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MODERN PIONEER

JUNE/JULY
2016

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FROM THE EDITORS OF AMERICAN SURVIVAL GUIDE
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PHOTO BY THINKSTOCK


"Be happy for this moment. This moment is your life." —OMAR KHAYYAM

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JUNE/JULY 2016

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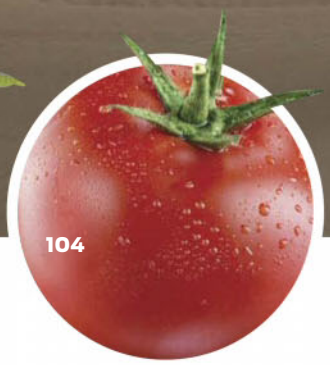

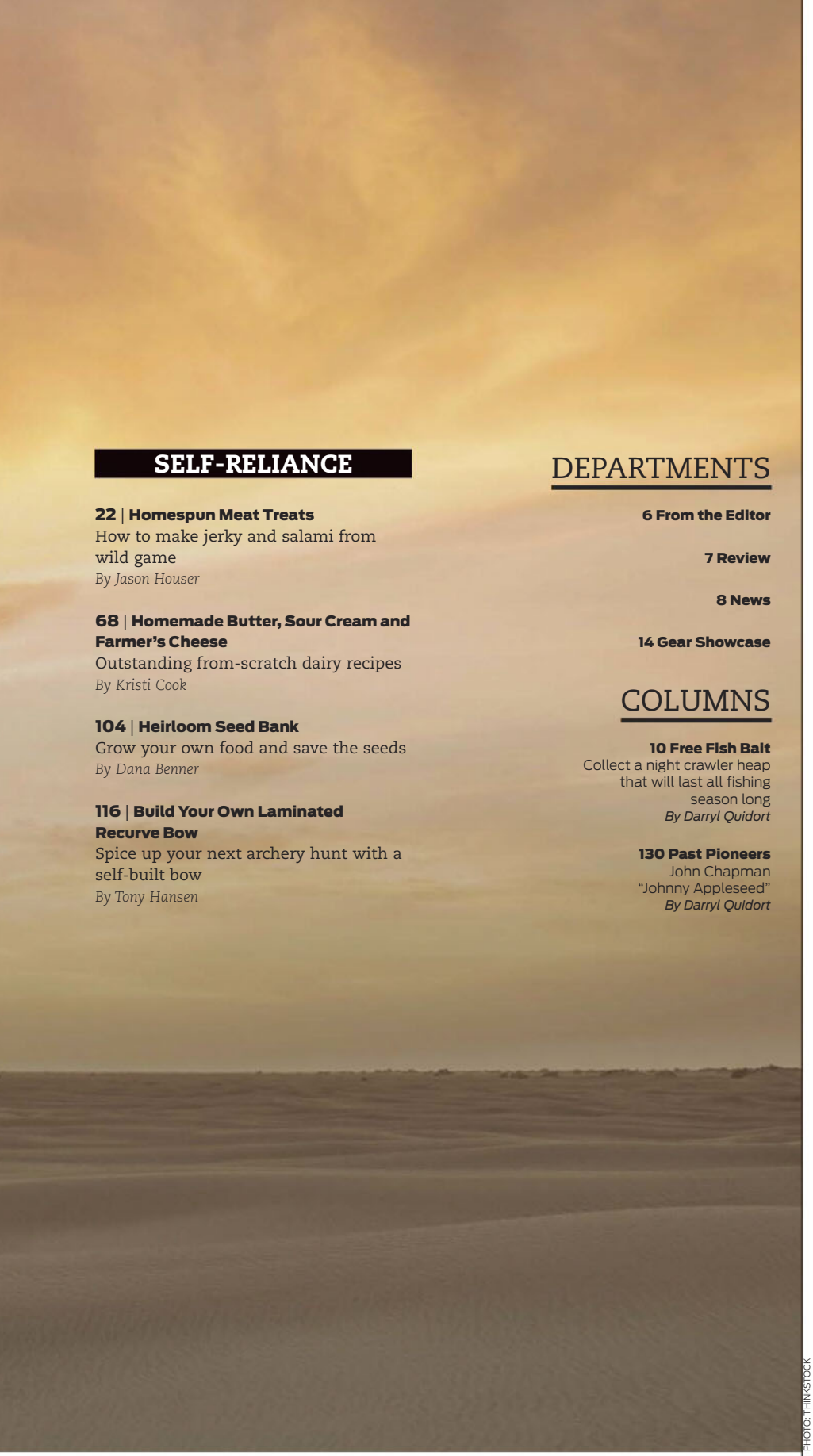

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Pioneer Lifestyle Requires Proficiency

Many things in life are optional. French fries can just as easily be eaten with ketchup as they can without it. Hunters can hunt as easily with minimal gear as they can with every latest trinket; gear alone doesn't classify one as skilled. A Green Bay Packer fan can just as easily attend a game wearing everyday clothes—although that's unlikely—as they can dressed from head to toe in green and gold. You get the point.

Meanwhile, other things aren't optional. Wear a seatbelt, or you'll get ticketed. File your tax return, or you'll be penalized. Heat your home in the cold months, or your water lines could burst and flood your house.

In regard to the pioneer lifestyle, some things are optional. For example, Patrick Meitin shares in "Compound vs. Traditional" (pg. 44) that bowhunters can be equally successful using primitive or modern bows, depending on personal preference and the specific application at hand. Options are good, and we're each entitled to our own methods and preferences.

One thing that's not optional for the pioneer lifestyle—or being a true do-it-yourselfer—is proficiency. That's the pioneer attribute this issue's content hammers home most. Although we're not born proficient, it comes with experience. How much experience? Malcolm Gladwell's 10,000-hour rule suggests that one achieves mastery in a given field after spending 10,000 hours practicing it.

Fortunately, mastery and proficiency are different. *Merriam-Webster* defines mastery as having "complete control of something," whereas it defines proficiency as having "a high degree of competence or skill." In plainer form, mastery is a lot like perfection, proficiency a lot like talent.

Proficiency's beauty is that two pioneers can make the same thing with two different, yet equally successful, outcomes. For example, if you embark on a mission to build your own recurve as Tony Hansen did for our cover story (pg. 116), I know your bow won't look exactly like the one he created. The difference in craftsmanship would give each finished product its own unique character. I like that. In contrast, if you held up two factory-built bows, you likely wouldn't see distinguishable differences. The element of character is lost.

As you read this month's features, you'll easily see that our writers are truly talented and proficient at their crafts. For example, Tracy Breen goes backcountry camping knowing—not hoping—he's prepared for wilderness variables (pg. 36). In fact, he's so sure of his abilities that he's known to spend more than two weeks off the grid at a time.

Another example is Randy Templeton's "Capture Your Hunt," (pg. 62) where he presents the ins and outs of shooting remarkable photography by which you can remember your hunt for years to come. By the way, one doesn't simply wake up one morning and become a pro-grade photographer. It takes months, even years, to develop the skills to shoot stunning images like the ones in Templeton's feature. He's a highly skilled hunter, but he's an equally skilled photographer.

Ever wonder what you'd do if you were stranded without fresh drinking water? Larry Schwarz doesn't wonder, as he thoroughly proves in "Water Purification for Home and Field" (pg. 92). He offers real tips that demonstrate proficiency by every standard.

Yes, the DIY modern-pioneer lifestyle is far more time intensive than just a series of hobbies. To do it well requires skill and knowhow. But most of all, it requires proficiency. I'm sure we can all agree on that.

DARRON MCDOUGAL

review

Value Meets Performance

Camillus Knives Rage 7.25-inch carbontride titanium folding knife

CAMILLUS RAGE SPECIFICATIONS

STYLE: Folding
BLADE: 3-inch carbontride titanium 440 stainless steel
HANDLE: Textured glass-filled nylon
LENGTH: 4 ⅛ inches, closed; 7.25 inches, open
WARRANTY: Lifetime
MSRP: $21.99
CONTACT: (888) 835-2263, camillusknives.com

THE NUMBER OF KNIVES ON TODAY'S MARKET IS ASTOUNDING, AND CHOOSING ONE OR TWO CAN BE COMPLICATED, EVEN OVERWHELMING. PRICES, DESIGNS AND USES ALL VARY, AND ELIMINATING OPTIONS REALLY BECOMES A MATTER OF BUDGET AND EXPECTATIONS.

To me, a folding pocket knife is an important tool for hunting. Of course, I keep larger fixed-blade hunting knives in my backpack for bigger jobs like boning out elk or deer. Nevertheless, a folding pocket knife is great for smaller jobs, like notching a license, field-dressing a deer or breasting a grouse or turkey. It can also handle small jobs in survival situations with life-saving results.

One knife in particular easily handles these jobs. Meet the Rage from Camillus Knives, a world-renowned knife manufacturer.

About Camillus

Camillus Knives has been in the business since 1876—that's more than 135 years. The company offers tactical, hunting and sporting knives, plus machetes and various other tools. Camillus has earned its worldwide following by producing cutlery that features stunning craftsmanship and outstanding performance. The Rage folding knife well represents those standards.

Carbontride Titanium

Blade durability is crucial to keeping a sharp edge. The Rage features a carbontride titanium non-stick cutlery-grade 440 stainless-steel blade. This means the blade is up to 10 times harder than untreated steel and keeps its sharp edge longer. Ultimately, this translates to less time spent sharpening and more time spent cutting. That's a trait I'm sure every hunter and outdoorsman will appreciate.

Compact and Lightweight

Being prepared for every circumstance usually requires carrying excess, often oversized, items. This is where the Rage really shines. Its carbontride titanium stainless-steel blade is 3 inches long, and folded, the knife measures 4 ⅛ inches, which is barely noticeable in my pocket. It's overall extended length is 7 ¼ inches. Again, it's sized perfectly for small jobs.

The vented, glass-filled nylon handle is lightweight and provides comfortable gripping with contours that perfectly fit my fingers. Further, the handle incorporates a belt clip—with an integrated Camillus logo—so you can conveniently keep the knife accessible for unforeseen encounters. The folding action is also quite smooth, so you can deploy the blade quickly when necessary.

Incredible Value

I'm a fan of the tactical black look many weapon manufacturers are currently integrating, particularly on bows, firearms, crossbows and, of course, knives. The Rage powerfully represents that look, which I'm sure would cause many folks to believe it's an expensive knife, but it's not.

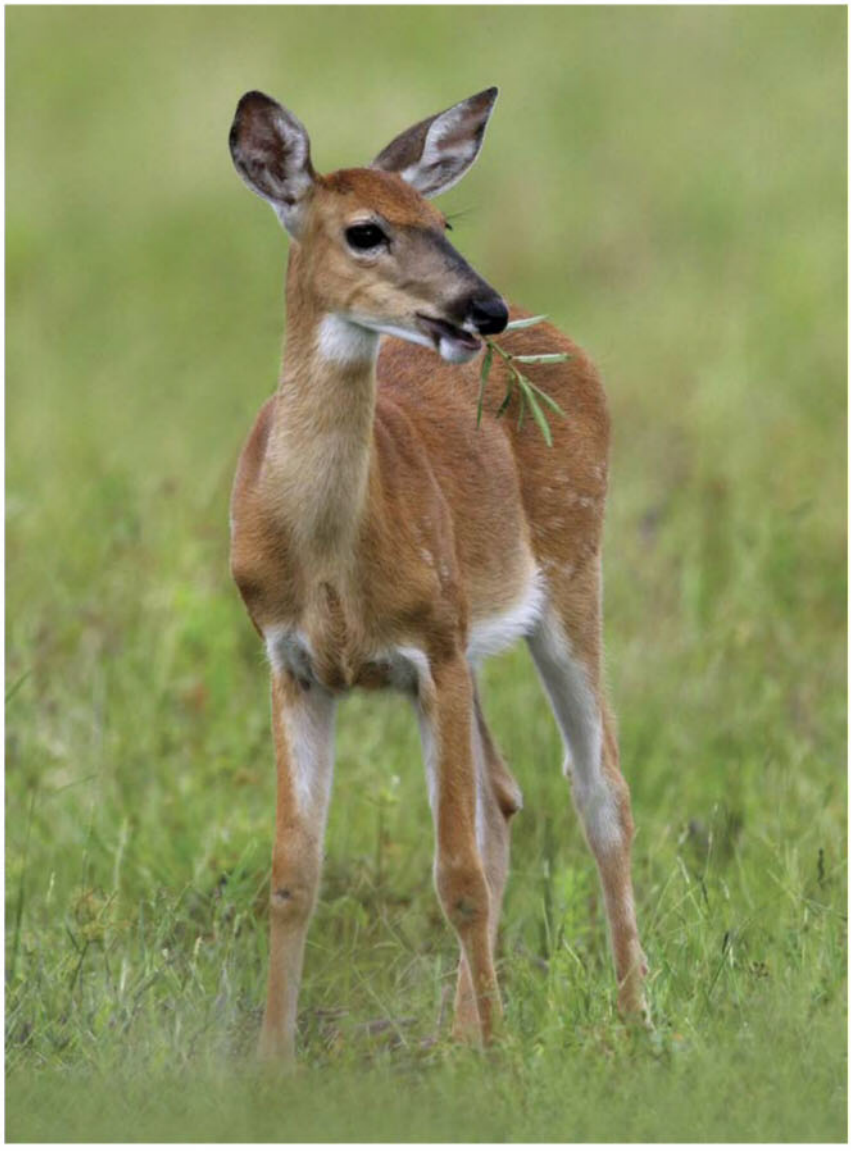
Of course, most working-class individuals consider pricing when shopping for knives. Again, the Rage nails this category. At $21.99 MSRP, it offers tasteful craftsmanship and delivers outstanding performance at a price most can afford. That marriage creates a strong representation of value.

