious

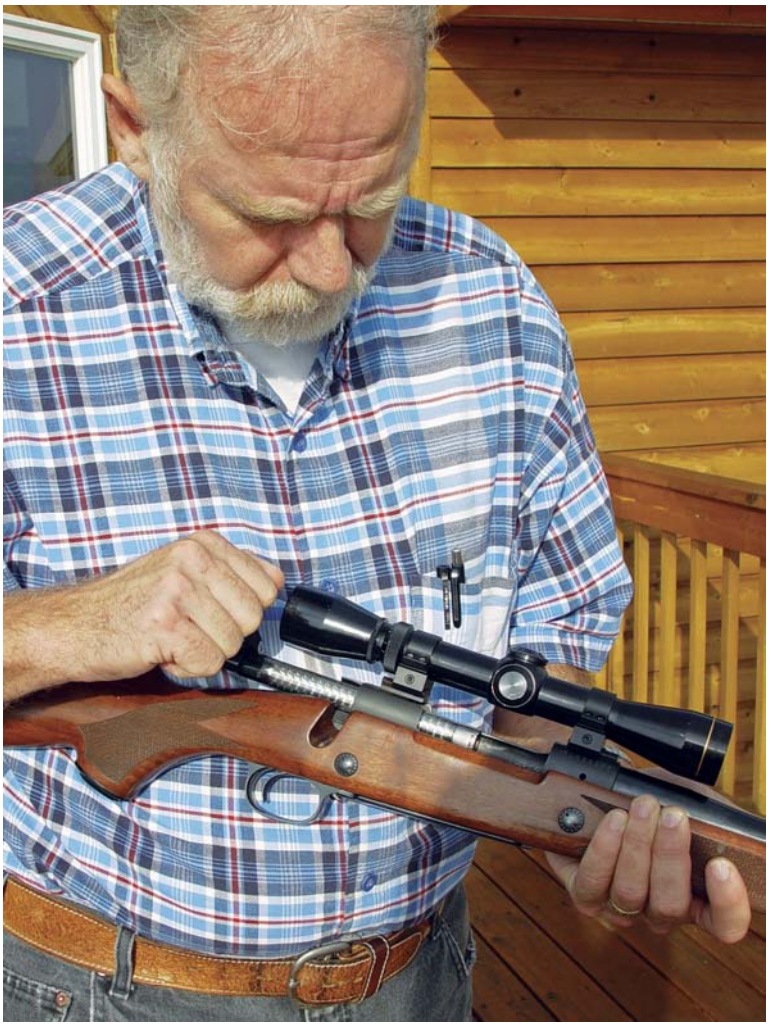
Seldom do pre-owned firearms come to the marketplace in the same pristine condition they did when new. In this case, a prospective buyer must inspect with a trained eye, separating cosmetic blemishes from functional shortfalls. While no one likes stock or bluing wear, sometimes those problems are easily remedied and aren't necessarily grounds for forgoing a purchase. In many cases, this type of wear is the result of the gun being handled and carried a great deal in the field, in a vehicle or, in the case of a handgun, in a holster. Of course, these wear signs don't always indicate actual shooting use, and in some cases, minor cosmetic wear may actually grant you bargaining power when negotiating a price.

Consider this example: Several years ago I purchased a used Smith & Wesson .44 Magnum revolver that showed a significant amount of holster wear from a neighbor. This particular gun belonged to a retired Forestry Service worker we affectionately named Ol' Scotty. Because Scotty spent a substantial amount of time working in Montana's wilderness areas, he bought the .44 as a hedge against possible encounters with angry grizzly bears. Even though the gun showed bluing wear from being carried afield, I was confident it hadn't cycled a full box of ammunition. In fact, I'm fairly certain that the partial box of ammo Scotty threw in with the purchase was the original box he purchased when the gun was new. The still-remaining price sticker on the box would certainly support that theory given that it was one-fourth of what a box of shells costs today. But by knowing Ol' Scotty and understanding his habits, I observed subtle clues that helped me determine how much the .44 had been fired. Nevertheless, I still ran the gun through some basic mechanical checks before agreeing to buy it.

If you want to retouch a firearm's bluing wear, consider using Super Blue Liquid Gun Blue, a product designed specifically for that purpose. Offered by Birchwood Casey, it's easily applied and available in many sporting-goods stores.

While some bluing wear may be only cosmetic and not a valid sign of shooting use, a major exception is when it appears directly at the end of the muzzle or the barrel's crown. When a cartridge is fired, an inferno follows the bullet out the barrel. Over time, this will eat away bluing around the bore opening. A complete lack of bluing in this area could, in some instances, indicate that the barrel has seen several hundred rounds.

While inspecting the bluing in this area, carefully look for nicks or dings around the



Slowly working the action of a bolt-action rifle can tell you a great deal about its functionality. Does the action open and close smoothly, and are there any obvious rub marks on the bolt or receiver? If so, these could be concerns.

A SOURCE OF REPLACEMENT PARTS

Used guns commonly need replacement parts. If you're lucky, the gun will still be in production and parts will be readily available directly from the manufacturer. If not, you'll be forced to look elsewhere for a fix. Certain parts—sights, recoil pads, sling swivels, etc.—are fairly generic, and aftermarket suppliers often stock them. But, if all else fails, Numrich Gun Parts Corporation is a great parts supplier, offering possibly the world's largest supply of new and used gun parts. While it doesn't have every part ever produced, it certainly has a broad selection that covers a wide variety of guns, even quite old ones. The company's current catalog, #37, is available online for $25.95, a price well worth it if you often need replacement parts. You can also use its online service to inquire about prices and availability of specific parts.

NUMRICH GUN PARTS CORPORATION

226 Williams Lane
Kingston, NY 12401
(866) 686-7424 or (845) 679-2417
gunpartscorp.com

Unique characteristics like this skeleton buttplate can add to a firearm's collectable value.

Damascus barrels, while elegant and quite attractive, aren't considered safe for use with modern ammunition. They were designed for shooting black powder, which generally produces lower pressure levels.

Rust deposits like this often indicate a firearm hasn't been cared for properly.

muzzle opening. Any irregularities here could adversely affect and disrupt bullet flight—the consistency and uniformity of the bullet's spin—which diminishes accuracy. If any irregularities are found, they should be eliminated. Generally, that means the barrel will need to be recrowned. Even though this will require a gunsmith's services, it isn't a difficult job for an expert.

Minor finish wear on a stock can usually be corrected with a light application of Tru-Oil. Also produced by Birchwood Casey, it applies easily with your fingertip or a cloth. I work it into the damaged area, feathering it out to match the original finish.

Problems to be Avoided

A complete reblue job performed by a gunsmith can be costly. When it comes to double barrels and, in some cases, even single-barrel shotguns with ribbed barrels, it can be doubly expensive. Manufacturers sometimes assemble their firearms using soft solder. When these firearms are exposed to the extreme temperatures associated with the normal hot-bluing process, the parts can separate. For these firearms, the only viable bluing option is to have them rust blued, which is expensive and time-consuming.

Rust and/or corrosion often indicate that the firearm hasn't been properly cared for, and are most often reasons enough to walk away from a purchase. If the bore has been pitted, it renders the barrel essentially worthless and potentially dangerous to shoot. That's why I always thoroughly check the bore of every firearm I'm considering purchasing. If the bore is soiled, it must be cleaned before completing this evaluation.

Some rifle calibers are clearly harder on barrels than others. Calibers such as the .264 Win. Mag., 22-250, 220 Swift, many Weatherby calibers and others that send their bullets out the muzzle at high velocities can sometimes be problematic for a used-gun purchaser. Typically, the damage associated with these ultra-fast cartridges appears in the throat of the chamber, and without using a borescope to thoroughly evaluate, that damage can easily go undetected. That's not to say these calibers shouldn't be considered for purchase, but whenever possible, it's always best to understand how much actual shooting the firearm in question has been exposed to. While an average hunter would most likely never shoot out a barrel in his or her lifetime, an active prairie-dog shooter firing his favorite 220 Swift, or a target shooter, may destroy several barrels within only a few years.

Recoil Pads and Stock-Length Changes

Many used shoulder firearms have had their recoil pads or butt plates replaced. Sometimes, that can be responsible for changing the stock's length of pull. In other instances, the stock may have been shortened to accommodate a youngster. Stock replacements, even the aftermarket composite versions, can be expensive. But, if the changes aren't too drastic, sometimes the proper length can be restored either by adding a thicker or thinner recoil pad, or adding spacers between the buttstock and the pad to lengthen it.

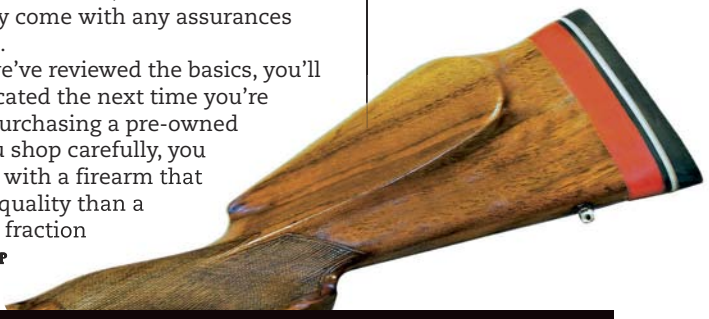
After making absolutely sure the gun is unloaded, an easy way to determine whether a stock is of proper length is to first place it against the inside of your forearm. In this position, your index finger should make contact with the trigger at the crease in the first joint; the butt should be tight against the inside of your elbow joint; and your entire forearm should be resting against the side of the buttstock. If all of these contact points aren't 100% correct, the stock may not fit you properly.

When evaluating a centerfire rifle, always pay particular attention to the area of the stock immediately behind the action's tang. If the stock hasn't been properly fitted, a crack sometimes forms in this area. Unchecked, it can progress until the stock needs to be replaced. This issue is primarily a problem with big bores or other hard-recoiling rifles, but it's a good idea to check every centerfire rifle to ensure its integrity. In the early stages, this problem may begin as a subtle hairline crack, which can sometimes be stopped by a gunsmith or stockmaker, but seldom does such a remedy come with any assurances or guarantees.