Aside from affordability, Camillus backs the Rage with a lifetime warranty. If a Camillus product fails to perform because of defective materials or workmanship, Camillus will replace it, regardless of age. This confidence in its products instills incredible peace of mind as you shop Camillus' line for the perfect knife.

With budget and expectations considered, I believe the Rage exceptionally represents value, performance and craftsmanship. You'll see what I mean the moment you try one.

—Darron McDougal

ATA Launches Deer Protection Program



Chronic Wasting Disease (CWD) in deer isn't just a bowhunting problem. When too many deer die, it affects entire ecosystems, impacting everything from plants to predator populations. Currently present in 23 states and in Canada, CWD is a problem that has frustrated wildlife experts and bowhunters alike.

Experts believe that CWD—a transmissible spongiform encephalopathy that's a cousin of Mad Cow Disease—is transmitted via infectious proteins called prions. While there is a lack of science to support it, some suggest that deer scents made with deer urine could be a source of CWD transmission, if not carefully managed.

In response, the Archery Trade Association (ATA) has instituted its new Deer Protection Program to ensure that ATA-member scent manufacturers and product suppliers do everything possible to prevent the spread of CWD in wild deer, elk and moose in the United States.

With help and advice from the nation's top CWD experts and state wildlife agencies, the ATA spent the past two years working with its scent manufacturers and urine providers committee to self-impose protective restrictions on their products and the deer/elk facilities that provide urine for those products. The restrictions are designed to ensure urine-based scent products don't contain the infectious prions that cause CWD. The restrictions meet or exceed rules already imposed by state and federal disease-management agencies like the USDA's APHIS Herd Certification Program.

Scent manufacturers enrolled in the ATA program can display the ATA's "Seal of Participation" label on scent products that originate from facilities participating in the program. "The seal demonstrates that the supplier and manufacturer are doing all they can to prevent CWD from harming our nation's wild cervid populations," said Mitch King, the ATA's director of government relations.

Another goal of the ATA Deer Protection Program is to increase CWD awareness among hunters. "A sad reality is that agencies dealing with CWD have struggled to engage widespread interest and concern among the nation's hunters," King said. "This program's success will depend on hunters recognizing the ATA Seal of Participation when buying scent products. That's why this program also includes marketing and outreach efforts about CWD to help hunters understand how their buying decisions and actions afield can help control CWD's spread. We will encourage hunters to only buy and use scents carrying the ATA seal."

To learn more about the ATA Deer Protection Program, visit archerytrade.org/deerprotection.

Ducks Unlimited and Phillips 66 Cooperate for Coastal Restoration

Ducks Unlimited (DU) and energy manufacturing and logistics company Phillips 66 reviewed the results of their combined coastal restoration efforts during a project tour recently. Phillips 66 also presented DU with $75,000 to continue restoring wetlands on public lands along the Texas Gulf Coast.

"Phillips 66 is truly committed to corporate responsibility," DU Director of Development Matt Bunn said. "They have supported our restoration efforts in Texas for several years, providing important habitat for waterfowl and other wildlife and outdoor recreational opportunities for their employees and millions of others who visit these areas."

The Gulf Coast wetlands of Texas and Louisiana comprise the continent's most significant waterfowl wintering grounds and are a level-one priority for DU's wetland conservation work. Through its support of the Gulf Coast Initiative, Phillips 66 is helping DU ensure that up to 15 million waterfowl will find a place to stay each winter.

Boone and Crockett Club Celebrates New Home of North American Conservation

Boone and Crockett Club member and Bass Pro Shops founder Johnny Morris will soon open one of the largest, most immersive conservation attractions in the world, Wonders of Wildlife National Museum and Aquarium. The 315,000-square-foot exhibit sits adjacent to Bass Pro Shops' flagship store in Springfield, Missouri, and will serve as the new home to North American conservation when it opens later in 2016.

In 2015, Boone and Crockett Club joined more than 25 of the country's leading conservation organizations to contribute to the creation of the attraction. The nationwide collaboration brought together conservation leaders to discuss fun and engaging ways to motivate public appreciation for wildlife and conservation efforts. The attraction will highlight past successes and share important conservation messages with a national audience.

Wonders of Wildlife will also become the new home to Boone and Crockett Club's National Collection of Heads and Horns. First dedicated in 1922 to "the vanishing big-game animals of the world," the exhibit gives visitors a chance to see more than 40 historically significant North American game animals that helped spark the U.S.'s conservation movement.

Lipsey Honored by Ducks Unlimited for Conservation Efforts

Richard Lipsey, chairman of national firearms distributor Lipsey's, was recently honored by Duck's Unlimited (DU) for his lifelong efforts in service to coastal conservation. Lipsey has been an advocate and ambassador for DU for many years. His passion for waterfowl and wetland conservation is far-reaching and has influenced friends and colleagues to become involved in the effort.

On April 28, 2016, the Baton Rouge Chapter of DU held the Richard A. Lipsey Sponsor Tribute fundraiser to officially dedicate two major DU projects to his service and contribution to the outdoors industry. These two projects located in Saskatchewan, Canada, and Cameron Parish, Louisiana, are uniquely joined as the starting and ending points for millions of migrating waterfowl each year.

The project in Saskatchewan will cover more than 160 acres in the Prairie Pothole region, which is a vital breeding ground for an estimated 60 pair of breeding ducks per square mile. The area is the beginning of the yearly migration to Louisiana.

The Cameron Parish project will serve to control salinities that span 11,000 acres of marsh that serve as home to the mottled duck, the only duck native to Louisiana.

Free Fish Bait

Collect a night crawler heap that will last all fishing season

> By ***Darryl Quidort***

PHOTO BY THINKSTOCK

Throughout the course of a fishing season, bait can get expensive. Night crawlers selling for $2.60 a dozen at local bait shops may steer serious fishermen to explore alternative options. Fortunately, collecting and keeping a good supply of fish bait is simple. Every year, spring rains bring me enough free bait to fish with all summer long.

Folk names like "dew worm," "rain worm," "angle worm" (due to its use as a fishing bait) and "night crawler" are used to describe the large worms that live naturally in good, organic soil. Worms are considered beneficial by gardeners because their tunneling activity helps to mix and aerate soil. They're considered beneficial by fishermen because fish love to eat them.

After winter dormancy, night crawlers become very active when warm spring rains soak the ground. At night after rainstorms, they can be found stretched out on the surface of the wet soil. Look for them in gardens, farm fields, flower beds and areas where the grass is thin enough to see the soil.

Tackle and Technique

All you'll need to collect your bait is a small flashlight, an old coffee can, mud boots and a positive attitude. On a warm, rainy night last spring, I picked up 18 dozen night crawlers in about one hour. That catch was exceptional; it's rarely that easy.

To catch them, I hold the can and light in my left hand and grab the worms with my right hand. A dim flashlight works best because worms are light-sensitive; a bright light will alert them to your presence. They're also vibration-sensitive, so walk softly. Any disturbance will cause them to instantly zip back down their holes.

Crawlers lie with their light-colored tail end in their hole and their darker head end stretched out. Grab them quickly by the tail end near the burrow and gently pull until they let go and come free. Pulling them from soft earth is much easier than from hard ground. Be patient; pulling too hard will break them in two.

Although worms regenerate lost segments to some degree, don't keep any damaged worms. Once you get a feel for the quick grab and gentle pull, your can will quickly fill with worms. With a little luck, your can will be full before your back starts aching from walking in a bent-over, worm-grabbing position.

Most kids who aren't afraid to get dirty enjoy the experience of catching fish bait. Here, Chloe Pestrue mixes worm bedding in a Styrofoam cooler.

"For healthy, happy worms, keep them in a cool, moist environment."

Storage and Care

For healthy, happy worms, keep them in a cool, moist environment. A small container of worms can simply be stored in the refrigerator, but larger collections will need special containers. The best method I've found is to use large Styrofoam coolers stowed in a cool basement. Placing some commercial worm bedding in the coolers will keep the crawlers lively and is much cleaner than dirt.

"The lowly angle worm has probably been responsible for more fish dinners than any other lure or bait."

I've had success using Buss Bed-Ding, made by Magic Products, Inc. (magicproducts.com). This is a complete food-and-habitat mixture which, after using, can be dried out and reused. Mix it according to the directions on the package, using fresh well water or rain water, not chlorinated or softened water. Be careful not to let the bedding get too wet, which will kill worms. Fill the Styrofoam cooler about half full of moist bedding, add the worms and close the top tightly. Don't worry, the worms won't suffocate.

For long-term storage and good health, worms can be fed organic material such as fruit and vegetable peelings or coffee grounds placed on top of the bedding. Magic Products also offers a prepared worm food (see sidebar, "Project Worm Food").

Catch More Fish

Transfer some worms and their bedding to a small cooler for a day of fishing. In warm weather, place a small ice pack in the cooler on top of the bedding to keep the crawlers fresh and lively all day.

The lowly angle worm has probably been responsible for more fish dinners than any other lure or bait. Besides saving money, learning to catch and keep your own supply of night crawlers may just make you a more successful fisherman. MP

Chloe works on her school science project.

PROJECT WORM FOOD

For her school science project, Chloe Pestrue experimented with Magic Worm Food to see if it really works as advertised. She prepared two coolers with Buss Bed-Ding and placed a dozen freshly caught night crawlers in each cooler.

One batch was fed weekly with worm food. The other batch had only the nutrients from the bedding. Each week, Chloe removed the crawlers from the bedding, washed them off, and set them on paper towels to absorb excess water. She then weighed each batch on a digital scale.

After six weeks, her records showed the night crawlers fed with Magic Worm Food had gained more weight than the worms who had only the bedding for food. She concluded that the worm food was beneficial, and she got an A on her school science project.


SPEED KILLS
HELL'S CANYON SPEED
IN STORES
JULY 2016
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gear SHOWCASE

SUNGLASSES FOR YOUR BIG GREEN TRACTOR

Wiley X has unveiled its Drill-X sunglasses, which are part of a new John Deere Safety Eyewear line. The Drill-X features premium styling and frame-trim enhancements. Like every John Deere model, the Drill-X meets the latest ANSI Z87.1 high-velocity and high-mass-impact standards, which means that Drill-X shades provide users with OSHA-grade eye protection. Wiley X offers the Drill-X in three versions, each boasting separate, unrivaled looks—even one with pink accents for women.

MSRP: $54.99 (non-polarized), $79.99 (polarized)

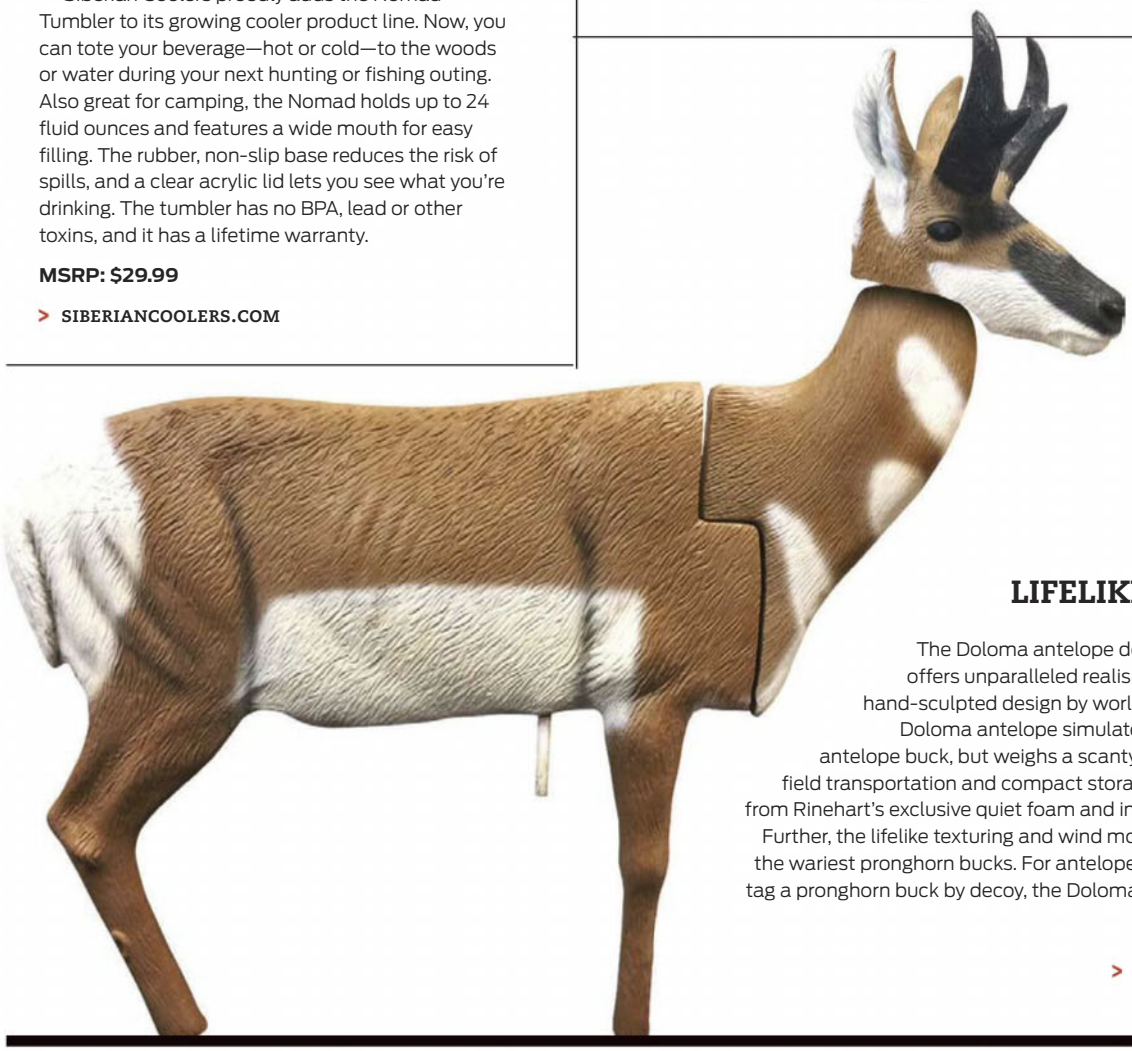
> WILEYX.COM

HOT OR COLD

Siberian Coolers proudly adds the Nomad Tumbler to its growing cooler product line. Now, you can tote your beverage—hot or cold—to the woods or water during your next hunting or fishing outing. Also great for camping, the Nomad holds up to 24 fluid ounces and features a wide mouth for easy filling. The rubber, non-slip base reduces the risk of spills, and a clear acrylic lid lets you see what you're drinking. The tumbler has no BPA, lead or other toxins, and it has a lifetime warranty.

MSRP: $29.99

> SIBERIANCOOLERS.COM



LIFELIKE REALISM

The Doloma antelope decoy from Rinehart offers unparalleled realism, the product of a hand-sculpted design by world-class artists. The Doloma antelope simulates a 135-pound live antelope buck, but weighs a scanty 9 pounds for easy field transportation and compact storage. It's constructed from Rinehart's exclusive quiet foam and includes a carry bag. Further, the lifelike texturing and wind movement fools even the wariest pronghorn bucks. For antelope hunters looking to tag a pronghorn buck by decoy, the Doloma is the cat's meow.

MSRP: $179.99

> RINEHART3D.COM

BRILLIANCE REDEFINED

See what you've been missing with Celestron's all-new Echelon 10x70mm binocular. Oversized objective lenses gather light optimally, and a proprietary XLT coating produces maximum light transmission throughout the entire optical path. Fully multi-coated optics, BAK 4 prisms and large exit pupils ensure hours of crisp, strain-free glassing. The Echelon includes lens caps, rain guard, neoprene neck strap and waterproof hard case. The gargantuan 70mm objective ensures maximum brightness even in low-light conditions.

MSRP: $749.95

> CELESTRON.COM

FAST ACTION ON THE TROLL

Dedicated fishermen know trolling is an excellent way to cover water and intercept saltwater gamefish as they feed on schools of slender baitfish, such as smelt. With its unique shape and swimming action, Acme's slab-sided Kastmaster XL entices savage strikes from various gamefish including striper, bluefish, bonito, albacore, sea trout, salmon, Spanish mackerel and others. Available in four sizes—2 ¾, 3 ½, 4 and 4 ½ inches—the Kastmaster XL also comes in five color options, including blue, pink, green, silver and chartreuse. The lure swims frantically at various speeds for the ultimate in fatal attraction. **MSRP: N/A**

> ACMETACKLE.COM

HEARING PROTECTION AND ENHANCEMENT

WildEar's Master is designed for sportsmen and women who shoot. Featuring advanced technologies, it protects your ears against loud noises, including muzzle blasts, and it enhances hearing for improved communication or so you can hear a distant elk bugle or turkey gobble that you'd never hear without it. The Master includes four digital hearing-enhancement programs, and it also features a new on/off switch. An adjustable volume provides up to five times more than normal hearing.

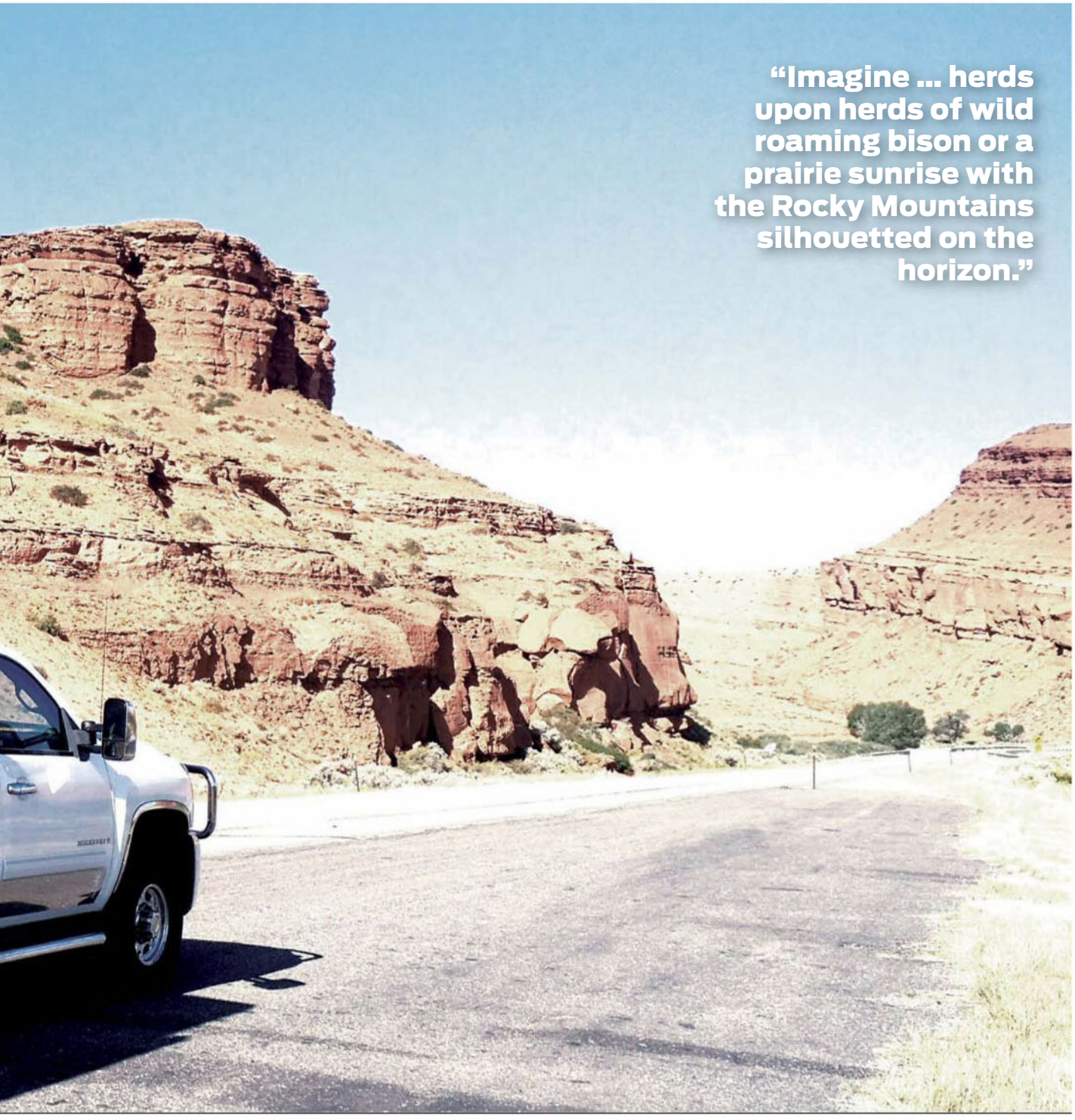
MSRP: $1,099.99

> WILDEAR.COM

FULL-TIME FIFTH-WHEELING

A LOOK AT LIFE ON THE ROAD

By Darron McDougal



"Imagine ... herds upon herds of wild roaming bison or a prairie sunrise with the Rocky Mountains silhouetted on the horizon."

Ever wonder what the nomadic pioneers experienced as they moved across the country via covered wagon? They must have had quite the adventure, with tons of variables, disasters and hardships. But despite enduring the coldest of colds and the hottest of hots—without heat or air conditioning—they saw sights most eyes will never see. Imagine, for a second, herds upon herds of wild roaming bison or a prairie sunrise with the Rocky Mountains silhouetted on the horizon.

Back then, it was possible to live on the move, mostly because traveling pioneers either lived off the land or traded goods with others. I'm sure others moved from town to town seeking work, too. Regardless, few old-time pioneers were employed by brick-and-mortar businesses with 9:00 a.m. to 5:00 p.m. operating hours.

Today, a small percentage of Americans have a job flexible enough (and prosperous enough) to support the drifter lifestyle. So, many people live their entire lives without seeing what our

Imagine towing your "house" through these red rock cliffs.

(top) **The author prepares to hook up his fifth-wheel camper.**

(right) **From top left and going clockwise: hot-water valve, black-tank flush, water filter, tank-dumping handles, fresh water inlet, outdoor faucet/hose and winterizing system.**

(below) **The author's wife, Becca, washes dishes in the camper.**

beautiful country offers. Of course, many retired people are the exception, taking in everything they can during their golden years, and they do it via motorhome or camper. Some young folks do it on more of a part-time basis, although there are those who do it full-time, like my wife, Becca, and me.

To the uneducated, living in a camper may seem like a huge sacrifice. This article will challenge you to reconsider that mindset, especially if you're retired or have a job that lets you work from virtually anywhere. Imagine the beauty of calling the ocean or mountains "home."

The Leap

My wife and I first contemplated the road life when the home we were renting sold. We moved into her folks' place and lived there seven months while we hunted for a new home. The housing market in our hometown offered basically nothing we were looking for, which was a decent place in the country with 5-10 acres. Knowing we couldn't live with my in-laws forever, camper discussions became daily musings.

We soon talked with other people who do it full-time and our interest grew. Being a full-time writer and editor, I can work from anywhere that has electricity and Wi-Fi, so that wasn't a concern. My in-laws agreed to continue getting our mail at their address and deposit checks for me, too.

We scoured the web for information, and visited a local RV dealership to scope out the

interior of several campers. We prayed for God's direction as we pushed forward and began shopping for a rig. After hours and hours of shopping online, we scheduled showings for two models listed on Craigslist by individual sellers.

The first one was a 32-foot camper by Heartland—a gorgeous fifth-wheel rig. It was slightly above our budget, and the seller wasn't willing to budge on the price. So, we continued on to see the next rig, a 39-foot fifth-wheel camper by Forest River. We loved all of its windows and that it had three slides. Best of all, it was within our price range.

Though we both knew we were going to move forward and make an offer, we thought about it for a couple of days, just to be sure. We both felt at peace with the decision to make our offer. The couple selling the camper countered with an agreeable price, and we soon became owners of a 2010 Forest River Sierra fifth-wheel camper. The camper also came with a fifth-wheel hitch and several other accessories.

So, we had a huge garage sale to get rid of everything we wouldn't need on the road, minus items we placed in storage at my grandma's place.

Getting Started

Once the couple delivered the rig, we obviously had to buy a pickup truck designed to pull a 16,000-plus-pound camper. A good rule of thumb if you're full-timing is to shop for a camper first, a truck second. You're better off being over-trucked than under-trucked, and a diesel engine is the way to go if you're pulling a big rig. They have a lot more power.

In our case, we found a beautiful 2009 Chevy Silverado 3500 on Craigslist. It was priced right, so we purchased it. The truck wasn't drilled for our hitch, so we had the hitch installed by a professional for $400. I felt that was a bit steep, but I didn't have the time or tools to do it myself. Plus, when you're pulling a "house" with your truck, you don't want anything to go wrong.

Preliminary Run

I took one 10-mile run with the rig to familiarize myself with towing, and everything went smoothly. We made a few minor fixes with help from our wonderful relatives, Greg and Diane Nutter, and my father-in-law. We checked the lug nuts and pressure on the truck and camper tires, purchased tools essential for changing tires on the road—at the time, we had no idea how handy they would be—and prepared for our inaugural run as full-time fifth-wheelers, an elk hunt in Idaho.

The Learning Curve

Eight hours in, we blew a truck tire. It surprised me, but I manned the wheel and coasted to a halt. Our truck is insured with roadside assistance, and though I can easily change a tire, I opted to call Geico for free help since vehicles were whizzing by us at 75-80 mph. I just didn't feel safe doing it with all of the traffic.

Once assistance came, the service man indicated our truck tires were underrated for even a ¾-ton truck, let alone our 1-ton truck. And that's without a heavy camper payload. The tires came with the truck when we bought it, and the previous owner obviously had made

BOONDOCKING

Dry camping—or boondocking—is camping without hookups, and it's usually free. If cities and concrete aren't your cup of tea, boondocking is a great way to spend a few nights. Or, if you have the right equipment, you can boondock indefinitely. Things you'll need for long boondocking ventures are a generator and fuel, a sanitary water barrel and a water filter and pump.

With good water filters, you can pump water from a river, pond, lake or spring into your water barrel and use it for drinking once you pump it into the camper's fresh tank. Or, you can run to a filling station or park that has free water. This allows you to fill your fresh tank without pulling the entire camper back to a water hookup each time you run dry.

As far as generators go, Honda makes probably the quietest and most reliable models. If you'll be running your air conditioner, be sure to get a generator with sufficient power.

We prefer dry camping as we move from one destination to the next. Most Wal-Mart stores offer free overnight parking, as do several travel stations, like Pilot. We pull in when we're tired, crawl into the camper, and sleep in our own king-size bed. No sketchy motels for us!

Author Darron McDougal takes a 10-mile test run to get familiar with the towing process.