Now that we've reviewed the basics, you'll be better educated the next time you're considering purchasing a pre-owned firearm. If you shop carefully, you might end up with a firearm that boasts better quality than a new one for a fraction of the price. MP

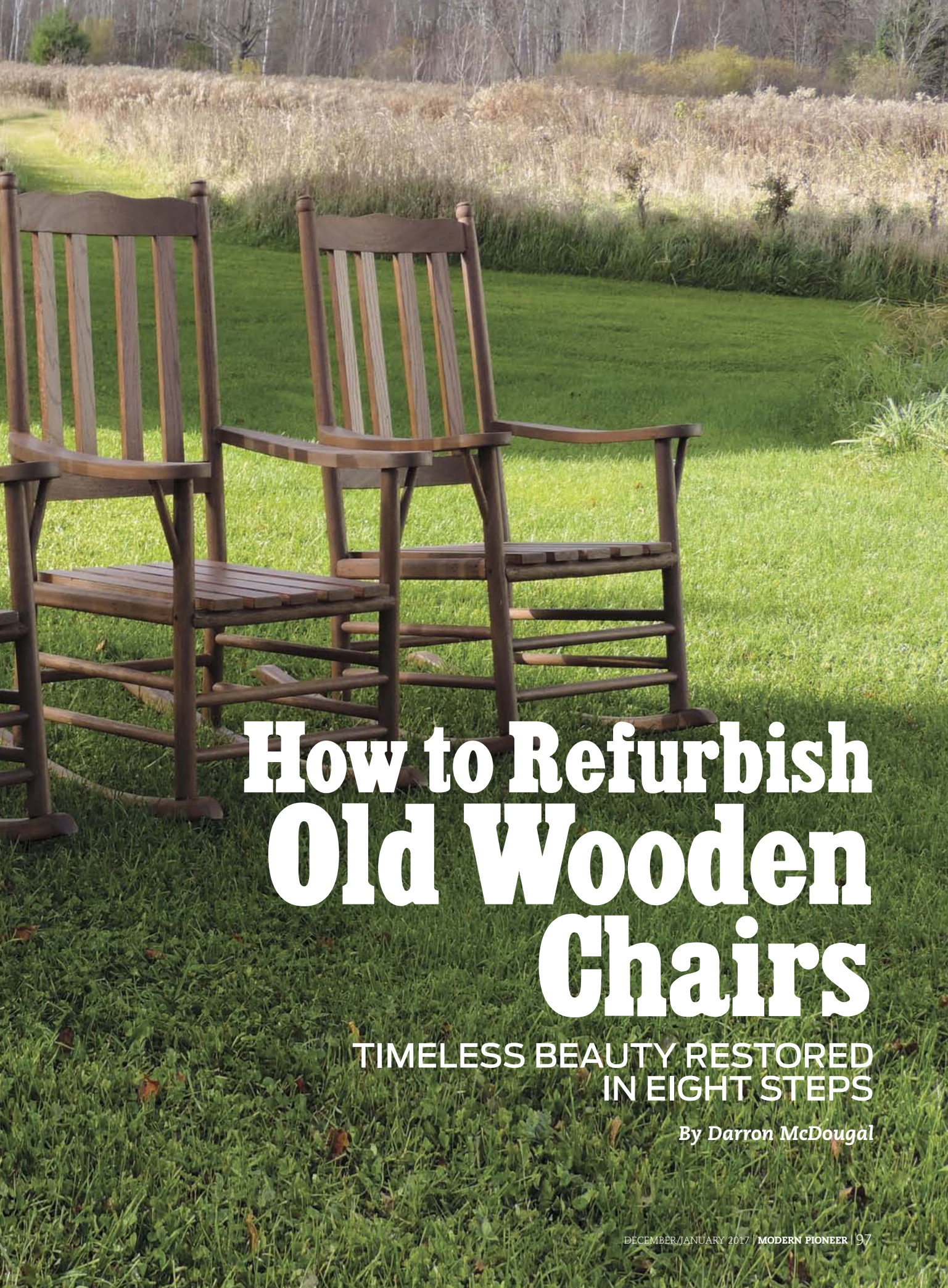
(above) **If possible, test-fire a firearm before purchasing it. This will provide you with a much better idea of the gun's condition and accuracy.**

(below) **If a stock has been shortened to accommodate a younger shooter, sometimes spacers can be used to reestablish the original length of pull. In this case, the author simply used colored Plexiglas to accomplish this.**



GUN TRADER'S GUIDE

No one is completely up to speed on the value of every firearm ever produced. Even experts who daily deal in used guns must refer to other sources when evaluating a firearm's worth. The best source for that information can be found in various gun trader's guides. Numerous publishers periodically distribute valuation books that cover firearm values based on overall condition. Often, these books are also a great source of manufacturer history and other interesting specifics.



How to Refurbish Old Wooden Chairs

TIMELESS BEAUTY RESTORED IN EIGHT STEPS

By Darron McDougal

1 Original wicker chairs before they were refurbished.

2 The wicker seats and backrests are cut away with a handsaw.

3 The author measures to determine how many oak boards are needed for the seats and backrests.

4 Loose sandpaper is used to sand the hard-to-reach areas.

5 A rotary electric sander is used to sand all easily reached surfaces.

"We loaded the chairs into our fifth-wheel camper ... eager to reinstate each chair's innate beauty we knew was underneath the ugly."

Timeworn wooden chairs are annually being retired and replaced with modern versions. The old chairs are sent to the backyard burning pile or left to occupy junk heaps, never to be sat in or enjoyed again. This scene is repeated all around the world, but what if there was another way? Fortunately, there is.

Before you junk old wooden chairs, consider this alternative. With a little TLC even the shabbiest wooden chairs can be refurbished to recapture their timeless beauty. Recently, my wife, Becca, and I acquired four shabby rocking chairs from our friends in Florida. Each chair's framework was sturdy, but the wicker seats and backrests were cracking, rendering them virtually unusable. Of course, they were on the burning pile and had already been replaced with new ones.

I first learned about the chairs while I was helping my friend prepare for the upcoming turkey-hunting season—he's a professional Osceola turkey guide. While driving between properties, I told him how my wife and I refurbish old furniture on the side. Later that day, he showed me the chairs. Most people would've seen the ugly, tattered, dully colored wood with unusable seats and backrests. Instead, I saw potential. "I know Becca and I can do something with these," I assured my friend. "They're yours if you want them," he offered.

We loaded the chairs into our fifth-wheel camper as we prepared to leave Florida a couple of weeks later, eager to reinstate each chair's innate beauty we knew was underneath the ugly. When we got settled in Wisconsin, we began discussing our plans, eventually settling on a design we both felt would embody a heritage look with the functionality of a brand-new chair. We went to work.

Step by step, let's review the refurbishing process we used to make time-tattered rocking chairs beautiful again.

1 Strip the wicker seats and backrests.

This first order of business was easy, but time-consuming. We used a hand saw to cut the wicker away from the framework, then used needle-nose pliers to remove staples and remaining wicker. The process took upwards of 45 minutes per chair. This was the easy part.

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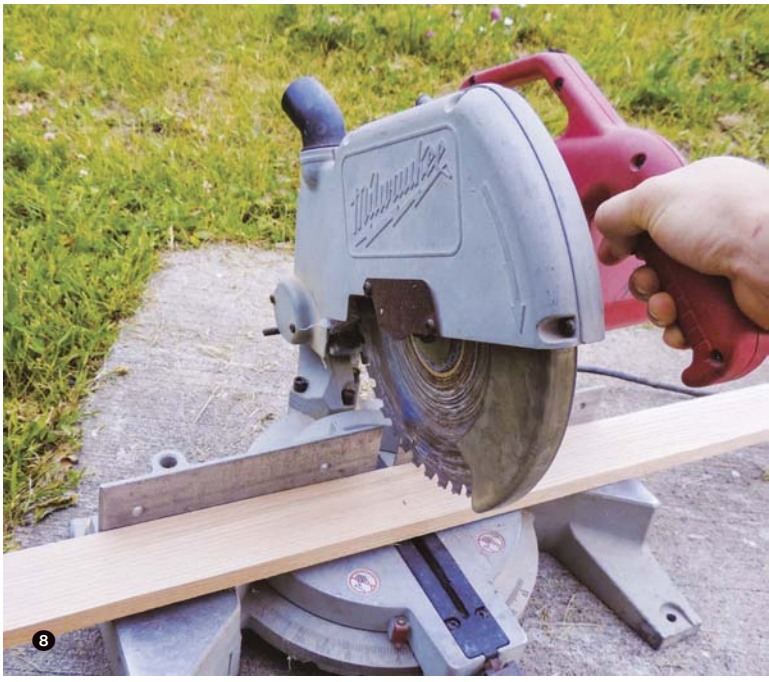

7 The oak boards are measured and marked to be cut into seat planks and backrest spindles. 8 A chop saw is used to cut the oak boards into planks and spindles. 9 The author's wife, Becca, arranges and spaces the seat planks on the chairs.

TOOL AND SUPPLY CHECKLIST

- Hand saw
- Electric rotary sander (with heavy- and fine-grit sanding pads)
- Sanding sponge and/or sandpaper
- Tape measure
- Pen or pencil
- 1x4-inch and 1x2-inch oak boards (unfinished)
- Chop saw
- Air nailer
- Staining brushes
- Deck stain

"Even the shabbiest wooden chairs, with a little TLC, can be refurbished to recapture their timeless beauty."

2 Sand the existing frame.

Next, we used an electric rotary sander—first with heavy-grit sanding pads, then finishing with fine-grit sanding pads—on all of the easily reached surfaces, and then we switched to sandpaper and a sanding sponge to hit the hard-to-reach spots. The goal was to remove the existing stain and varnish, thereby exposing the wood's original color beneath. The chairs went from an exhausted gray and brown to a light tan with obvious potential. Thorough sanding ensured our chosen stain would seep into the wood properly, so we took our time and didn't cut corners.

3 Measure for oak backrest and plank seats.

After shopping around at a local construction-supply store and discussing our options, we settled on a design that included unfinished oak boards by Mastercraft, 1x4-inch for the plank seats, 1x2-inch for the backrest spindles. Of course, we measured the frame so that we knew how many boards of each dimension to purchase. The boards and some other supplies (which we'll discuss later) cost us less than $100 dollars. We felt that was a minor expense knowing that the finished chairs would easily sell for $500 as a set.

4 Cut oak boards to length.

After returning from the construction-supply store with the oak boards, I measured and marked them, then cut each into planks and spindles using a chop saw.