"I took one 10-mile run with the rig to familiarize myself with towing, and everything went smoothly."

the ill-advised decision to slap six-ply load-range C tires on the truck. Of course, I should have checked them, but at the time I was a complete greenhorn. So, we had to get new tires for the truck.

Back on the road, we drove an hour before a camper tire blew out. By this time, we were really discouraged. I replaced the blowout with our spare tire, which got us to the nearest town, where we had all of the camper tires replaced. We didn't want any more setbacks, and even though the camper tires appeared to be in good condition, we weren't taking any more chances. Camper-tire blowouts can cause severe damage underneath the camper, but ours thankfully only melted and deformed the fender.

With all new tires, we didn't experience any more setbacks and arrived to our elk camp safely.

Live Anywhere

Since our Idaho adventure last fall, we've traveled pretty extensively. We spent a month in Oklahoma, several weeks in South Dakota and two and a half months in Florida, as well as a few several-night stays in other states. We ended up replacing the computer board in both our fridge/freezer and our furnace. As far as dicey situations, we faced freezing rain in Kansas, but made it out safely.

The possibilities are endless when your home is on wheels. In Florida, for example, we saw far more than we would've seen during a weeklong vacation. We stayed at two different beaches and even stayed north of Lake Okeechobee in Florida's premier heartland. There, I hunted Florida's coveted Osceola turkey and successfully took two of them.

We've found ways to target destinations based on things we like to do. Obviously, I love to hunt and so does my wife, but she also likes spending time at the beach. We've combined the two to keep us both happy. We've been attending church at nearly every location we've visited so far and have met some terrific strangers that have become close friends. These are opportunities our camper life has afforded us.

Nothing is Perfect

Do we sacrifice some things by living in a fifth-wheel camper? Sure. The biggest sacrifice is not having our own yard where we can shoot bows and firearms or plant a garden. And not being able to tend to my own mail 100% of the time poses occasional frustrations, although my mother-in-law and sister-in-law have been a tremendous help with communicating when important documents arrive. Not having as much storage as a house becomes difficult with all of my hunting gear. Yes, full-time fifth-wheeling has its downsides, but so does owning a home (repairs, yard chores, etc.). No lifestyle is perfect. If one were, we'd all be living it.

After full-time fifth-wheeling for nearly a year, my wife and I are talking about settling down, purchasing a home, selling our camper and buying a smaller one so we can still get away. We love the room our camper offers, but it's a big job pulling it across the country. If we do purchase a home and settle down, will I miss full-timing? Some aspects, yes; other aspects, no. Overall, it's been an amazing experience that has helped us see the country—with more roads, traffic and buildings, of course—and make amazing new friends as the early pioneers did from their covered wagons. MP

Fifth-Wheel Take-Off Checklist

I won't go into all of the tools and maintenance required for campers. I could write another entire article on that alone. Use the web for this information; you'll find answers to virtually all of your questions. However, here's a checklist to follow before hooking up and taking off.

- Retract TV antenna.
- Make sure the slide-outs are clear and retract them.
- Secure breakable décor, plates, glasses etc.
- Dump gray and black tanks.
- Retract rear jacks.
- Lower/raise front legs so the hitch lines up with the gooseneck.
- Drop truck tailgate.
- Approach the camper slowly and line up the gooseneck with the hitch.
- Make sure the gooseneck is fully secured in the hitch.
- Close the hitch (some hitches close automatically when the gooseneck is in place) and pin it.
- Loop trailer brake cable around the hitch handle.
- Plug in wiring for lights.
- Check lights (brake, hazards and right/left turn signal).
- Unhook drinking-water hose.
- Unplug from electricity.
- Punch trailering button on the truck shifter and take off.

Homespun Meat Treats

HOW TO MAKE JERKY AND SALAMI FROM WILD GAME

By Jason Houser

Hunters have many options when preparing big game, small game, furbearers and waterfowl. Deviating from steaks, burgers and roasts is often a welcome change. If you're like me, a snack of jerky, salami or summer sausage hits the spot. Summer sausage is perfect for entertaining, and jerky makes a great snack for kids, hunters, trappers, fishermen and campers. These treats are also great ways to use roasts, ground meat, waterfowl breasts and even furbearers before you begin filling your freezer again in the fall.

There are many good commercial jerky, salami and sausage kits available for purchase. These kits provide options for flavors and methods. I've experimented with countless kits and have found they're easily used and provide a good quality finished product. However, I recently ventured out and began making jerky and salami without commercial kits. Although I still occasionally use kits, I prefer the satisfaction of doing it all on my own.

PHOTO BY THINKSTOCK

“Summer sausage is perfect for entertaining, and jerky makes a great snack for kids, hunters, trappers, fishermen and campers.”

Most of the necessary ingredients are probably already in your pantry. If not, they're readily available at your local supermarket.

Making jerky, summer sausage and salami from scratch isn't difficult. The toughest part is waiting to sample the snacks. Unlike more common dishes, these recipes often call for marinating and cooking processes that can take hours, even days, to complete.

These are my favorite recipes for wild-game jerky and salami. I believe you'll find they're relatively simple and absolutely delicious.

Duck Jerky

I've never enjoyed waterfowl using traditional preparation methods. However, I eat what I kill, which is why I was heavily motivated to find a way to prepare ducks and geese to make them more appealing. The recipe below is for duck, so you'll have to adjust the seasoning amounts accordingly for geese since they're larger.

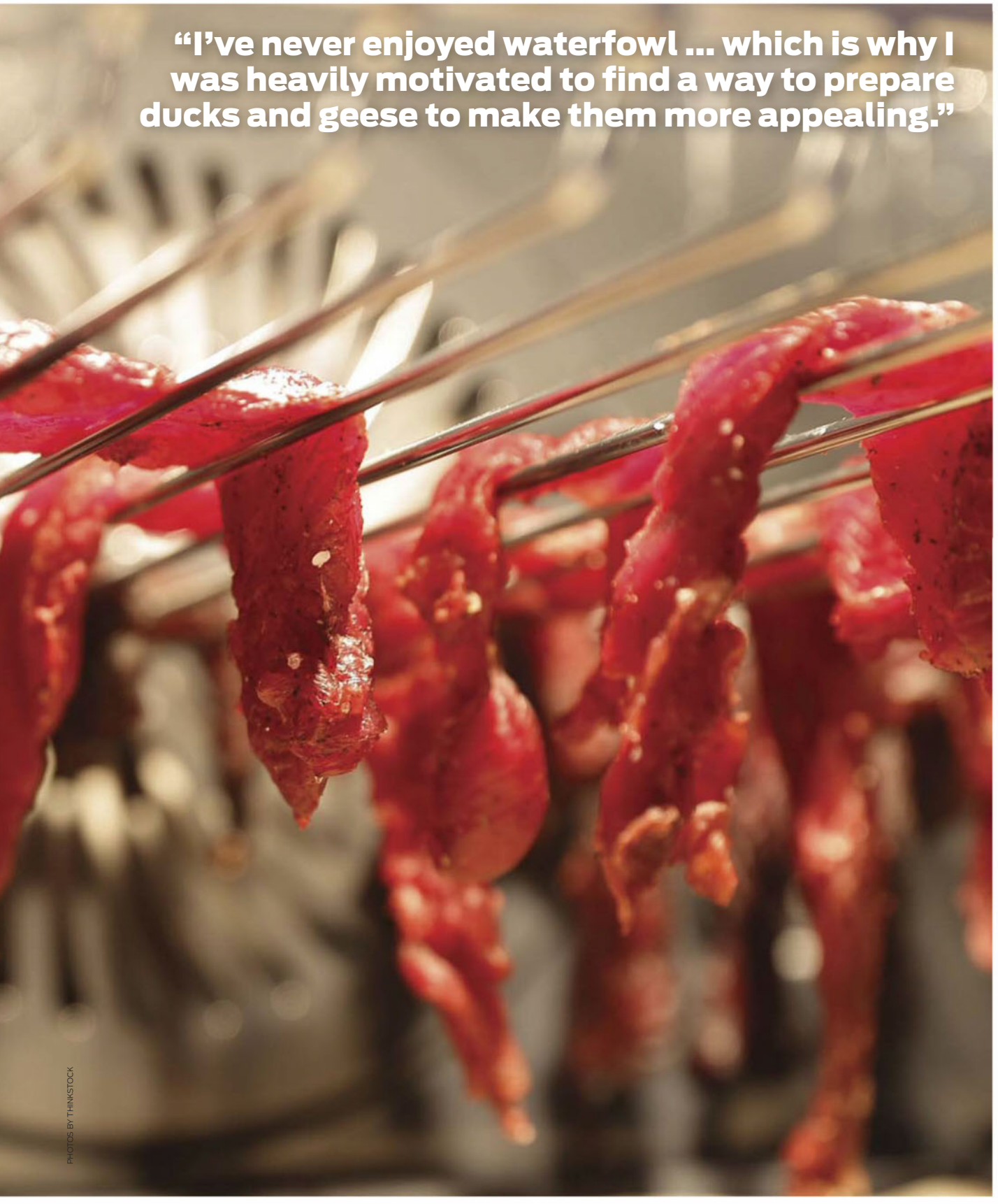
¾ cup soy sauce
¾ cup teriyaki sauce
1 cup red wine
1 tablespoon liquid smoke
2 tablespoons freshly ground peppercorns
1 teaspoon red pepper flakes
2 teaspoons rosemary
½ teaspoon onion powder
4 duck breasts

1. Mix all of the marinade ingredients in a plastic bag (soy sauce through onion powder).
2. Fillet the duck breast meat, then partially freeze it; this helps the meat slice easily. Carefully remove as much tendon and fat as possible. Slice ¼-inch strips along the grain.
3. Marinate the duck breast pieces overnight. The next day, prepare the jerky using one of the following three methods.

SMOKER: Use the lowest heat setting possible for 3 to 7 hours.

DEHYDRATOR: Dehydrate for 8 to 10 hours.

OVEN: Coat oven racks with cooking spray and line the bottom of the oven with aluminum foil. Drape the meat strips on the oven racks. Prop the oven door open 2 inches with a toothpick or short pencil. Cook at 150-170°F for 4 to 7 hours. When done, each strip should bend, but not break. Store in the refrigerator or freezer.



“I’ve never enjoyed waterfowl ... which is why I was heavily motivated to find a way to prepare ducks and geese to make them more appealing.”

PHOTOS BY THINKSTOCK

PHOTO BY THINKSTOCK

Big-Game Jerky

This recipe works with any red meat. I usually use it to prepare whitetail deer, but elk, moose, caribou, antelope and other big-game animals are equally viable candidates.

1 5-pound roast
1 quart water
1 cup distilled white vinegar
1 cup salt
1 tablespoon ground pepper
Steak sauce, to taste
Worcestershire sauce, to taste

1. Slice meat into ¼-inch-thick strips, slicing with the grain.
2. In a large pot, bring the water, vinegar, salt and pepper to a boil.
3. Add the meat strips to the pot and allow to simmer for 5 minutes. Remove the meat from the water/vinegar mixture and allow to dry on a plate lined with a kitchen towel or paper towels.
4. Place the strips on an oven rack. Set oven temperature to 200°F and prop door open slightly. Allow the meat to cook until almost dry, about 60 to 90 minutes.
5. Mix steak sauce and Worcestershire sauce to taste. Brush the mixture on both sides of the jerky strips. Continue cooking another 30 minutes. Store the jerky in airtight containers.

Beaver Jerky

I love to trap. Although, not all furbearers are considered edible, I do occasionally eat barbecued coon. I've tried some other animals, too. Some were OK, others weren't, but one I've enjoyed in particular is beaver. There are only so many ways to cook beavers, which is why making beaver jerky is a great way to use the animals you've trapped. Once you try it, you won't taste the difference. It's so similar to other, more common types of jerky.

3 pounds beaver meat, cut into thin, fat-free strips
½ cup steak sauce
½ cup Worcestershire sauce
½ cup soy sauce
1 tablespoon liquid smoke
1 tablespoon salt
1 tablespoon ground black pepper
1 tablespoon garlic powder
1 tablespoon onion powder

1. Place all of the ingredients, including the beaver meat, into a zip-top plastic bag. Shake well and place the bag in the refrigerator for three days. Be sure to shake the bag daily.
2. After three days, rinse the meat. Place the meat strips on an oven rack and dry at 200°F for 2 to 2 ½ hours. Store jerky in an airtight container.

Oven Salami

1 pound ground venison
½ pound ground pork jowls
1 ½ teaspoons minced garlic
1 tablespoon plus 1 teaspoon Morton's Tender Quick
1 teaspoon coarsely ground black pepper
½ teaspoon ground coriander
1 teaspoon cracked black peppercorns
¼ cup beef broth

1. Combine the venison and pork in a large bowl; add remaining ingredients, except broth, and mix thoroughly. Transfer the mixture to a zip-top plastic bag and place in the refrigerator to chill overnight. To taste test, microwave a ½-inch ball for about 15 seconds on high, or fry a small patty until all pink is gone.
2. Reseal the bag, flatten the sausage mixture with your palm until it's about 1-inch thick. Place it in the freezer for about 2 hours. When the edges of the sausage mixture begin to harden, add the broth and mix well. For the best texture, mix the sausage until it becomes quite sticky. The mixture will become harder to work as it gets stickier, and it should actually form into a ball.
3. To mold the salami, lay a length of plastic wrap on the counter and place half of the sausage mixture in the center. Fold the plastic wrap over and shape the ball into a 2-inch-diameter log. Twist the ends of the wrap to round off the salami and carefully place the log on a baking sheet, rolling the log off the plastic wrap. Note: Do not cook the plastic wrap.
4. Repeat step 3 with the second half of the sausage mix, leaving at least a 1-inch gap between the two logs for air to circulate.
5. Preheat the oven to 200°F and cook the sausage for about 5 hours. Chill, slice and serve.