5 Fit the planks and spindles into place and attach to existing frame with air nailer.

Next, I set the planks on the chair, and Becca ensured they were spaced properly, then held them in place as I nailed them to the frame with an air nailer. We did the same with the spindles, although lining them up and keeping them sturdy as I nailed proved trickier than the seat planks. Many people probably would've used wood glue to attach them, but we were aiming for stability, so I shot trim nails through the existing

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⑩ Refurbished, the rocking chairs the McDougals rescued from a burn pile offer exquisite taste, combining the functionality of new rockers with a heritage flavor.

⑪ McDougal cleans the wood prior to staining with a damp cloth.

⑫ The existing wood required two coats of stain, while the new wood required a third for ample coverage.

"... new wood will have rough spots that must be sanded away before staining. If not sanded, it won't stain properly."

horizontal backrest boards and into the spindles. When finished, the seat planks and backrest spindles were all in place and more than solid enough for normal use. Of course, the nail holes could've been patched with stainable wood putty, but they were hardly noticeable, especially once the chairs were stained and finished.

6 Sand the newly attached planks and spindles.

Inevitably, new wood will have rough spots that must be sanded away before staining. If not sanded, it won't stain properly. For this, we again used our rotary sander, going over all surfaces. Of course, the edges were rough from the chop saw, so I rounded those out with the sander, too.

7 Stain the entire chair with outdoor stain.

For our rocking chairs, we selected Ultra Advanced from Pittsburgh Paints and Stains, which combines stain and sealant in one. We went with a semi-transparent version perfect for decks, fences, siding and, of course, rocking chairs. We started with cheap stain brushes, but soon opted for a more expensive brush, which made application much easier. After one application, the chairs were left in the sun to dry before a second application. We found the original wood on the frame took stain easier than our new seats and backrests, so the new wood was hit with more stain than the original wood.

8 Enjoy!

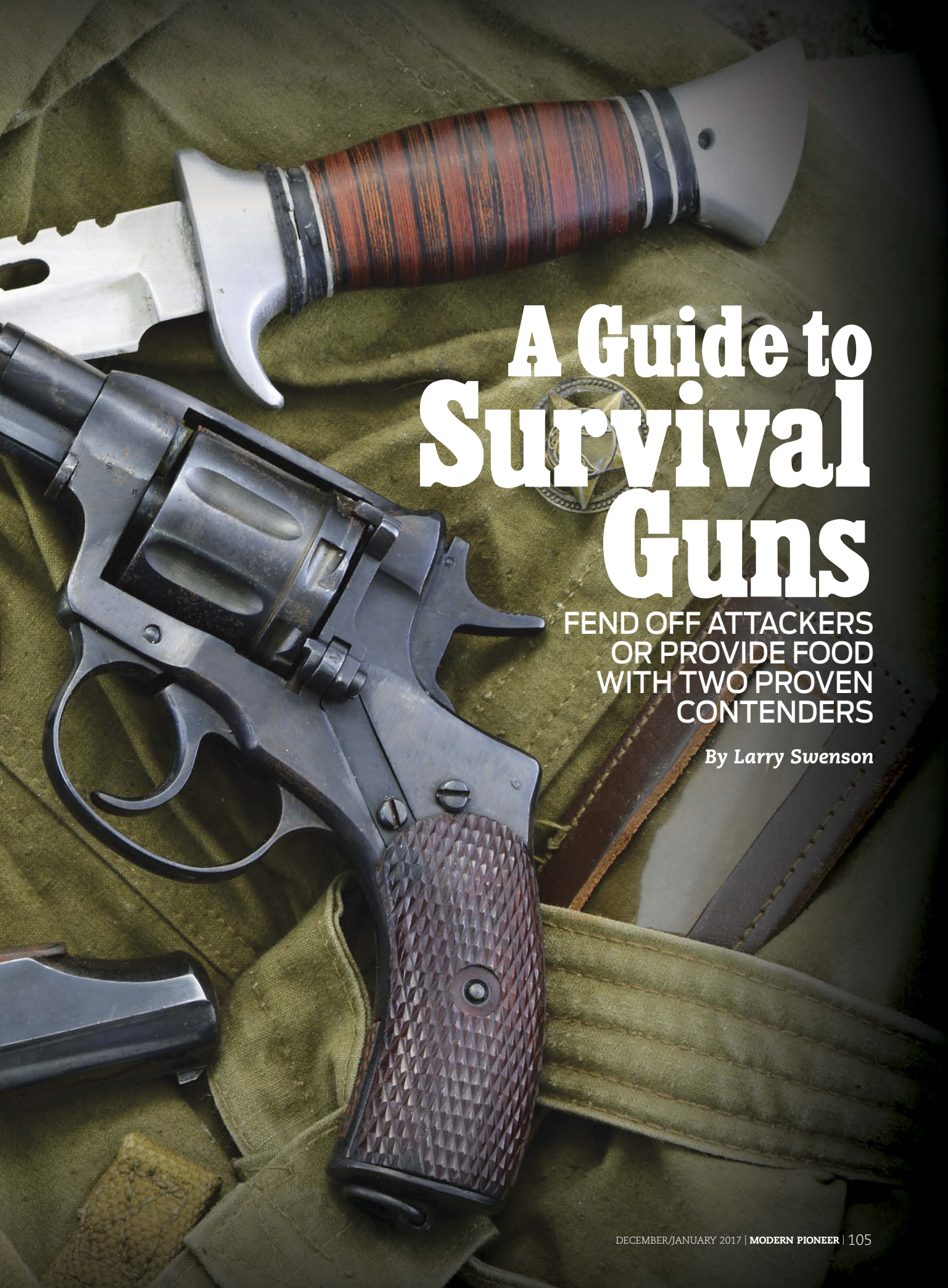
We couldn't be happier with the end results, and although we originally planned to sell the chairs, Becca likes them so well that we're keeping them, at least for the foreseeable future. My mind cannot fathom that these chairs were going to be burned. I'm glad we came to the rescue, because the old, tattered chairs got their chance to shine once again. Best of all, they offer the functionality of brand-new chairs, but with a heritage look anyone could appreciate. In my eyes, that's hard to beat. MP

AN EYE FOR VALUE

Though only amateurs, my wife and I have developed a knack for spotting valuable aged furniture most would see as an eyesore. Besides the chairs described in the article, which would sell for at least $500 now that all four are refurbished, another item we encountered was an 1800's table and chairs. The big round table was obviously made from hardwood, but the gorgeous wood had been painted with a glossy John-Deer-green paint. To the untrained eye, it was a worthless piece that had been pitched into a friend's junk heap.

I immediately saw the opportunity at hand. We sanded every inch of the table and chairs until the beautiful wood underneath was exposed. It was then I realized that, though stain would restore the items to their natural beauty, we would instead paint them off-white for an antique feel. I brushed dark stain along the tabletop planks and in cracks and corners, then wiped most of it away with a cloth to give the items a distressed look.

When all was said and done, we sold the set within a week for $650. I'm sure we could've priced it even higher. Live and learn. Regardless, we'd taken someone's trash and made it another's treasure.



A Guide to Survival Guns

FEND OFF ATTACKERS OR PROVIDE FOOD WITH TWO PROVEN CONTENDERS

By Larry Swenson

A good survival gun is a necessity for anyone traveling the backwoods or wilderness. Always be aware of your surroundings; it pays to be prepared.

Anyone hiking our modern trails, whether long-range backpacking in the Rocky Mountains or the northland's expansive pine forests, has access to history's best survival and self-defense guns. But, even though we have access to the best, there are survival guns specially suited to various situations, depending on what you're doing and where you're going.

History

Two self-defense guns were used in the mid-1700s. One was the blunderbuss, which had a 12.5-inch flared-muzzle barrel that was muzzle-loaded with shot or metal objects; it was a short-range shotgun. The other was the British Duckfoot pistol, which had four barrels—positioned at various angles—that discharged simultaneously. Ship captains used this gun to dissuade mutineers, and prison wardens deployed it when riots broke out.

A survival gun is used for much more than harvesting game for food during an unplanned stay in the woods. It should be capable of protecting the person carrying it from attacks by animals or humans.

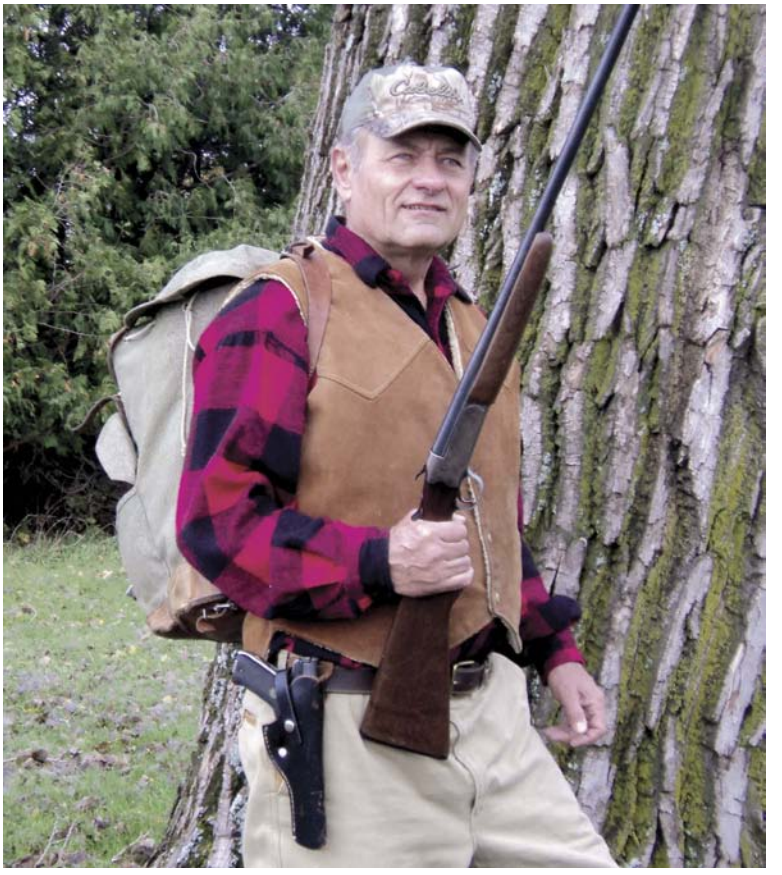
Personal

My personal concealed-carry gun is a Glock Model 32. Another side arm I've carried while hunting elk with a muzzleloader in the Rockies is a Ruger Bisley with heavy .45 Colt hand loads. This heavy gun offers security in the mountains where I encounter sign from cougars and black bears while walking 2 to 3 miles back to my truck at dusk after a day of hunting. Remember, a muzzleloader is a one-shot proposition when under attack. I don't care to trust my odds to that one shot, especially when I must act instinctively.