A Labor of Love

Nearly everyone loves jerky and salami, but buying it prepared is expensive. Chances are you already have what you need in your freezer and cabinets to prepare these tasty treats inexpensively at home.

Jerky and salami make great treats for children and adults. Plus, they're perfect anytime snacks. They're also an excellent way to use up remaining harvest once you've tired of traditional recipes. It's satisfying to know you made something tasty from your success in the outdoors. The only downside is that your treats will disappear almost as quickly as you make them. When this happens, simply start planning your next batch. MP

FISH JERKY, ANYONE?

Jerky isn't just for red meat. If you have access to fresh low-fat fish, then consider making fish jerky. The process is basically the same as for red meat, except the marinade recipes are usually sweeter. You'll also need to be careful to remove all of the fine bones.

To start, select the fish you want to use. Once the fish has been prepared—scales removed, deboned and filleted—marinate it. Use your favorite fish marinade or try the following recipe. If you'd rather play it safe—at least for your first attempt— Hi Mountain Seasonings offers an excellent fish-jerky kit.

Fish Marinade

1 pound low-fat fish, sliced into jerky-sized portions
1 cup boiling water
2 tablespoons teriyaki sauce
3 tablespoons Old Bay seasoning
1 cup light brown sugar
½ to 1 tablespoon liquid smoke—optional

1. Whisk all of the ingredients, except fish, together in a small saucepan over low heat. Continue heating and stirring until the sugar has dissolved. Remove the saucepan from the heat and set aside until the mixture cools to room temperature.
2. Place the fish slices and the marinade into a zip-top bag and marinate for up to 4 hours, refrigerated. Turn the bag once per hour to ensure all fish slices are evenly exposed to the marinade.
3. Drain the fish, pat it dry with clean paper towels and dry using a dehydrator, oven or smoker. Be sure not to stack the fillets on top of one another; space them evenly to promote air circulation. If you use a home oven, place the fish on a wire rack so liquid can drip and air can circulate. When the fish jerky is ready, store it in a zip-top plastic bag.

DIY Moose Adventure

BOWHUNTING BIG BULLS IN THE CANADIAN WILDERNESS

By Randy Templeton

It was the final week in September and our second DIY adventure into Canada's wilderness with Halley's Outpost Camps located in Minaki, Ontario. We'd be hunting near a pristine wilderness lake we call "No Name." On arrival, Gene Halley informed hunting partner Mark Alexander and me that moose had been moving steadily, and he felt we'd timed our rut hunt perfectly.

Halley also said an early frost had killed mosquitoes and "no-see-ums." Unfortunately, though, the extended forecast was calling for above-normal temperatures, news we didn't want to hear, but we came prepared with ThermaCells and plenty of refills in case the pests returned.

Moose can hear a call from long distances and have the ability to pinpoint the source. Megaphone calls like this Bull Magnet will increase your calling range.

Once we loaded our gear and strapped on our seatbelts, pilot Rob Halley put the pedal to the metal. The Turbo Otter's engine roared as we taxied across the lake and lifted off.

About 30 minutes later, the floats were skimming across No Name's glass-smooth water for the landing. Within minutes, we'd unloaded our gear, and the plane had disappeared from sight. I turned to Mark and asked, "Do you hear that?" Mark replied, "I don't hear anything." I said, "That's exactly my point!" Other than a loon calling in the distance, it was utterly silent. The flight to camp was a great experience, but in the grand scheme of things, our DIY adventure had only just begun.

(right) **Moose have relatively poor eyesight, but their hearing and sense of smell more than compensate for it. A little cow-in-heat or bull-in-rut scent could improve your odds of luring a bull into range.**

(below) **It's not uncommon to find fresh thrashings like this around marsh or meadow edges where moose feed. Bulls thrash trees to remove velvet, but it's also an aggressive act when another bull invades his space.**

I'm often asked how I go about planning an adventure hunt. The answer is simple, considering the fact that I'm on a limited budget like most working stiffs supporting a family. I go through a carefully outlined process that ensures getting the most for my hard-earned dollars. I'd like to share what I've learned throughout the years, and with any luck, you'll understand what it takes to book your own DIY moose adventure.

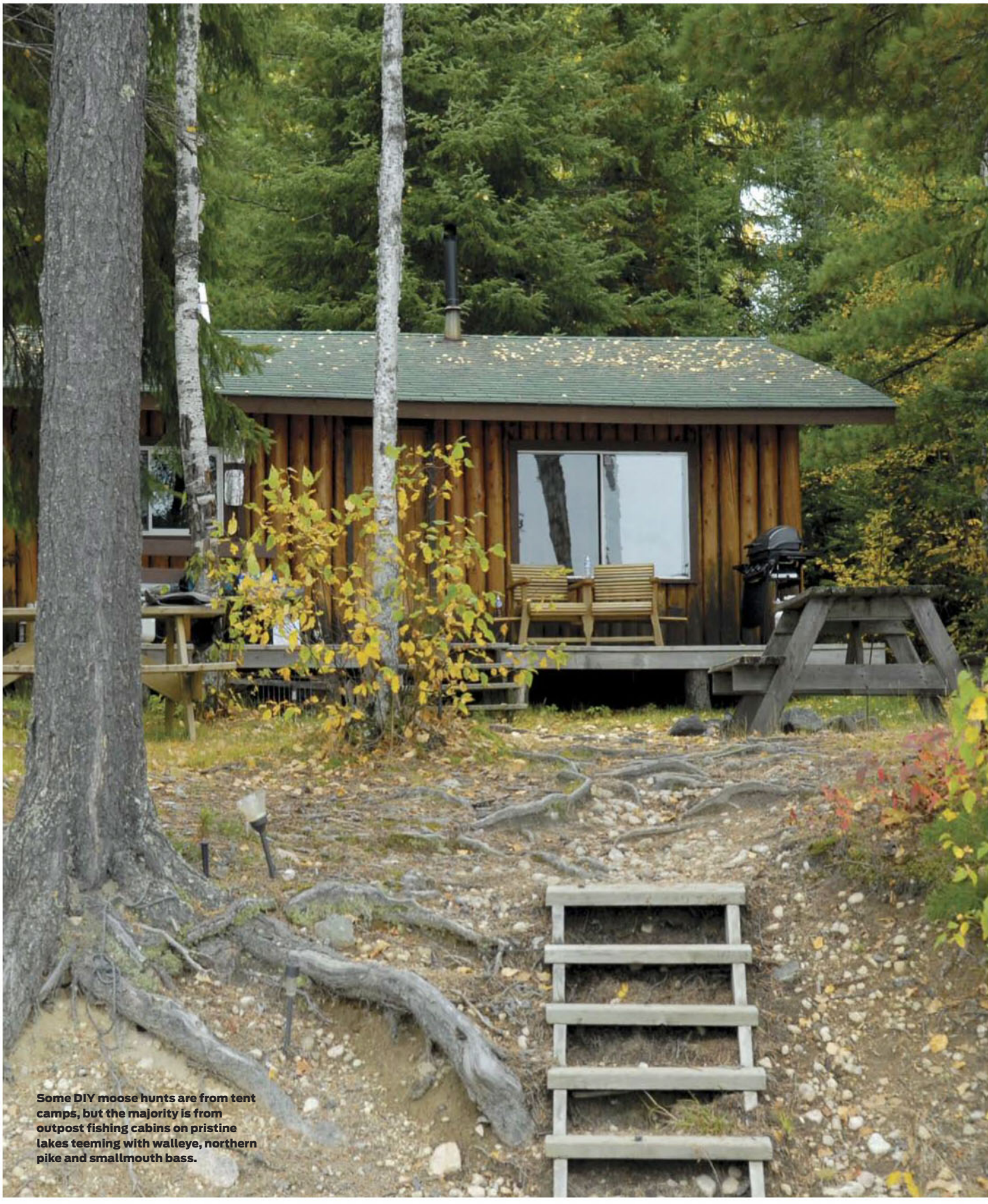
Getting Started

Non-resident tags are allocated to outfitters based on the size of their area and the moose population. To acquire a tag in Canada, you must hire an outfitter's services. For that reason, finding a reputable outfitter with tags becomes the starting point for planning a DIY moose hunt.

Obviously, if you know someone who's previously used a reliable outfitter, time spent researching can be shortened considerably. Otherwise, you can skinny down the list of reputable outfitters by going to the Northwest Ontario Outfitters Association website, noto.net.

"... the extended forecast was calling for above-normal temperatures, news we didn't want to hear."

To tip the odds in your favor, don't be afraid to try a decoy. Templeton likes this Montana decoy because it's lightweight, compact and easy to set up.



Some DIY moose hunts are from tent camps, but the majority is from outpost fishing cabins on pristine lakes teeming with walleye, northern pike and smallmouth bass.

"We hunted from sunrise to sunset the first three days but hadn't seen or heard a single moose."

Like elk and whitetails, your best odds are during the rut. You can't control the weather, but past experience proves peak rutting activity occurs between Sept. 23-27. Mark and I schedule our hunts to coincide with those dates.

Know the Area

One of a DIY hunt's toughest challenges is becoming familiar with an area. You're going to have questions; answers come by hovering over a topographical map with the outfitter. Marshes, coves, sandy shorelines and extended shores of cover are typically the best places from which to call. Review these with the outfitter, and pay close attention to the wind requirements for each spot.

From my viewpoint, the three most important things are weather, prevailing winds and having multiple calling locations so you can play the wind. You can't control the weather, but the best case scenario is having multiple options for any given day, regardless of the wind's direction.

For example, let's say you have four potential calling spots and each is on a marsh's south end. These places would be great if the wind daily prevails from some northerly direction, but that rarely happens. If the weather turns warm, you'll more likely be dealt southerly winds, leaving you without options. Consequently, you'll be sitting in camp all dressed up with no place to go.

Assuming you book, review the map again with the outfitter when arriving to confirm your suspected calling spots. Your outfitter likely will point you toward other places you hadn't even considered.

Set Realistic Goals

Setting realistic goals is something nearly everyone struggles with, including me. In fact, I've set headstrong goals well before a hunt, but changed them midweek.

This reminds me of our first moose hunt. It was a guided hunt, and I'd previously set a goal to shoot a bull that would meet the Pope & Young Club minimum requirement of 135 inches.

The first morning, Mark shot a bull a half hour after sunrise. It wasn't a giant, but he was tickled. My guide, Steve, and I hunted hard all week and endured torrential rains, warm weather, high winds and a bazillion mosquitoes and no-see-ems. We had a couple of close encounters, including one with a 60-inch-wide giant that came in one morning through the fog. Unfortunately, unpredictable winds blew the gig.

On our final day, I arrowed a bull minutes before the plane arrived to fly us out. It wasn't the record-book bull I'd hoped for, but I went home with fond memories and 400 pounds of delicious meat.

The point is, unless you're willing to possibly go home empty-handed, set realistic goals and remain flexible to the end.

Mastering Moose Talk

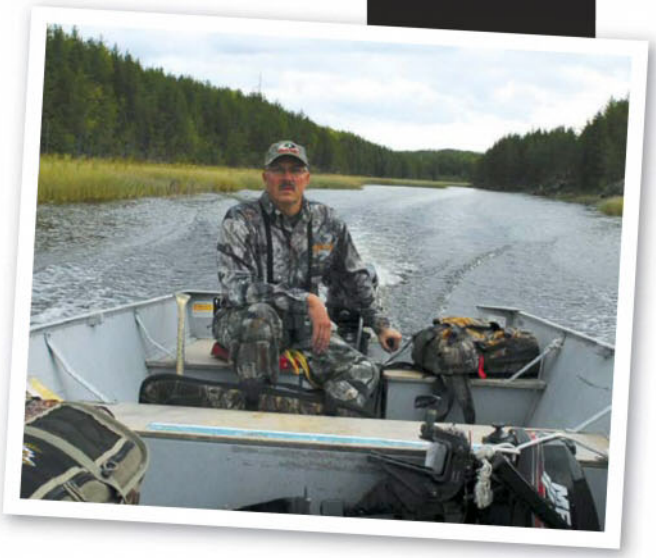
The whines of a cow in heat and the bull grunt are two calls you'll want to master. Unlike calling elk or turkeys with diaphragm or reed calls, moose-calling requires you to replicate a bull or cow with your own vocal cords. You can learn through trial and error, but I suggest investing in a good instructional video like the *Gouthro's Moose Madness* series well before your hunt.

When calling, it's best to team up with a buddy: One person is the designated shooter and the other is the caller. Because moose typically approach from downwind, the

KNOW WHAT'S INCLUDED

For many, a moose hunt is a once-in-a-lifetime hunt, so it's important to know exactly what's included beforehand. It's like ordering a pizza. If you expect something other than basic toppings, it's probably going to cost extra. Most outfitters are forthcoming with what's included, but it doesn't hurt to ask the following questions to avoid any surprises.

- **What's the success rate for bowhunters?**
- **What services and gear are provided in the package and what isn't?**
- **Will anyone else be hunting the area before I arrive or at the same time?**
- **Do you fly in to check on your clients? If so, how often?**
- **Is there a charge for flying out the meat or for cold storage?**
- **Do you provide a satellite phone to be used for emergencies?**
- **Do you provide a boat, motor and gas at no extra cost?**
- **Ask for both successful and unsuccessful references. Call both and ask how satisfied each was with the area they hunted and with the outfitter's services.**



You can't cover 10 square miles every day on foot, so boats are the most efficient means of traveling to and from calling locations.