While hunting big game south of Glenwood Springs, Colorado, at McClure Pass, I've used established hiking trails to access remote hunting areas. I've met individuals and groups hiking these trails, which, in many instances, stretch for more than 30 miles. These people may be camping in the wilderness for two or three nights, and they need a self-defense plan in order to survive an unforeseen attack from man or beast.

Should a legitimate hiker or camper encounter other hikers who seem out of place or who pay inappropriate attention, they should move 50 yards or farther off the trail, not allowing suspicious people to get too close. Then, it's up to them to reveal their intentions, giving the good guy(s) time to react.

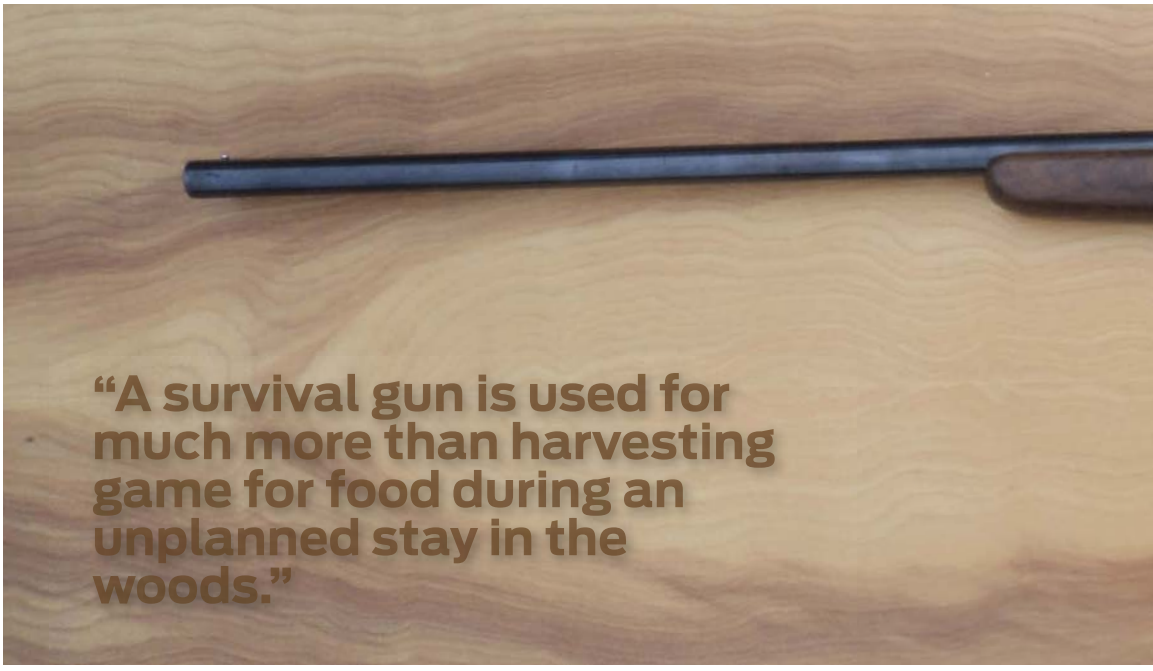
I recently read about an incident in *Outdoor News* (Vol. 49, No. 26, pg. 11) that took place in Colorado where a cougar had grasped a child



(above) **Though some may be surprised by his choice, the author prefers a breakdown 20-gauge shotgun as a survival gun. Even mediocre marksmen can snipe small game for food, and they can also fend off carnivores and humans with harmful intentions.** *(below)* **One reason author Larry Swenson prefers a 20-gauge breakdown shotgun is because it can be disassembled for compact carrying, yet quickly reassembled and loaded in time of need.**

SURVIVAL GUN PRICES

My personal survival picks, the Ruger semi-automatic .22 and the 20-gauge single-shot breakdown, can both be bought used for about $200 each or less. Currently, a new Ruger .22 MK III with a 6-inch tapered barrel has a $350 MSRP. A new 20-gauge single-shot breakdown, depending on make and model, is slightly more than $200 MSRP (prices via Sheels Sporting Goods, Mankato, Minnesota).



by the head. The child's mother was able to pry the cat's jaws loose, but had the mother or someone nearby been armed with even a .22-caliber handgun, one strategically placed shot—with the child's location and safety in mind—would've ended the struggle instantly. If you were questioning it earlier, now you can see how beneficial a survival gun can be in desperate times.

Usefulness

The opinions I'm presenting here apply little to the hunter toting a .30-06, but rather to the backpack hiker or hunters toting a primitive weapon as a means of harvest.

Thugs target hikers—especially female hikers—in remote areas where a 911 call will do little good. You must defend yourself, and in order to do so effectively, here are my two top picks for surviving dangerous wilderness encounters.

My Choices

My first choice is unconventional and may surprise some: a 20-gauge single-shot breakdown shotgun. This is an excellent defense gun when loaded with factory No. 3 buckshot, both for humans and attacks by large animals.

Should you be searching for game for the cooking pot, No. 4 birdshot for rabbit, squirrel or ruffed grouse performs admirably. The beauty is you need not be a crack shot to be effective. This gun can be broken down into three pieces and stuffed into a backpack along the sides of a rolled-up sleeping bag. Should a dangerous area appear on the trail ahead, the 20-gauge can be quickly assembled and loaded. This is a survival gun in every sense of the word: It's lightweight, fairly compact and highly effective with the various shot loads available. A long gun in-hand sends a message to would-be human attackers that the carrier is ready and confident.

My second choice is a longtime standby I bought in the late-'60s when I was in high school. It's a semi-automatic Ruger .22 Standard 6. Today's equivalent is identified as MK I, MK II or MK III. Its reliability rivals the foolproof revolver. In nearly 50 years, I recall only three jams.

The Ruger isn't a lightweight handgun, and with its 6-inch barrel, it's not compact, either. But, its accuracy and reliability are outstanding. A handgun is all but useless if you can't hit a flock of barns or a bull in the butt at 10 paces, as those adages go. I feel confident I can kill a sitting rabbit at 15 yards 80% of the time with my Ruger .22, and the same sitting rabbit 60% of the time at 35 yards.

Triggers and Semi-Automatics

Sometimes, gun makers and writers hype new handguns to increase sales. Personally, I'm not fond of the double-action-only (DAO) semi-automatic pistols. DAO means the striker or internal hammer must be cocked by the trigger being pulled all the way back until the striker is released to hit the firing pin. This trigger pressure is usually 10 pounds or greater, which greatly diminishes accuracy. A 3- to 5-pound trigger pull is a better choice for most shooters.

World-renowned defensive-handgun instructor Massad Ayoob, when discussing triggers in the May 2016 issue of *Combat*

Handguns (pg. 11), was quoted as saying, "Many thousands of my students have heard me say that trigger pull is the heart of the beast." He continues to say that trigger pull isn't the only consideration when choosing a handgun, but it is an important factor.

Today, a good selection of fly-weight snubbie revolvers exists. Many have external hammers that can be cocked for single action, but also have double-action capability. These guns have the best reliability against malfunction. However, one such gun fails badly for accurate shooting.

In a review article, "Tackle Box 22s," penned by gun writer Clair Rees, in the May 2016 issue of *Combat Handguns* (pg. 23-28) four different 22 revolvers are discussed, one of which is the Ruger LCR. This gun is the only one without an external hammer and is a DAO gun. Rees says, "This double-action-only mode makes target-grade groups difficult."

Describing his range tests, he said, "I had trouble firing 15-yard five-shot groups that grouped tightly enough for downing small game."

I rate Ruger handguns highly, as they're some of the industry's finest. But, the DAO LCR .22 is one to avoid, unless shooting at 5 yards or less. Survival guns must be accurate and effective for the average shooter at 25 yards and beyond. Remember Ayoob's statement, "The trigger is the heart of the beast."

Revolvers

The revolver is close to 100% reliable. Two downsides are that they usually have a reduced round capacity compared to clip-fed semi-automatics, and the decibel level is too high for shooters who aren't wearing hearing protection.

In my teens and twenties, I shot a lot of .22 and .357-magnum revolvers without hearing protection. This was a mistake, and today, I suffer from hearing loss because of it. In trail-hiking or other backwoods situations, few people carry hearing protection. A semi-automatic pistol is much easier on the shooter's ears should shots be fired without hearing protection. When revolvers are fired, gases escape between the cylinder and the barrel. This area is called cylinder gap. A significant amount of shot report escapes out the sides. The semi-automatic expels noise forward, which is much easier on the shooter's ears when hearing protection, though advised, isn't used.

The Ruger semi-automatic's accuracy is outstanding. My brother-in-law shot a 2.5-inch group with his Ruger MK II at 80 yards with cheap Remington Thunderbolt .22 ammunition and a red-dot sight.

DAO guns are good for human-sized targets at close ranges and definitely have their place, but aren't well suited as survival guns. Choose one or both of my top picks referenced in this article, and you'll be prepared when disaster strikes. **MP**

(above) **A single-shot 20-gauge shotgun is disassembled into three separate pieces that can be reassembled in mere seconds.**

(below) **A 20-gauge shotgun can fire loads suited for various uses. Buckshot is a good choice for unplanned encounters, while birdshot can down small game for food in survival situations.**

Tabor tests the T/C Strike on his private firing range while shooting off the bench at 50 yards.

THOMPSON/CENTER STRIKE

HERITAGE STYLING MEETS MODERN PERFORMANCE

By Thomas C. Tabor

While modern-day muzzleloading shooters still face many hurtles, as our ancestors did hundreds of years ago, quite a lot of those challenges have been tempered to some degree. The innovative in-line muzzleloaders now being produced have virtually eliminated the problems that plagued flintlock and percussion shooters of yesteryear. As a result, muzzleloading continues to grow in popularity.

If you prefer simplicity, you no longer have to weigh or measure out your powder charges, or fire pure-lead bullets that frequently lack accuracy and humane lethality. As well, you need not worry

Aside from fiber-optic open sights, the Thompson/Center Strike includes a Weaver-style scope base, making it an easy proposition to mount a scope.

The T/C Strike features a break-open, in-line design equipped with the typical-style action lever for opening the action.

Pushing the cocking slide fully forward exposes a red dot that indicates the rifle is cocked and ready to fire. In order to uncock the rifle and place it in "safe" mode, the button atop the slide must be pressed, allowing the cocking slide to move into the rearward position.

STRIKE SPECIFICATIONS

MANUFACTURER:	Thompson/Center
MODEL:	Strike
CALIBER:	.50 caliber
MASS WEIGHT:	7.5 pounds
SIGHTS:	Adjustable fiber-optic
ACTION:	Break-open
BARREL:	24-inch
STOCK OPTIONS:	G2 Camo, walnut and black composite
PRICE:	$499 to $599 (varies by model)

so much about your primer or flash-pan powder becoming contaminated by moisture. Essentially, muzzleloading has now moved into the 21st century, becoming significantly easier and more effective than ever before.

Strike Introduction

I recently tested one of the market's newest in-line muzzleloaders, Thompson/Center's (T/C) Strike. It's a classic example of heritage fashion, but with modern simplicity. The model I tested is a .50-caliber rifle with a G2 Camo stock. However, it's also available with a walnut or black composite stock.

The T/C Strike features a break-open design that uses a 209 shotshell primer to ignite the powder charge. To load the primer, simply slide the action lever to the right as you would to open most single-shot and double-barrel shotguns. Doing so hinges the rifle downward, exposing the primer adaptor and its retaining collar. After that, slip the primer into the retaining collar's hole and close the action. While this design doesn't entirely protect the primer from the elements, it affords considerably more assurance against moisture contamination than does the open flash-pan of a flintlock or the exposed primer of a percussion-style rifle.

Included with the T/C Strike are a set of fiber-optic sights with contrasting colors and a Weaver-style base for mounting a scope. The

The test T/C Strike muzzleloader features an attractive G2 Camo composite stock.

The T/C Strike muzzleloader is also available with a black composite stock, or for shooters who prefer wood, the Strike is also available with a walnut stock.

rear sight is an adjustable notched style accented in a bright red/orange color, and the front sight is a bright green tubular-style fiber-optic design.

Regulations governing use of magnified optics on muzzleloaders for hunting vary by state, but where permitted, a quality scope can greatly improve accuracy. For that reason, I installed a Leupold Ultimate Slam Illuminated 3-9x40mm scope, which is equipped with a Sabot Ballistics Reticle. It's designed specifically for use on muzzleloaders, but it could also be used effectively on a shotgun. It came with an illuminated red center dot, a circle aiming point and multiple aiming crosshair striations geared to the bullet's trajectory drop.

Because the scope base is designed to mount where the rear sight sets, the shooter must decide between open sights or a scope since both cannot be mounted at the same time.

The T/C Strike's barrel is 24 inches long and incorporates a rifling twist rate of 1:28. Like most muzzleloaders, the Strike is fairly heavy at 7.5 pounds, and after mounting the Leupold scope, it weighs 8.75 pounds.

Charging Options and Methods

Propellant pellets are an innovation worth considering, especially given their convenience in hunting situations. These can be substituted for loose black or Pyrodex powders and come in preset weights, which essentially correspond to the alternate weight of an equivalent black-powder charge. I chose Hodgdon Triple Seven pellets, which come in three grain weights for .50-caliber muzzleloaders: 30, 50 and Mag. 60.

These pellets are comprised neither of black powder nor smokeless powder and are sulfur free. I found they burn cleaner than black powder but considerably dirtier than modern-day smokeless powders. While lacking the typical sulfuric rotten-egg smell of burning black powder, the pellets still emit a substantial cloud of smelly smoke, and much like black powder, the residue left behind in the bore required frequent cleaning.

I shot two different Hornady 250-grain Sabot-style .50-caliber bullets: Mono Flex ML High Speed/Low Drag and SST Low Drag Sabots. Additionally, two powder-charge weights were shot. The lighter charge consisted of one Hodgdon Triple Seven 30-grain and one 50-grain pellet. For the heavier charge, I loaded two Triple Seven 50-grain pellets.

Sabot-style bullets have become extremely popular among muzzleloader shooters. For my test, I used .45-caliber jacketed bullets encased in a plastic sleeve of the appropriate .50-caliber diameter. Sabot-style bullets come with benefits of easy loading and improved accuracy. While a 100-grain equivalent load is

CONTACT INFO

Thompson/Center Firearms
2100 Roosevelt Ave.
Springfield, MA 01104
(866) 730-1614
tcarms.com

Hornady Manufacturing Company
3625 West Old Potash Hwy
Grand Island, NE 68803
(800) 338-3220
hornady.com/ammunition

Hodgdon Powder Company
6430 Vista Dr.
Shawnee, KS 66218
(913) 362-9455
hodgdon.com

In order to measure the Strike's velocities, the author uses Caldwell's newest Ballistic G2 Precision chronograph set 15 feet from the muzzle.

likely the most commonly used charge for .50-caliber rifles, I decided to also shoot an 80-grain load in order to determine the range of potential velocities and how they could affect accuracy. I've included a table with this data (see sidebar, "T/C Strike Performance," below).

Strike on the Range

To obtain the highest degree of performance, I found it was best to clean the Strike frequently. If I didn't clean the bore after eight to 10 rounds had been fired, I found it difficult to seat the Sabot bullets against the propellant pellets. This is typical with any muzzleloader. My usual cleaning procedure consisted of first scrubbing out the bore using warm, soapy water, followed by a solvent scrubbing and, eventually, a light oil application.

For a thorough cleaning job, it became necessary to remove the primer-adaptor plug, and by cleaning the rifle frequently, it becomes much easier to remove. I even found that lightly lubing the outside area of the adaptor before reinserting it into the retaining collar further simplifies future removal.

Being personally very attuned to trigger performance, I checked the pull weight and found the trigger came from the factory set at a reasonable 4 pounds (5-pull average), which, in my eyes, is appropriate for field use and hunting purposes. The trigger movements were sharp, crisp and very functional.

The Strike's ramrod was designed as a multi-purpose tool. Not only can it be used to seat bullets, it also doubles as a cleaning rod. When seating the bullets, the appropriately

T/C STRIKE PERFORMANCE

Bullet	Powder Charge	Average Muzzle Velocity	Smallest Three-Shot Group at 50 Yards	Average Three-Shot Group at 50 Yards
Hornady 250-gr. SST	One 30-gr. + One 50-gr. Hodgdon Triple Seven Pellet	1,179 fps	1.8 inches	2.2 inches
Hornady 250-gr. SST	Two 50-gr. Hodgdon Triple Seven Pellets	1,431 fps	1.3 inches	1.3 inches
Hornady 250-gr. Mono Flex ML	One 30-gr. + One 50-gr. Hodgdon Triple Seven Pellet	1,355 fps	1.5 inches	1.9 inches
Hornady 250-gr. Mono Flex ML	Two 50-gr. Hodgdon Triple Seven Pellets	1,441 fps	.63 inch	1.45 inches

NOTE: Muzzle velocities were measured with a Caldwell G2 chronograph placed 15 feet from the muzzle.

"I feel the Strike's accuracy is good in all instances, but the 100-grain charges ... produce slightly better groups with both bullet styles and increase the muzzle velocity."

named multi-tool is placed over the end of the ramrod as an aid for pushing bullets down the bore, but like the ramrod, the multi-tool also serves another purpose. By slipping it over the top of the retaining collar, it provides a better grip for turning. And, in the unlikely event that the retaining collar should become overly stubborn to break free, the ramrod's end can be slipped into the hole in the side of the multi-tool and used for additional leverage.

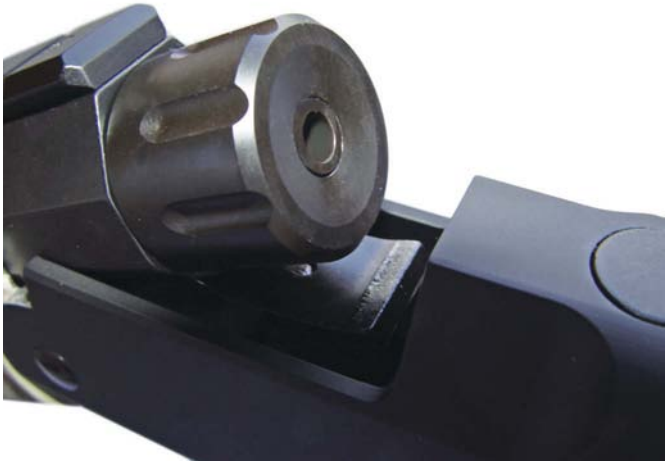
The Way I See It

Clearly, a segment of the shooting public prefers the challenges associated with shooting a muzzleloader. For those individuals, I believe the new T/C Strike muzzleloader provides a near perfect blend of old and new technology. It's a simple system that offers shooters excellent versatility. One can shoot newer Sabot-style bullets or the more traditional lubricated and patched lead projectiles. Charging can be done using traditional black powder or the newer Pyrodex loose powders, or you may opt for the convenience of propellant pellets as I did. And if you're a hunter, many states have separate seasons specifically for muzzleloader hunting, which provides both an edge for your hunting success, and in some cases, extends hunting opportunities.

I feel the Strike's accuracy is good in all instances, but the 100-grain charges—two 50-grain equivalent propellant pellets—produce slightly better groups with both bullet styles, and increase the muzzle velocity. Nevertheless, the ability to shoot lighter loads is an advantage when it comes to accommodating young shooters.

All things considered, if you're shopping for a reliable in-line muzzleloader, consider the moderately priced T/C Strike. You'll be glad you did. **MP**

The T/C Strike's trigger is very good quality and comes from the factory at a smidge over 4 pounds.