Fresh meat and antlers are the rewards successful moose hunters reap.

GOUTHRO'S MOOSE MADNESS series is one of the market's best instructional moose-hunting videos. You'll learn passive and aggressive calling tactics, how to set up, and you'll gain a fair understanding of moose behavior. To learn more, visit gouthrosmoosemadness.com.

shooter should be positioned 30 to 50 yards ahead (upwind) of the caller.

The primary strategy will find you calling from the edges of areas where moose bed, feed and breed. The objective is to call a lovesick bull into the open rather than penetrate too deep and foul the area.

Fresh tracks, beds, thrashings and droppings around the marshes will confirm any hunches that moose are actively in the area. Like elk wallows, moose have similar spots called "rut pits" where they wallow in the mud and leave their scent.

There's no set rule for how long to stay in one spot after calling, but I know from experience that an hour isn't too long. Bull moose are known to travel a couple of miles to a whining cow. What's amazing is how a bull can nearly pinpoint a caller's exact location. I once witnessed a bull walk more than a mile around a lake to a guide's call. It took about 20 minutes, but he walked within feet of where the guide had been calling.

If a bull responds before dark, but doesn't show up before legal shooting hours fade, return to the same location the next morning. Chances are the bull will hang around and continue looking for the cow he heard.

The Adventure Continues

We hunted from sunrise to sunset the first three days but hadn't seen or heard a single moose. We saw plenty of fresh sign, so we knew moose were in the area. The warm temperatures had obviously slowed daytime movement. We could only assume the moose were holding up in a cool place during the day and moving nocturnally.

The fourth morning there was a light drizzle, and temperatures had dropped into the mid-30s. We launched the boat before dawn and headed to an overgrown snowmobile trail. On arrival, we walked up the trail riddled with fresh tracks and thrashing to a bog surrounded by black spruce. There, we found a rut pit that reeked to high heaven.

Within an hour, while alternating between our birch-bark call and a homemade can call, we heard a stick crack in the distance followed by a grunt. Another hour elapsed

“Soon after, I spotted a rack as wide as a plywood sheet maneuvering through the trees.”

The author had high expectations of shooting a record-book bull, but was perfectly satisfied with tagging this young bull during literally the last half-hour of his first moose hunt. PHOTO BY MARK ALEXANDER

without a sound.

We decided to move back toward the lake, hoping the bull would think the “cow” he heard was leaving. I’ve used this tactic successfully on turkeys and hoped it would work on a stubborn moose, too.

I called for nearly an hour without any response. We’d just discussed leaving when Mark spotted a bull along the lakeshore, maybe 300 yards away. Figuring the bull had already pinpointed our location, I made a couple of soft calls and shut up.

Minutes later I heard antler palms scraping trees, followed by a repetitive Whaah … Whaah … Whaah … as the bull came closer. Soon after, I spotted a rack as wide as a plywood sheet maneuvering through the trees. The bull cut the distance quickly, and when he stepped into a narrow opening, I settled my top pin and released. On impact, the Muzzy-tipped arrow sunk to the fletching and sent the 7-foot-tall giant charging uphill. I couldn’t see him, but I could hear antlers banging through the trees. Seconds later, I heard a loud thud, and then it became dead quiet.

A few minutes later, we found the bull lying on his back with all fours pointing in the air. He was a trophy by all means of measure, and my quest for a record-book bull had ended excitingly.

Conclusions

For those looking for a challenging hunt, a DIY moose adventure is one you’ll want to add to your bucket list. As you begin planning, review the aforementioned tips and get the most for your hard-earned dollars. MP

PROVEN OUTFITTERS

I’ve booked several moose hunts and fishing trips with Halley’s Outpost Company, based in Minaki, Ontario, Canada. Halley’s offers both moose and black bear hunts, but it also books fishing trips to outpost camps on remote lakes loaded with trophy walleye, smallmouth, northern pike and lake trout. To learn more, visit outpostcompany.com or call (800) 617-1906.

I’ve also booked a couple of moose and bear hunts with Quetico Country Hunts. It specializes in moose and black bear hunts but also offers trophy-fishing trips to some of Ontario’s most pristine lakes. To learn more, visit queticocountryhunts.ca or call (807) 597-8317.

Large planes like this Turbo Otter are the workhorses used when flying four or more hunters and their gear to and from remote camps.

Backcountry Camping

DO YOU HAVE WHAT IT TAKES?

By Tracy Breen

Something about camping's simplicity refreshes the soul, especially if you truly camp. I'm not talking about pulling an RV into a campground that offers Wi-Fi, a heated swimming pool and an arcade. I'm talking about real camping, which consists of a tent, a little bit of food and wide-open spaces. I relish this camping style most. I enjoy unplugging from the world and disappearing off the grid.

My favorite camping style is backcountry camping, several miles off the beaten path, far from the everyday hustle and bustle. That's my idea of camping.

Backcountry camping is fun, but requires a fair amount of specialized gear and preparation. The right gear simply makes outings more enjoyable. Using the wrong gear yields miserable, disastrous and even fatal experiences. Let's take a look at what you need to know before tapping untamed places with your tent and bedroll.

PHOTO BY THINKSTOCK

"... real camping ... consists of a tent, a little bit of food and wide-open spaces."

PHOTO BY THINKSTOCK

“While researching the trail I’d be hiking, I learned that people regularly die in the Grand Canyon from dehydration.”

A high-quality pack like this one is a must when hiking miles daily. A good pack makes heavy loads feel light.

A lightweight tent like this Easton version is a great option.

Freeze-dried meals by Mountain House are the author's favorite while backcountry camping.

The Right Tent

One of the most important things to include in your wilderness arsenal is a top-notch tent. Yes, a $100 tent does the job most of the time, but in the backcountry, weather can turn wicked without notice. A tent designed to handle extreme conditions is crucial equipment.

Throughout the years, I've used many different tents while camping. Of them, a tipi is my favorite backcountry shelter. There are many available on the market, but the one I've used most is made by Kifaru. It weighs slightly more than 5 pounds and has a collapsible wood stove that keeps the tipi warm and can also be used for cooking or heating water. The tipi excels in the backcountry because it's lightweight and can handle wind, rain and snow. Kifaru offers smaller tipis that weigh even less, but I prefer the four-man version.

Cabela's, Easton and other companies make great tents, too. On a recent trip to the bottom of the Grand Canyon, a friend and I used an Easton tent. It was compact, lightweight and worked well for two guys. When camping in mild weather, a small two- or three-season tent works well. When camping in the fall or winter, it's hard to beat a wall tent or tipi.

Backcountry Food

Another consideration when planning a backcountry camping trip is the food you'll bring. Some folks love eating eggs, bacon and homemade pancakes when camping off the grid. This is great, if you have enough people to help pack all of that food into the backcountry.

Often, my favorite backcountry cuisine consists of freeze-dried food. Mountain House makes really tasty, good-quality freeze-dried meals. Choices include breakfast meals, fajitas, spaghetti and everything between. The company offers such a wide variety of great-tasting food options, that even if you camped a week or longer, you wouldn't have to eat the same meal twice.

First-time backcountry campers often scoff at the idea of eating freeze-dried food, but the truth is, it tastes great. It doesn't

CHOOSING A BACKPACK

There are many different backpacks on the market. One of my favorites is the Outdoorsmans pack. What makes it unique is its curved polypropylene frame that fits the body like a glove and weighs only 2 pounds. The entire pack weighs slightly more than 7 pounds, and features many pockets for carrying all of your gear. Underneath each pack bag is a load-carrying system that's part of the frame. Simply remove the main bag and load up. Best of all, the pack is made in the USA. Visit outdoorsmans.com for more information.

A tipi makes a great backcountry shelter. They are lightweight and built for extreme weather.

Author Breen (second from left) and four friends prepare for a journey into the Grand Canyon.

taste like military MREs—I promise. Freeze-dried food is the best option when wilderness camping because the meals are super-lightweight and require little preparation: Simply pour boiling water into the bag of food, let it set a few minutes and eat. After a long day of hiking and exploring, the last thing most people want to do is prepare a big meal. Freeze-dried food is a great option.

A Quality Backpack

To transport food and gear into the backcountry, you'll need a good backpack. A high-quality backpack can be expensive, but the good news is that if you buy a quality pack, it'll probably last your lifetime. Spend as much money on a backpack as you can afford. A good backpack will make 60 or 70 pounds feel like 40 pounds. A low-quality pack will make 50 pounds feel like 80.

It's important to know how much weight you can handle long before you head into the backcountry. Months before I leave on a trip, I weigh all of my gear and hike with it in my backpack to train for the real thing. I've learned that I can handle 50 pounds on my back for days on end. I can handle 60 or 70 pounds if I'm going on a short hike to my camping spot. Know your limitations when you head for the timber. Otherwise, you could be miserable during the entire trip, or find yourself in a bind miles from civilization.

H_2O

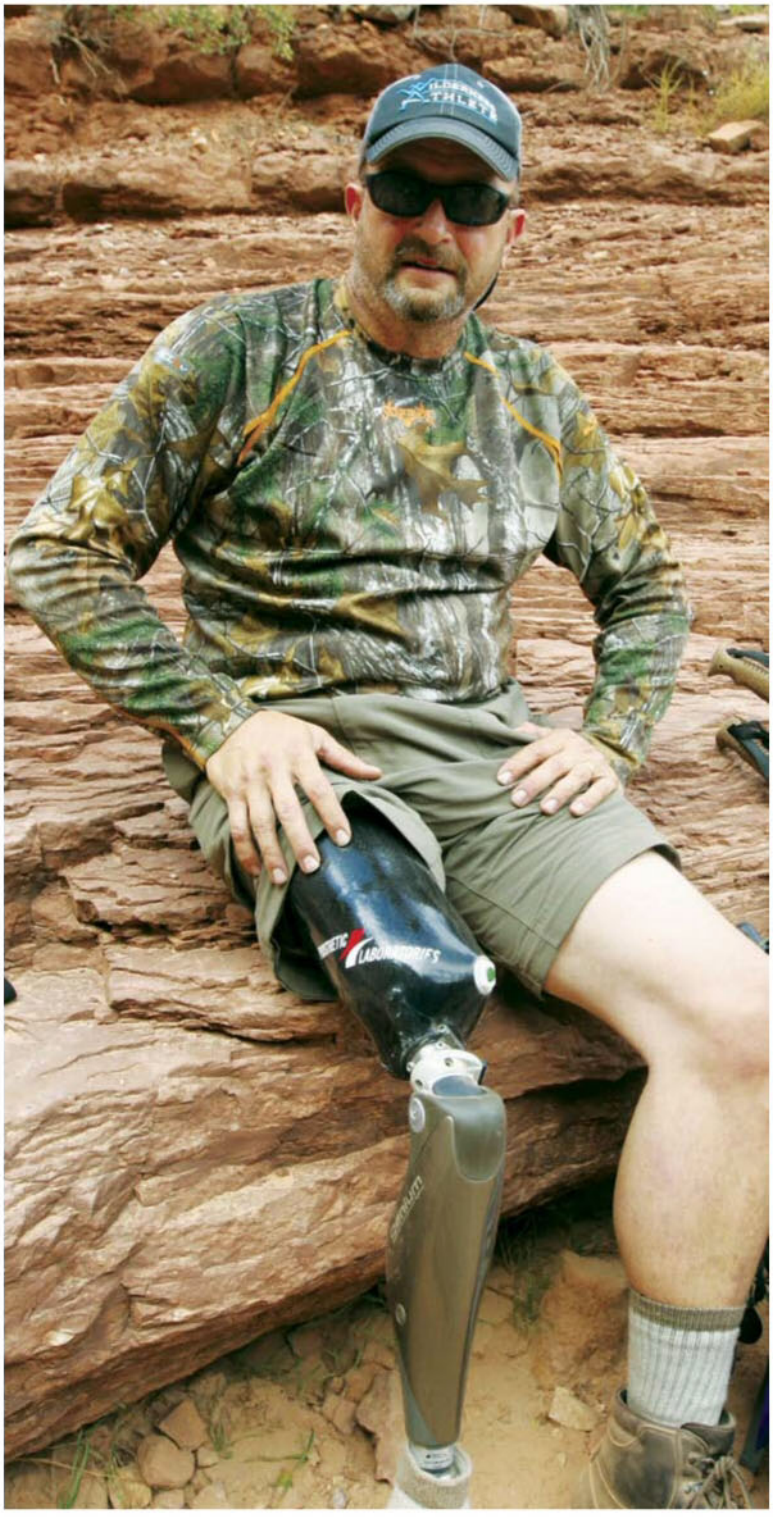
Whether you bring water with you or filter it from a wilderness source, you'll need lots of it. While hiking and camping, I consume more water than I do when I'm at home to compensate for the additional physical activity.

A few years ago, I hiked to the bottom of the Grand Canyon. While researching the trail I'd be hiking, I learned that people regularly die in the Grand Canyon from dehydration. Extreme heat coupled with exercise can quickly exhaust and dehydrate you. That's why I always carry a water filter and iodine tablets. I always use the filter, but if the water looks questionable, I use the

STAY HYDRATED

Drinking only water can get old when hiking the backcountry. An alternative is to drink Hydrate & Recover from Wilderness Athlete. The powder quickly combines with water, and it's packed with nutrients, hydrates more effectively than water alone and tastes great. Best of all, it's very low in sugar. Visit wildernessathlete.com for more information.