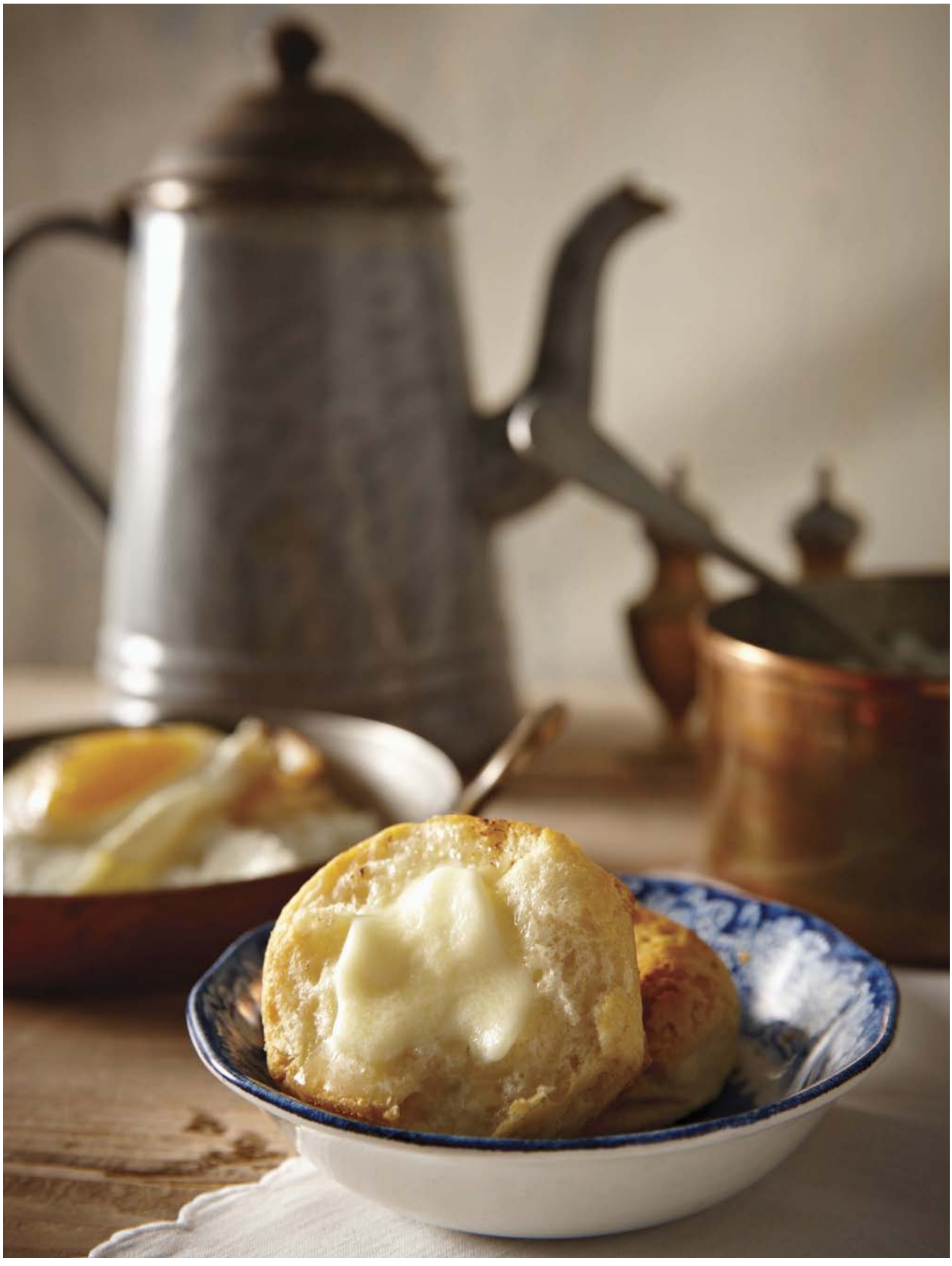
In order to prime the T/C Strike using a normal 209 shotshell primer, the action must be opened, after which the primer is placed into the hole in the retaining collar and the action is reclosed.

The high-quality front fiber-optic sight and its green color contrast well with the orange rear sight.

Pioneer Breakfast Recipes

POWER UP YOUR DAY WITH A HEARTY BREAKFAST

By Charles Witosky



If you need a lot of energy to sustain yourself throughout a day filled with tough chores, eating a hearty, healthy breakfast is crucial. In recent years, drinking energy drinks or munching power bars to get through the day has become a popular trend; however, not only are these choices generally unhealthy, relying on them heavily goes against our basic human biology. Early pioneers didn't have energy bars or drinks. Instead they depended upon a filling breakfast to get them through a strenuous work day.

You probably already have your own favorite go-to breakfasts, but it's always interesting to try something new. Here are a few recipes, all simple and classic, that have been cooked as far back as the late-1800s.

(above) **The finished dough for drop biscuits should be shaggy, not smooth.**

(opposite) **Finished drop biscuits hot from the oven won't last long on your breakfast table.**

DROP BISCUITS

Ingredients

2 cups all-purpose flour
1 tablespoon baking powder
2 teaspoons sugar
½ teaspoon cream of tartar
¼ teaspoon salt
½ cup butter, melted
1 cup milk

Tools

Large baking sheet
Large mixing bowl
Small mixing bowl
Measuring spoons
Measuring cups
Small spoon to scoop batter
Spatula

Directions

1. Preheat oven to 450°F and grease a baking sheet; set aside.

2. In a large mixing bowl, combine flour, baking powder, sugar, cream of tartar and salt; mix well.

3. In a small mixing bowl, blend the melted butter and milk. Slowly stir the melted butter and milk mixture into the dry ingredients. It's important that the butter is fully melted so the mixture doesn't become lumpy. Once the butter and milk are completely combined, only mix a few seconds longer. The dough should be moist and goopy.

4. Using a small spoon, drop batter onto prepared baking sheet. Ensure that the scoops are all the same size so that they bake evenly. Bake the biscuits until the edges are golden, about 9 to 11 minutes. Serve warm.

CORN CAKES

Ingredients

6 tablespoons (¾ stick) butter
¾ cup breakfast sausage
1 ½ cups fresh corn kernels, cut from cob
6 scallions, green part only, chopped
1 cup yellow cornmeal
½ cup whole-wheat flour
1 tablespoon sugar
1 teaspoon kosher salt
1 teaspoon freshly cracked black pepper
½ teaspoon baking soda
¼ teaspoon baking powder
A pinch of cayenne pepper
2 large eggs
1 ¼ cups buttermilk

(above) **Serve the finished corn cakes while they're hot.**
(left) **Cut corn kernels from the cob for corn cakes.**

Tools

Large skillet (or two, if you don't want to clean your pan halfway through cooking)
Small saucepan
Medium mixing bowl
Small mixing bowl
Spatula
Cutting board
Chef's knife

Directions

1. Melt the butter in a saucepan, spooning out the milk solids that rise to the surface. Remove the majority of the milk solids; it's OK if some small clumps remain. Pour the clarified butter into a separate bowl and set aside.

2. Cook the breakfast sausage in a skillet until done. Transfer it to a bowl and set aside. Leave the grease rendered from the sausage in the skillet and move on to step 3.

3. Cook the corn in the skillet until the kernels have all browned slightly, about 5 minutes. Transfer the corn to the bowl of sausage, stir in the chopped scallions and set aside. Wipe the skillet clean or place a second skillet on the stove.

4. In a small bowl, whisk together the cornmeal, whole-wheat flour, sugar, salt, cracked black pepper, baking soda, baking powder and cayenne pepper.

5. In a large bowl, whisk together the eggs and buttermilk. Add the dry ingredients and mix until combined. Fold in the sausage, corn and scallion mixture.

6. Heat 1 tablespoon of clarified butter in the clean skillet. In small batches, spoon tablespoons of batter into the skillet. Cook each cake until it is brown and crispy on both sides, about 2-3 minutes per side. Use 1 tablespoon of butter for each batch. As they're cooked, transfer the cakes to a plate lined with paper towels. Serve warm.

Simply Satisfying Energy

The following recipe is particularly filling. Whether you work in an office, the field or live off the land, give it a try to start your day off strong. Carry on, pioneers.

LUMBERJACK BREAKFAST HISTORY

Pretty much every diner has its own version of the lumberjack breakfast, although it might be named differently on the menu. Lumberjack breakfasts typically include a stack of pancakes, one or more types of breakfast meat, eggs, hash browns and coffee. Some diners might offer more, some less, but the meal is always huge. But where did the lumberjack breakfast originate?

While there appears to be no way of definitively tracing its origin, according to cookbook author Anita Stewart, via *Esquire* magazine, there's an 80-plus-year-old Vancouver hash house that has served a "Yukon-Style" breakfast that includes all of what most would recognize as the regular lumberjack breakfast items.

Of course, the more obvious answer is that meals like this were named after the folklore surrounding lumberjacks. Cutting down trees in the extreme heat and cold from dawn until dusk required a lot of energy, and a large breakfast delivered the necessary fuel.

EIGHT-STEP SCOTTISH OATCAKES

The following recipe is fairly solid, but oatcakes can serve double duty as a tasty and filling snack as well as a hearty breakfast. Scottish oatcakes are great when you'd like something that's not too sweet with a cup of coffee or tea.

Ingredients

1 cup all-purpose flour
½ cup sugar
½ teaspoon baking soda
¼ teaspoon salt
1 ½ cups steel-cut or old-fashioned oats
½ cup chilled solid vegetable shortening, cut into pieces about the size of peas
¼ cup buttermilk

Tools

2 large baking sheets
Large bowl
Rolling pin
Round cookie cutter, biscuit cutter or water glass
Spatula
Cutting board
Sharp kitchen knife

(above) **The chilled vegetable shortening should be chopped into small pieces.** *(opposite, top)* **Finished Scottish oatcakes make a great breakfast treat or snack with a cup of coffee or tea.** *(opposite, below)* **Most cooks will already have the ingredients and tools on hand to make Scottish oatcakes.**

Directions

NOTE: If you've forgotten to chill the vegetable shortening in advance, pop it into the freezer for about 15 minutes. It must be semi-solid.

1. Preheat oven to 350°F, grease the baking sheets and set aside.

2. In a large bowl, sift together the flour, sugar, baking soda and salt. Stir in the oats.

3. Using your fingertips, rub the shortening into the flour-oat mixture until the mixture feels coarse.

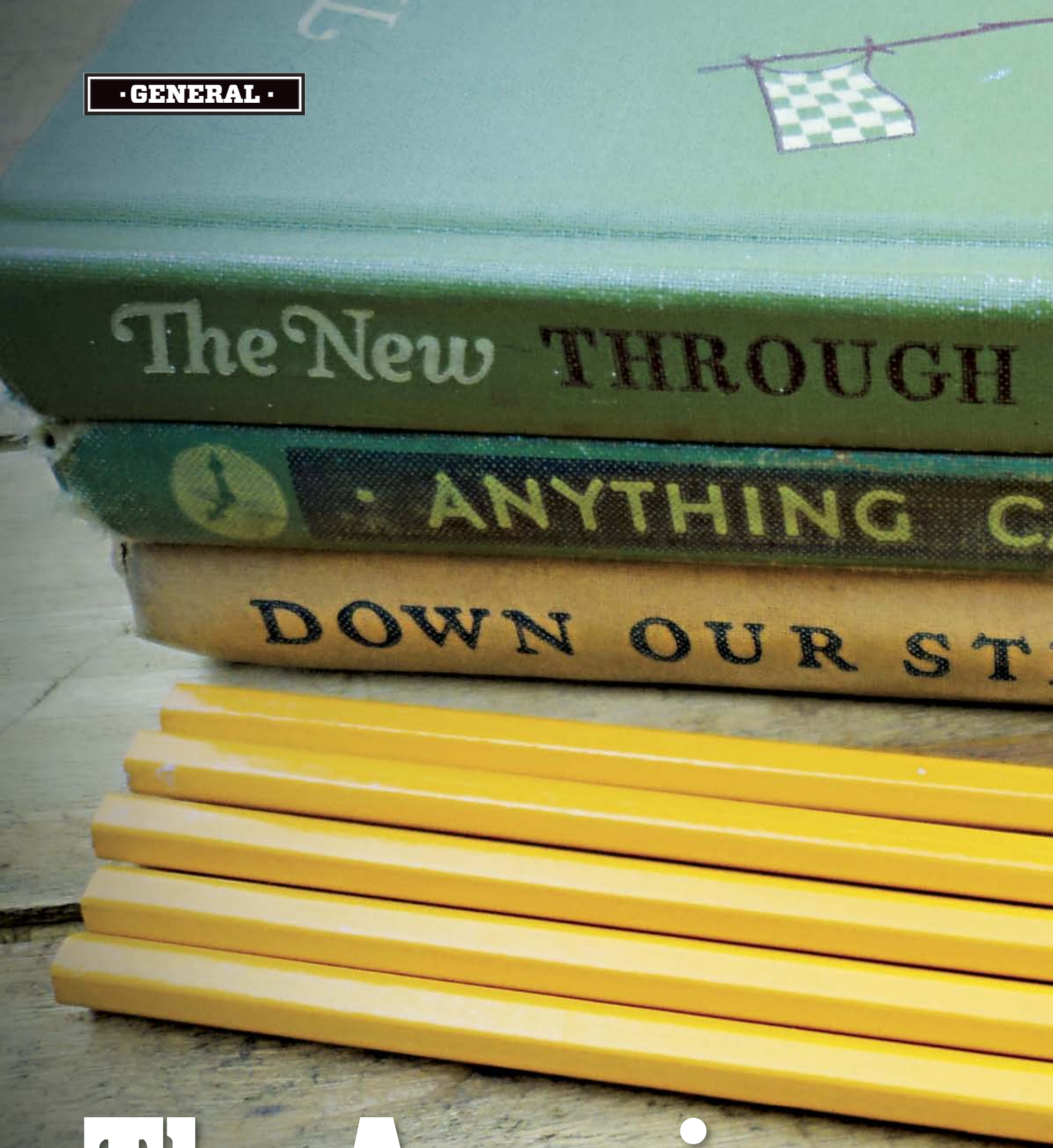
4. Pour in the buttermilk, and stir until a dough forms.

5. Flour a cutting board or clean countertop. Roll the dough out until it is roughly ¼-inch-thick from edge to edge.

6. Cut out small cakes using a cookie cutter, biscuit cutter or water glass. Arrange oatcakes on the prepared baking sheets, spacing them evenly. Gather scraps, reroll and cut out additional cakes.

7. Bake the oatcakes in the preheated oven until pale golden on the edges, about 11 minutes.

8. Transfer the baking sheets to cooling racks and cool for 5 minutes. Then, move the cakes directly to the cooling racks. Cool completely and serve. MP



The Amazing Pencil

HISTORY'S MOST SIGNIFICANT TOOL PERSEVERES

By Sharon Swenson


THE GREEN GATE
AN HAPPEN
REET
MACMILLAN

FAMOUS PENCIL USERS

These are some well-known folks in history who used pencils:

- **LEWIS AND CLARK** penciled beautiful and detailed maps of their explorations.
- **THOMAS EDISON** hired the Eagle Pencil Company to custom-make his pencils 3 inches long, thicker around and with a softer graphite core.
- **ROALD DAHL,** the British novelist, had six pencils sharpened and ready to use each morning. Only when all six became dull did he resharpen them.
- **JOHNNY CARSON,** late-night talk-show host for 30 years, was well known for playing with a pencil while he joked around at his desk each evening. His pencils were custom-made with an eraser at each end to avoid on-air accidents.
- Author **JOHN STEINBECK** is rumored to have used 60 pencils each day, and he used more than 300 to write *East of Eden*.

SOURCES:
wiki.answers.com
wikipedia.com
pencils.com

"Graphite sticks were first wrapped in string and later wood, which supported the core and protected the user's hand from markings."

If you toured a typical American home, you'd likely see them in every room: on desks, in the kitchen, on the dinner table, on living-room end tables, on nightstands and even in the bathroom.

They vary in length, some measuring only 3 inches long, others measuring about 7 inches long. What is this oh-so-important and seemingly indispensible item? It's the ordinary pencil.

Brief History

Ancient Romans first used a thin metal rod called a stylus to record their daily thoughts and business. Later, these were made of lead.

The forerunner to the pencil, as we know it today, has existed since 1564 when Englishmen discovered a large, non-toxic graphite deposit near Borrowdale. The graphite was valued for its ability to leave a darker mark than lead, but it was so soft and brittle that a holder was needed. Graphite sticks were first wrapped in string and later wood, which supported the core and protected the user's hand from markings. Even though pencil cores haven't been made of lead since the 1500s, we still refer to these writing instruments as lead pencils.

The French, Germans and English continued improving the pencil's design. Early American colonists imported their pencils until war with England stopped imports.

In America, William Monroe is credited with first producing wooden pencils near Boston in 1812. Philosopher Henry David Thoreau developed an improved core using a poor grade of graphite, which he mixed with clay as a binder. Thoreau's father owned a pencil factory, which made use of this improvement.

Ebenezer Wood first made hexagonal- and octagonal-shaped wooden casings to prevent the pencil from rolling off desks.

Hymen Lipman was the genius who first patented a pencil with an attached eraser in 1858.

Joseph Dixon created a method to mass-produce pencils, and by 1870, he owned the world's largest pencil factory, which later became the Dixon-Ticonderoga Company.

More than 240,000 pencils were being used each day in the United States by the late 1800s.

Pencil Components

The core of the pencil consists of finely ground graphite, which is mixed with clay powder and water. The clay powder acts as a binder, with the amount of clay determining the core's hardness. If a softer "lead" is desired, less clay is used.

The powders are shaped into cakes, which are allowed to dry completely. The blend is then formed into the long, spaghetti-like lengths we recognize as the core of a pencil. After this, several procedures are conducted to develop a strong, smooth-writing product, and the string of graphite is set between two grooved wood planks, which are then glued together and cut into pencil lengths. Next, they're painted and outfitted with a metal ferrule, which contains the rubber eraser.

When we think of a pencil, we usually think of it being painted yellow. This tradition began with an Austrian company in 1890 and has worked so well that most pencils made in the United States today are painted yellow. Although, lead poisoning did occur until the mid-1900s when the paint coating the pencil shaft was ingested if the pencil was chewed or sucked.

Red cedar was commonly used in the late 1800s for pencil shafts because it could be sharpened without splintering. After red-cedar supplies dwindled, incense cedar was found to work just as well, and it's still being used today. Forestry-management practices are in place to meet the world's annual demand of 15 billion pencils.

Uses

We all probably started every school year with a pack of brand-new pencils and a small plastic sharpener to use as needed. The wooden shavings from these little devices made messes, and some teachers wanted us to use the mechanical sharpener with a small hand crank mounted to a wall in the classroom. This gave us permission to escape our desks' confines and take the long route

around the classroom to and from the sharpener. It relieved boredom and writer's cramp and exercised our legs.

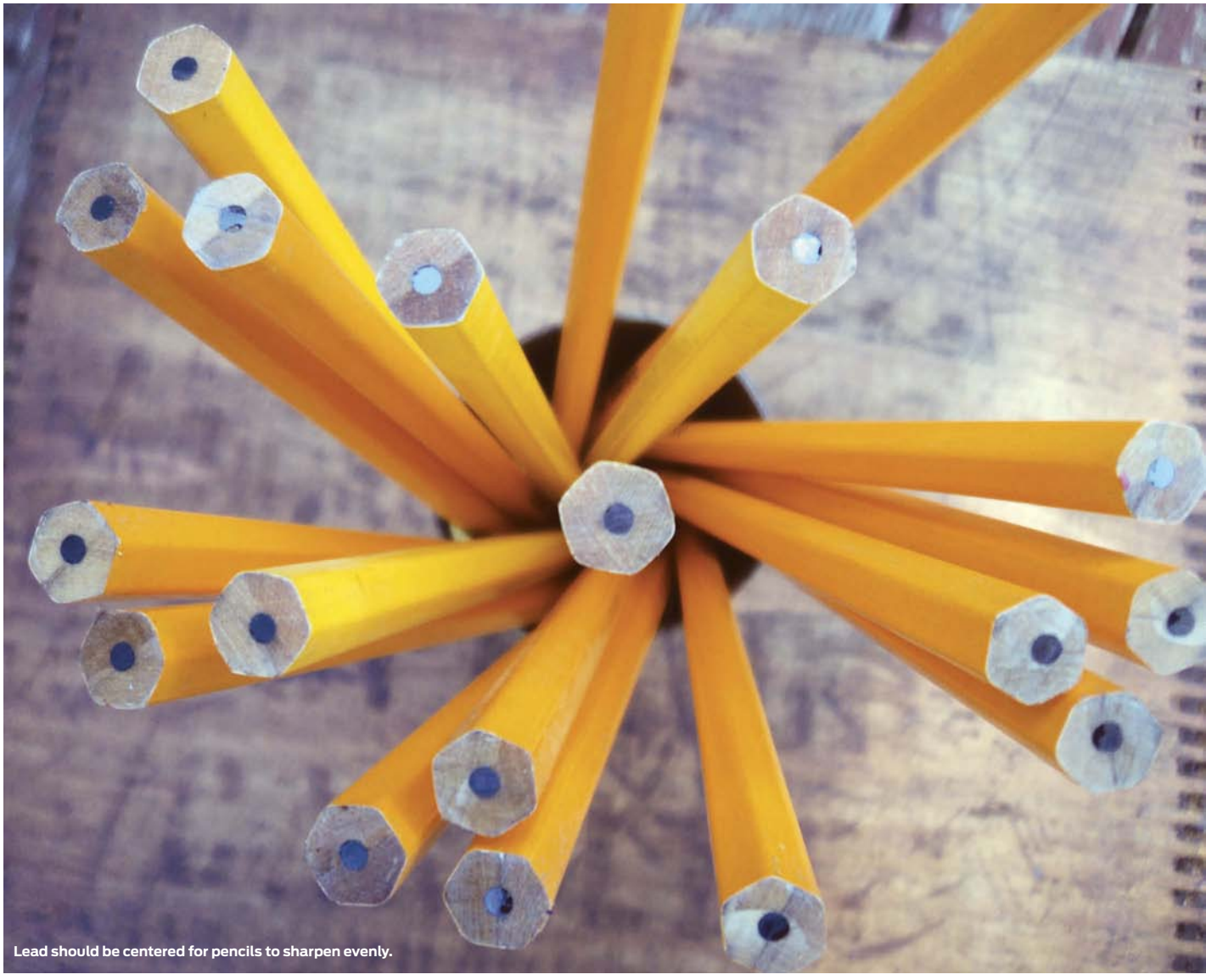
As I recall, we were required to use pencils until we reached fifth grade. At age 10, we were deemed mature enough to use an ink pen, and boy, did we feel like big shots then. Pencils were for babies.