"If your boots aren't broken in when you begin hiking, you'll likely develop blisters, which will hinder or even end your hiking trip."



tablets, too.

When planning a backcountry camping trip, study maps and try to camp in an area you know holds water. A fresh lake, spring or stream makes camping more enjoyable. A few years ago, I was camping in Colorado, and much to my surprise, a severe drought had dried up the creek beds where I was camping. As a result, I spent most of my time searching for water. Having access to water nearby makes cooking and filling up bottles and water bladders easy so you can spend more time having fun and exploring.

Keep Your Feet Happy

Good footwear is a wilderness must-have. You have to keep your feet happy if you plan to do much hiking. One mistake campers often make is buying a new pair of boots a week or two before their trip. If your boots aren't broken in when you begin hiking, you'll likely develop blisters, which will hinder or even end your hiking trip.

Besides good footwear, I always wear two pairs of socks. This decreases the chances of rubbing and hot spots. Wearing a thin pair of blister socks underneath a pair of wool socks is my favorite combination.

Carry Navigation Tools and a Spot Device

Backcountry camping is fun, but when you're miles from civilization, falling and getting hurt or lost are real possibilities. I never leave home without a compass, a high-quality GPS and a SPOT device, which is an emergency navigation beacon. If you get lost, simply push a button on the SPOT device to alert local authorities of your location and that you need help. Many people have been rescued thanks to this service.

Go Prepared

When camping in the backcountry, you can have lots of fun glassing mountainsides for wildlife, bird-watching, hiking remote trails or scouting for an upcoming hunting trip. Whatever your goals, make sure you have the right gear. It'll make the trip far more enjoyable and less dangerous. MP

Breen's friend, Randy Herlein, hiked the Grand Canyon with a prosthetic leg. If he can camp in the backcountry, so can you!

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DEBATES RAGE, BUT IS ONE BOW STYLE TRULY SUPERIOR?

By Patrick Meitin

Compound vs. Traditional

I find the compound-vs.-traditional argument as boring and counterproductive as the worn-out Chevy-vs.-Ford (or Dodge) debate. I quickly grow weary of hunters fighting amongst themselves when the real enemy is those who want to take away our hunting rights. In each case, the question really begs asking: Would you prefer every archer in the world to shoot exactly the same equipment as you?

Bowhunting, ultimately, is about fun and relaxation. One doesn't subtract from the other. Shoot whatever makes you happy, but please, allow me to derive joy from the equipment I choose.

Still, from a practical standpoint, is one approach truly superior to another? Assuming you've mastered your bow of choice, are modern compounds automatically superior in every way to traditional bows? Does approaching bowhunting with ancient technology provide any advantages at all?

I've never settled on a single equipment type. I happily shoot compounds with fingers or a release. I've been known to shoot nothing but recurves for years at a time. I enjoy the simplicity of longbows and have taken big game with self-made primitive bows (including wood harvested and cured myself). I often choose a particular weapon based on travel constraints (a takedown recurve, for instance,

(top) **The bow you shoot can make or break an opportunity dependent upon obstacles between yourself and the target. A compound's flatter trajectory allows slipping arrows through small holes in brush where a slower traditional bow lobs arrows over screening brush to drop into obscured vitals.**

(right) **Bear Takedown**

is easier to pack when heading into the Alaskan wilderness for 20 days). But mostly I choose a bow type based on conditions I expect to face in the field, an indication of the general strengths and weaknesses of these disparate technologies.

Sheer Range

The basic concept of the modern compound bow includes the more efficient mechanical advantages of pulleys (cams) combined with springs (loaded limbs) to propel arrows downrange at greater velocities. Modern compound cams also provide full-draw let-off, often as much as 80%. These systems have become more efficient every season, now providing real speeds of 330 to 350 fps.

Longbows use the simplest form of spring, recurves a more advanced but still primitive preloaded spring to push arrows forward. Traditional bows typically gain 3 to 4 pounds per inch of draw length, gaining poundage the farther back they're pulled, instead of providing the let-off of compound bows.

The most basic compound design lends a huge advantage to deliberate aiming at stationary targets—and increases range—due to sights and a peep. The additional speed flattens trajectory, removing some guesswork out of range estimation. For pinpoint accuracy at stock-still targets at longer ranges, the compound wins, hands down.

Moving Targets

The problem with real-world bowhunting is that wild animals are unpredictable, changing positions often or simply moving (or trotting slowly) past our positions. In other cases, wary game detects our presence and actively works to distance themselves from the threat. Here's where traditional bows shine, as the fluid, instinctive shooting style better mirrors shooting flying targets with a shotgun. It's not the deliberate process of aiming sighted firearms (or a sighted compound), it just happens, like throwing a baseball to cut off a runner stealing third base.

Of course, like throwing a baseball, this doesn't just happen. It requires practice. Into my early twenties, when I shot recurves exclusively, I thought nothing of taking running shots, whether a cottontail rabbit dove for

When traveling to hunts via commercial airlines, like the author did to enjoy this Nebraska spring turkey hunt, a takedown recurve makes packing easy, given today's baggage restrictions.

"The problem with real-world bowhunting is that wild animals are unpredictable, changing positions often or simply moving ..."

cover or a desert mule deer jumped from a midday bed. But we practiced extensively for such scenarios, filling an old motorcycle tire with layered cardboard and taking turns rolling it down an incline for one another. We became deadly running-shot shooters. When you can hit a full-out bunny 50% of the time, moving deer at reasonable ranges are child's play. Pick a spot, draw and shoot—it all happens automatically when you've practiced for it.

Though considered bad form, sometimes in bowhunting the snap shot is just what's called for, and a traditional bow is the best tool for the job. I recall a rutting mule deer sliding to a stop before me at only 3 yards while I fought to break a compound over peak and jerk the string into some semblance of anchor. It just didn't come off quickly enough, and the buck escaped. A quick-draw recurve shot would've likely ended the scenario differently. For moving targets at reasonable ranges, or conditions demanding nearly instant responses, the traditional bow is the superior tool.

The Cant Factor

Allow me to relate a tale of the "big one that got away" due entirely to carrying the wrong equipment on the wrong day. I was bowhunting from inside a brush blind, set beside a waterhole, constructed of limbs wired between four conveniently spaced pines with boughs arranged over the frame to create a dark cave, including an overhead roof. It might have been close to noon when a bachelor group of five velvet mule-deer bucks sauntered in, drinking at the far side of the pond only 27 yards away.

Unfortunately, the blind had been constructed to address the closer edge of the water 18 to 22 yards away, and due to the blind floor's slope, combined with the added yardage, when I hit full draw and attempted to put the correct pin on the biggest buck—a solid 180-inch 5x5—the top cam and limb of my

SMART RANGEFINDER

Bushnell's (bushnell.com) Truth laser rangefinder with ClearShot technology is designed to help compound shooters ensure they have a clear shot before shooting at game in brushy conditions. ClearShot provides a simple, instantaneous notification when an unobstructed shot is offered, using an easy three-step process to calibrate the unit to correspond with your arrow velocity and set a dot representing the apex of your arrow's flight path. If this dot intersects overhead obstacles, your arrow won't clear, and you can make adjustments. The Truth also includes Angle Range Compensation (ARC) technology to provide real range on steeply falling or uphill shots.

Many bowhunters choose a traditional bow for the added challenge or to keep things simple, but in many circumstances they actually offer advantages, like on moving shots or when forced to make a quick-draw shot.

compound bow encountered overhead branches. I slumped to get clear, but when I released the limb uncoiled and thumped an overhead branch solidly, sending the arrow wildly off its intended mark and wrenching my wrist painfully. I didn't even come close to hitting the buck.

I sat despondent, thinking of my recurve bow sitting in camp (my quiver of arrows had gone missing, bouncing out of the pickup bed on the bumpy ride into remote mountains). It was the bow I'd had in mind while constructing that blind. The simple ability to tilt (or cant) my bow sideways—as traditional bows are comfortably shot—would have allowed me to make the shot unhindered, and the buck likely would have been mine. When constricted shooting makes tilting a bow to clear obstacles necessary, a canted traditional bow is the easy answer.

Brushy Shots

One of bowhunting's biggest spoilers is brush and other shooting obstacles in the path of an arching arrow. It's common in bowhunting to see your quarry clearly while a shot remains impossible due to intervening brush. In brushy northern Idaho where I bowhunt elk, getting elk within range, whether calling or stalking bugling bulls, is relatively easy. Getting a clean shot is more problematic. For instance, last season I stood for a half hour, with two nice bulls at only 15 yards, unable to find a hole large enough to thread an arrow through.

In other cases, brush actually helps. It screens movements while drawing a bow, and a basketball-sized hole in just the right spot allows you to laser through and find vitals. Or, a rainbow trajectory allows you to drop into vitals otherwise screened from view, all while remaining out of sight and undetected. Overhead branches always cause consternation, forcing you to decide while at full draw whether an arching arrow will clear or deflect.

Threading the needle or clearing overhead obstructions is generally best achieved with a fast compound and flat-shooting carbon arrow, while dropping over a wall of brush is more likely when shooting a slower trad bow

"... when I hit full draw and attempted to put the correct pin on the biggest buck—a solid 180-inch 5x5—the top cam and limb of my compound bow encountered overhead branches."

lobbing heavier shafts. These situations really present a toss-up, highly dependent on specific situations. In direct regard to the type of equipment you happen to be carrying when encountering game in brushy habitats, I'll call this one a tie.

Treestands

Pope & Young statistics reveal the average record-book whitetail buck is shot at less than 25 yards. Given an 8-inch vital area (roughly correlating to standard-issue paper plates) these are ranges any traditional shooter can easily manage. But here's the problem with treestands in direct relation to traditional bows: The most productive stand sitting generally occurs during the rut when it's cold. This adds up to a combination of bulky clothing, long hours of inactivity and stiff muscles. Even in warmer settings—baited spring bear, early-season waterhole or crop-edge deer hunting—sitting still for long hours doesn't promote ideal trad-shooting performance. My best traditional shooting occurs when I'm warmed up and unrestricted, when I can engage in sporadic stump shooting without spooking game, and while wearing light clothing.

Conversely, a compound's let-off makes it easier to shoot well with cold, stiff muscles, while intentionally shortening your draw length a ½ to 1 inch provides better bowstring clearance while wearing puffy insulated duds. This one goes to the compound.

Tie Goes to The ...

So in conclusion, we find compounds and traditional bows tied with three wins each. While these scenarios and conditions might not correlate to the type of bowhunting you engage in or experience most, it does show that in the big picture no equipment approach is truly superior 100% of the time. MP

FRED BEAR'S FAVORITE BOWS

1959 Kodiak: Papa Bear used the 1959 Kodiak to tag his long-standing world's record Stone sheep. You can shoot essentially the same bow today constructed of fast-flight-compatible materials. The 60-inch recurve includes I-beam construction of purple heart with Bolivian rosewood on each side and layered brown-and-white glass reinforcing the handle. It includes a large profile leather rest plate and forgiving feather arrow rest.

Super Kodiak: First appearing commercially in 1967, the Super Kodiak remained Fred Bear's favorite bow for years. It was a bow he carried to arrow African lion, Cape buffalo and Alaskan polar bear. Today, it's offered in 60- and 64-inch lengths with black phenolic and Bolivian rosewood caps, or two-tone brown-and-black hard-rock maple handles. They are as beautiful as they are functional.

Bear Take-Down: The globe-trotting Mr. Bear experimented with many take-down systems before perfecting one in 1969; it was a bow he carried afield until his last hunt. The style persists today, allowing instant assembly of the fine-shooting three-piece recurve without tools or bolts. By choosing A or B riser and #1 or #3 limbs, 56-, 60- and 64-inch bows can be assembled. The crowned shelf holds a Bear Hair rest and leather side plate, and the bow comes with Dynaflight 97 Flemish twist string.

Bear Super Kodiak

Though spring food plots can and will attract spring turkeys, they also rejuvenate deer after a harsh winter, which encourages antler growth and herd health.

Easy Throw-and-Grow Food Plot

CREATE A LUSCIOUS FOREST OPENING WITH MINIMAL EQUIPMENT

By Patrick Meitin

Since moving to northern Idaho and purchasing our own slice of wildlife habitat, my attitude toward whitetail hunting has changed completely. I no longer view whitetail habitat as something to be sized up and conquered on limited time while traveling to hunt. I now see it from a long-term, goal-oriented perspective.

Since acquiring our 40 acres, I've created two ponds to solve an obvious water shortage; planted, watered and protected hybrid oak and fruit trees to produce future mast; offered antler mineral annually and removed fences for uninhibited travel. In general, these efforts give deer more incentive to remain on our little swatch of bowhunting-only property. I've also learned the value of small "shot plots" created in challenging, outlying mountain habitat, generally on public lands where altering land in any major way is verboten.

One of the most important factors to making our land and those remote mountain sites more attractive to wildlife is planting simple food plots, but there have been challenges. Those remote and rugged sites of overgrown woods are limited to foot access and hand tools. On private properties, one can take more liberties, but like most blue-collar hunters,

PHOTO BY THINKSTOCK

“... it’s important to choose seed that germinates reliably when broadcast on top of soil with a hand-cranked spreader ...”

A simple drag implement works well to create a small food plot in deep-woods areas, especially those with soft or sandy soils.

we can’t afford the equipment necessary for large-scale farming. I own an ATV and a 36-horse tractor with snowplow and mower, but our implement budget ends there; so, our plots must remain simple.