But somewhere between ages 10 and 60, I've come to prefer using a pencil for many jobs. My shopping list is mounted on a kitchen wall, and when I happen to grab a pen to write down a few items, I sometimes run out of ink because I'm holding the pen point upward; gravity quickly pulls ink down and away from the point. Of course, that never happens with a trusty pencil.

I also prefer a pencil when balancing my checkbook. When I make an error, it's easily erased, and my checkbook register remains neat.

When making appointments with the

(above) **Colored pencils with softer leads are used for school projects such as coloring various map features like trees, roads, rivers and mountains. The author likes to use them for underlining or highlighting because the color doesn't bleed through paper like highlighter markers do.** *(below)* **The 1940s mechanical pencil at top advertises Heise Motor Inn, Ford Sales and Service, Phone 67, Minnesota Lake, Minnesota. Below it is a 1970s bullet pencil advertising Hi-Potentials, Blaney Farms, Inc., Route 3, Madison, Wisconsin. The silver-bullet tip pulls out of the barrel to reveal an attached wooden pencil (bottom); place the bullet tip back into the barrel to write.**



Lead should be centered for pencils to sharpen evenly.

TICONDEROGA PENCILS

Friends of mine who are experienced teachers say they much prefer their students use Ticonderoga brand pencils. They reportedly keep their sharp writing tip longer than other brands and are more difficult to break. They even come pre-sharpened.

doctor, dentist or hairdresser, I always use a pencil to mark the date because appointments are often changed.

I've learned to pencil entries into our address book because friends and relatives are constantly moving. I save time and paper if I can quickly erase an old address and enter the new one.

As I write this, I'm using a pencil. Later, I'll use the keyboard to type out this article, but for now, I prefer a pencil because I can easily change my mind, edit, erase and, well, just because I love pencils. As a former teacher of mine once said, "I can think better with a pencil in my hand."

Various Types of Pencils

There are many kinds of pencils. For school tests and most everyday uses, we grab the familiar yellow No. 2 hardness designation.

This hexagonal-shaped pencil is 19cm (7.5 inches) long when new.

Artists have myriad choices of pencil grades, from light gray to the blackest black. There are also colored pencils with soft, wax-based cores, which are popular for school projects.

Carpenter pencils have a flat, rectangular shape, which keeps them from rolling, and they also have a stronger graphite core.

There are dozens of mechanical-pencil designs; they resemble ink pens and don't require sharpening.

Grease pencils, usually encased in paper, can write on virtually any surface.

Advertising

Pencils have been popular advertising vehicles for many years. Smart business owners knew that people needed pencils, and to keep their name in the forefront of customers' minds, they distributed pencils imprinted with their name, product(s) and/or contact information. Today, we still find numerous businesses handing out beautifully colored advertising pencils at fairs and various home-improvement events.

Collectors

Today, collectors avidly seek older pencils with advertisements on them, and pencil-collection societies and groups have sprung up. Members have newsletters, websites and annual meetings to discuss and share their collections.

School Children

Children still learn to write numbers and the alphabet with a pencil. They have a multitude of colorful pencils to choose from. In addition to every color of the rainbow, they have bright neons, pencils that sparkle, pencils with kittens, puppies or cartoon characters decorating them, and those with a shiny kaleidoscope effect. It must be so much fun to do schoolwork these days.

Erasers at the tip of each pencil are dressed up to coordinate with the color of the pencil, or various shapes can also appear as erasers. My young grandson proudly uses a pencil with a shark-shaped eraser attached, a memento from his aquarium visit.

Conclusion

Despite the advanced technology of computers, keyboards, cellphones with texting features and apps galore, there are still 100,000,000 pencils manufactured each year in the United States alone.

Even more interesting, according to pencils.com, one pencil can write a whopping 45,000 words or draw a line 35 miles long.

In my book, pencils are pretty amazing. MP

George Washinton Sears "Nessmuk" (1821-1890) An adventurous wanderer

> By ***Darryl Quidort***

Born the first of 10 children on Dec. 2, 1821, in Oxford Plains, Massachusetts, George Washington Sears started his life adventurously. At 8 years old, his father sent him to work in a textile mill, but he disliked factory work and ran away.

By age 12, Sears was working for the commercial fishermen on Cape Cod. Somewhere along the way, he came under the influence of a young Narragansett Indian named Nessmuk (meaning "Wood Duck" or "Wood Drake"). Nessmuk taught Sears how to hunt, fish, camp and all about outdoor life and survival.

Jack of all Trades

At age 19, Sears signed up for a three-year whaling voyage to the South Pacific. Once he returned to the U.S., he left the sailing life and spent the next several years wandering the country. He later wrote that he, "taught school in Ohio, bullwhacked across the Plains, mined silver in Colorado, edited a newspaper in Missouri, was a cowboy in Texas, a 'webfoot' in Oregon, and camped in the wilderness of Michigan," before settling down in 1848 as a shoemaker in Wellsboro, Pennsylvania.

Although Sears married in 1857 and had three children, he continued to wander. He served in the Civil War, traveled to Wisconsin in 1866, and then to Brazil where he traveled up the Amazon River with a plan to improve the latex rubber industry. He once walked solo across Michigan's roadless wilderness from Saginaw Bay westward 100 miles to a lumber camp on the Muskegon River just to see an old friend. Traveling light and living off the land, it took him 10 days to find his way around lakes and through swamps to reach his destination. He truly was a wilderness man.

Sears was a small man, standing just 5 feet 3 inches tall and weighing a little more than 100 pounds. Later in life he developed consumption (a combination of tuberculosis and asthma) and became quite frail. In an effort to improve his health, he began to seek the clear, invigorating air of the Adirondack region's lakes and forests. His experiences there cemented his reputation as an outdoor authority. Much of his outdoor philosophy, and the practical camping equipment he used, were developed through his own experiences.

A Respected Outdoor Writer

Amazingly, the things that Sears became most famous for didn't begin happening until he was more than 60 years old. Sears was one of the most influential and widely read American outdoor writers of the 1800s. An important and outspoken early conservationist and pioneer environmentalist, Sears loved and lived the outdoor lifestyle that he tried to advance yet protect.

Writing under his pen name, Nessmuk (in honor of his Indian mentor), his most famous writings are accounts of three extended solo camping trips where he canoed and portaged hundreds of miles in the wilderness of the Adirondack Lakes region. Some of the trips took him months to complete. In *Nessmuk's Adirondack Letters*, Sears describes those experiences and gives advice in wonderful, old-style language. Nessmuk published 18 articles in *Forest and Stream* magazine in the 1880s. Those articles earned him the admiration of a wide readership, and brought the magazine to the forefront of U.S. outdoors life. His writings encouraged readers to, "Go light; the lighter the better, so that you have the simplest material for health, comfort and enjoyment."

His minimalist philosophy on camping and canoe travel led many to become what he called "outers" who left the city behind and began to enjoy vacations in his beloved Adirondacks. Nessmuk encouraged his readers, "I would say, don't rough it, make it as smooth, as restful and pleasurable as you can."

In 1884, Sears published the how-to book, *Woodcraft and Camping*, which is still in print and available today. This book describes his methods of using shelters, fires, canoes, knives and axes, and how to use natural materials for cooking and surviving in the wilderness. Even today, several knife makers offer a Nessmuk-style sheath knife, and blacksmiths still copy the small, double-bit camp axe described in his book.

Being a small man, Sears needed a lightweight canoe that he could portage between lakes by himself. J. H. Rushton of Canton, New York, built canoes for him from Sears' directions. Using cedar slats only $^{3}/_{16}$-inch-thick, he made the canoes with no seats, thwarts or bracing. They weighed between 10 ½ and 17 ½ pounds. Sears paddled solo, using a double-bladed paddle, kayak style. After the *Forest and Stream* publicity, Rushton made and sold many of the Nessmuk-model canoes.

Gone but not Forgotten

George Washington Sears passed away May 1, 1890, at his home in Wellsboro, Pennsylvania. His burial and grave marker were partially paid for by gifts from his loyal readers. A nearby mountain bears his name, and Lake Nessmuk was created by damming up a stream near his longtime home.

Nessmuk's contributions to practical woodcraft, and his observations on conservation and the environment, are still viable today. He showed us that it's possible to enjoy traveling through wilderness without destroying it. More than 100 years after his passing, admirers still refer to minimalist camping or lightweight canoeing as "Nessmuking." MP

Sources

Woodcraft and Camping, by Nessmuk, Dover edition 1963 (first published 1884).
Literary and Cultural Heritage Map of PA (available online)
Nessmuk's Adirondack Letters (available online)

"The best thinking has been done in solitude. The worst has been done in turmoil."

—Thomas A. Edison


TOPS KNIVES
THE OPERATORS EDGE
VIAX
TOPS
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