This calls for more manual labor and seed that flourishes in poor soils with minimal preparation. Soil preparation ranges from rake, hoe and herbicide to drag spikes, a 5-horse garden tiller and a rented small tractor box tiller.

Purpose Driven

Food plots serve two purposes: feeding wildlife for increased carrying capacity or direct attraction for hunting sites (or both). I mention this only because if your goal is simply to feed deer, you can establish plots just about anywhere. Hunting plots require special attention to predominant winds, which dictate stand placement.

Creating feeding plots is easy, and allows you to choose sites with the best soil and sunlight conditions, perhaps even watering options. For instance, on a neighbor’s land we established a pure feeding plot just below a large runoff pond. We water it with a trash pump during the hottest parts of summer, which expands our crop options.

The best combinations are low-lying areas with dark, rich soil filled with organic matter that provides nutrients and holds water during dry months. Generally, areas surrounded by hardwoods instead of conifers offer superior soil chemistry. Pines, firs and cedars

increase soil acidity, and require lime application for reliable growth, which increases overall costs.

When choosing sites for reliable scent management, you're often forced to deal with less-than-ideal soil and moisture conditions. These include ridgetops—though sometimes you can locate small pockets of decent soil on benches—draw heads or saddles where organic material collects. Commercial fertilizer is always an option, but on smaller shot-plots I prefer natural mulch. I'll haul in—by backpack, ATV trailer or wheelbarrow—and spread bags of leaves, rotted hay, grass clippings or seasoned manure. These sites might also require drought-resistant seed.

For instance, I have a ridge-point bench requiring a mile hike to access. I invested hours initially removing small trees and brush with an ax, many more hoeing out competing vegetation and loosening soil, then hauling in and distributing about a dozen backpack loads of dried manure. That small opening, walled on one side by new-growth brush, the other by sterile, mature red cedar, isn't perfect, including marginal soil and copious weeds. Still, I arrowed an 8 ½-year-old 5x6 buck there this past fall.

Another more typical site closer to home is a 30-yard circle cleared from nasty-thick woods in early spring. It includes a trail connecting an old and barely passable logging road enabling ATV/tractor access. I started with a chainsaw, piling cuttings and burning them in place. I then used our 36-horse Kobota with bucket to remove root balls and stumps. In inaccessible areas, substitute a pick, shovel and sweat.

Then I deployed a simple drag implement—rows of heavy pipe holding spikes, three railroad tie halves wired on for weight—and drove in circles to rip out additional roots and grass, smooth the ground and tear up the thin topsoil. I added 80 pounds of gypsum to help break down the heavy clay and about 50 pounds of lime to address acidity caused by surrounding yellow pines. That deep-woods opening became a real hotspot during the fall rut.

Acidic, lime-inviting soil is generally more common than basic material, which does well with the addition of pine-needle mulch. Ask a farmer or agricultural agent in your area for advice, or send a soil sample in for testing.

Without sophisticated implements, it's important to choose seed that germinates reliably when broadcast on top of soil with a hand-cranked spreader and frost seeded or raked over lightly. Frost seeding requires preparing soil early, when freezing nights and thawing days predominate, which can be as early as February in some areas, as late as April in northern climates. On smaller, more

The start of a new food plot involves clearing away brush with a saw, ax and machete; burning slash to create nutrients, then removing stumps and roots balls with a pick and a shovel or tractor bucket.

Affordable ATV Implements

Looking for compact but efficient implements to turn your ATV into a food-plot machine? Look no further than Cabela's (cabelas.com). For $250-$1,000, hunters can purchase anything from a basic ATV spike cultivator to simple cultipackers or harrows to more sophisticated but scaled-down plows and disc assemblies. Look under Cabela's "Wildlife & Land Management" section to learn more.

The author created this opening in thick woods with a chainsaw during a wet spring. It quickly became a deer-hunting hotspot.

remote plots, I've used nothing more than a heavy-duty rock rake to not only prepare soil—removing large debris and loosening soil—but help cover seed, too. A 6x6-foot piece of chain link with stiffening boards attached at each end, dragged behind an ATV or small tractor, also works well. The general rule of thumb is to bury seed four times its diameter. Many grain seeds—oats, wheat, clover and barley—germinate by simply contacting dirt, as long as soil remains moist and direct sunlight isn't too harsh.

What to Plant

Deciding what to plant hinges largely on soil type and precipitation. When in doubt, ask a local farmer. Planting times include spring (rejuvenating feed after a harsh winter, which is useful for concentrating spring turkeys) and fall plots (which serve to carry deer into winter and as direct attraction during hunting seasons). Success on each depends on latitude and altitude, moisture patterns and crops planted.

For example, in northern Idaho I can grow basically anything in the spring. Days are long, moisture and sunshine are abundant, and wildlife is ravenous after a lean winter. Conversely, fall plots are trickier, with essentially zero rainfall from July through September, leaving soil rock hard and difficult to till. If early rains arrive—normally late September or early October—basic grain crops (more correctly, their tender shoots) draw well by the November rut. Cold-tolerant crops, like oats, wheat and certain clovers, are essential for fall success here.

In West Texas and Kansas' more arid regions, spring plots are problematic; hot temperatures bake crops if irrigation isn't available. Yet, fall winter wheat becomes an important wildlife draw. Planted in late September and given the smallest amount of moisture, its tender shoots attract deer and hogs for miles from October into December.

In the country's wetter regions, like the Deep South, Midwest or Eastern Seaboard, in the right soils, crops such as corn, turnips, radishes and soybeans provide greens through the summer months and nutritious feed well into winter. No matter where you reside, clovers are always safe bets, requiring minimal soil prep, proving drought resistant, self-sustaining and relished by wildlife.

Commercially available food-plot seed is an obvious start and simplifies choosing a variety suited to your area specially assembled for "no-till" or "shot-plot" success. The only problem is that these mixes can be expensive when you're tackling either multiple projects

“Deciding what to plant hinges largely on soil type and precipitation. When in doubt, ask a local farmer.”

or a large one. I use a lot of it, but also supplement these products with agricultural seed. I carry plastic sacks in my vehicle during planting and harvest seasons, collecting spilled agricultural seed on roadsides and exchange sites. You might ask your local co-op if you can sweep up seed spilled during transfer, and many outfits sell daily floor sweepings cheaply, sometimes even giving them away. I’ve also successfully sowed bagged feed, like cool-weather oats and drought-resistant milo (ensure they’ve not been kilned). Many agricultural outlets offer oat, pea, clover, wheat and other seed much cheaper than commercially prepared food-plot products.

Whether you wish to simply feed and hold wildlife on your property, or increase your odds around a specific stand site, simple food plots are worth the time and effort required. They can demand plenty of old-fashioned sweat equity, but are the way to go for hunters who don’t have extensive equipment or large pieces of property at their disposal. MP

(top) **The author created this small food plot with nothing more than an ax, hoe and rake. It’s a remote walk-in spot that eventually produced a mature white-tailed buck.** *(below)* **The author uses simple, throw-and-grow food plots to make his small property more appealing to wildlife. By increasing your land’s appeal and carrying capacity, you’ll hold more game.**

Simple Plot Seed

Biologic’s (plantbiologic.com) Hot Shot is the company’s best product for quickie food plots, including a mixture of rape, wheat, radish and annual rye grass. It excels in poor soil and doesn’t require complete soil coverage for germination. Removing weeds, loosening soil and applying BioLogic pH fertilizer are recommended.

Evolved Habitats (evolved.com) offers four Throw & Gro seed varieties, including Xtreme No-Till Radish, Xtreme Oats, Crush and No-Till Forage. Xtreme Radish; Xtreme Oats with Rye Grass; Forage Oats, Rape and Red Clover; No-Till Forage with Rye Grass and Forage Clovers and Brassica come in 5-pound bags, Crush in 3.5 pounds, each covers ¼ acre or 11,000 square feet of ground. They’re nutritious, fast-growing and require minimal soil preparation.

Heartland Wildlife (heartlandwildlife.com) offers several no-till options, including Hi-Pro Forage, Forested Trail, Topseed Trophy Clover and Wildlife Habitat. Hi-Pro Forage includes high-protein forage brassicas and perennial clovers; Forested Trail provides shade-tolerant clovers; Topseed Trophy Clover includes extremely hardy, cold- and drought-tolerant perennial clover; Wildlife Habitat traffic-resistant rape, clovers, alfalfa, rye grass, orchard grass, climax timothy and birdsfoot trefoil is perfect for reclaimed timber or mining properties. Each 5-pound bag plants a ½ acre.

Whitetail Institute (whitetailinstitute.com) offers three ideal small-plot blends, including Imperial Whitetail No-Plow, Secret Spot and BowStand.

No-Plow is specifically formulated for hard-to-reach spots and includes clovers, radishes, lettuce, brassica and cereal grains that are extremely drought and cold tolerant. Secret Spot requires clearing existing vegetation and spreading a 12-forage mixture and pH booster to help growth in highly acidic soils. BowStand is designed for maximum attraction with minimal planting effort and is drought and cold tolerant, with included pH booster. Four-pound bags cover up to 4,500 square feet, 10 pounds up to a ¼ acre.

Bread Pudding

MAKE A TIME-HONORED DESSERT IN NINE EASY STEPS

By Charles Witosky

In the days of the early pioneers, there weren't chemical preservatives that could be injected into fruit, meat or bread. If food sat too long, it spoiled. But what were they supposed to do with that food, other than throw it away? One option for stale bread was to transform it into a tasty dessert, bread pudding.

Bread can go stale very quickly. In fact, freshly baked, preservative-free bread can begin to harden after only one day. Even if it doesn't spoil, it certainly won't taste as fresh as it did the day it was baked. That's why grocery stores and bakeries sell day-old bread at half price or throw it away.

Of course, no one will buy your day-old bread at home, and if you're like me, you won't have the heart to toss it. All food and resources must be put to good use if at all possible, and bread pudding is a great way to put this idea into practice. Follow this tried-and-true recipe for tasty results.

PHOTO BY THINKSTOCK

Bread Pudding

1 16 to 20 oz. bread loaf (we used brioche)

1 tablespoon butter

6 eggs

5 cups milk

1 cup granulated sugar

2 teaspoons vanilla extract

1 teaspoon ground cinnamon

⅛ teaspoon salt

I noted stale bread should be used to make bread pudding, but if you want to make it using a fresh loaf, bake the bread to dry it out (instructions in step 2).

Serrated bread knife, optional

Baking sheet

9x13-inch baking dish

Aluminum foil

The serrated bread knife is optional because you can easily tear the bread apart with your hands. If you're using stale bread, tearing might be easier.

1 Either tear the bread with your hands or slice with a knife. If you use a knife, make sure it's sharp; a serrated bread knife works best. Cut the pieces into small cubes. Leaving the crust on the bread is optional; we left it on because we like the texture it adds. If you're using stale bread, skip step 2. If you're using fresh bread, continue to step 2.

2 Preheat the oven to 350°F. Spread the bread pieces in one even layer across multiple baking sheets. Our 17.6-ounce brioche loaf cubes covered two 9x13-inch baking sheets. It's very important to spread the cubes in a single layer, otherwise the bread won't toast evenly. Bake the bread for about 6 minutes, turn all of the pieces over and bake another 6 minutes. Once the pieces are light golden brown on each side, remove them from the oven.

PHOTOS BY THINKSTOCK

3 Butter the interior of a baking dish and add the bread cubes. The dish must be large enough to hold all of the bread so it doesn't heap above the rim. Shake the dish gently so all of the pieces fall into place. Set the dish aside.

4 Whisk the eggs, milk, sugar, vanilla, cinnamon and salt together in a mixing bowl to create the custard mixture.

5 Pour the custard mixture evenly over the entire dish so that none of the bread cubes become more soaked than others. The custard mixture should come up to just below the top of the bread. It's fine if the bread floats a bit.

6 Cover the baking dish with foil, and refrigerate for 1 hour so the bread absorbs all of the custard mixture.

7 Set an oven rack in the center of the oven and preheat to 325°F.

8 Remove the baking dish from the refrigerator and bake for about 50 minutes. Use a fork to test for doneness. If the pudding is firm and doesn't stick to the fork as you pull it out, it's done.

9 Place the dish on a cooling rack, and let the pudding rest for at least 10 minutes before serving.

That's all there is to it. Now you have one more tool in your toolbox for when a loaf of bread—bought or homemade—becomes too stale. There are a few variations on this recipe, including adding raisins or a top glaze, but this recipe is the simplest, most effective way of using your resources to the fullest.

AUTHOR'S NOTE: A big thanks goes to Beth Gaughan and the Wheat family for lending us their wonderful family recipe.

Banana Pudding

Another food prone to spoiling quickly is bananas. Here's a great pudding recipe to use up overripe fruit.

1 box vanilla wafers
4 large bananas

For the pudding:

1 ½ cups sugar
2 heaping tablespoons flour
2 cups milk
3 eggs, yolks and whites separated
¾ stick butter
1 ½ teaspoons vanilla extract

For the meringue:

Pinch of cream of tartar
2 tablespoons sugar
½ teaspoon vanilla extract

1. Layer the vanilla wafers and banana slices in an oven-safe dish, beginning and ending with vanilla wafers. Set the dish aside while you prepare the pudding.

2. Combine sugar and flour in a saucepan. Stir in milk and cook on medium-high heat, stirring frequently.

3. When the mixture is warm, remove a small portion of it from the pan into the bowl of egg yolks, blend, then pour mixture back into the saucepan. Continue stirring.

4. When the mixture boils, run a spoon through the pan. Once the mixture coats the spoon, add the butter and stir until it has melted completely. Continue stirring.

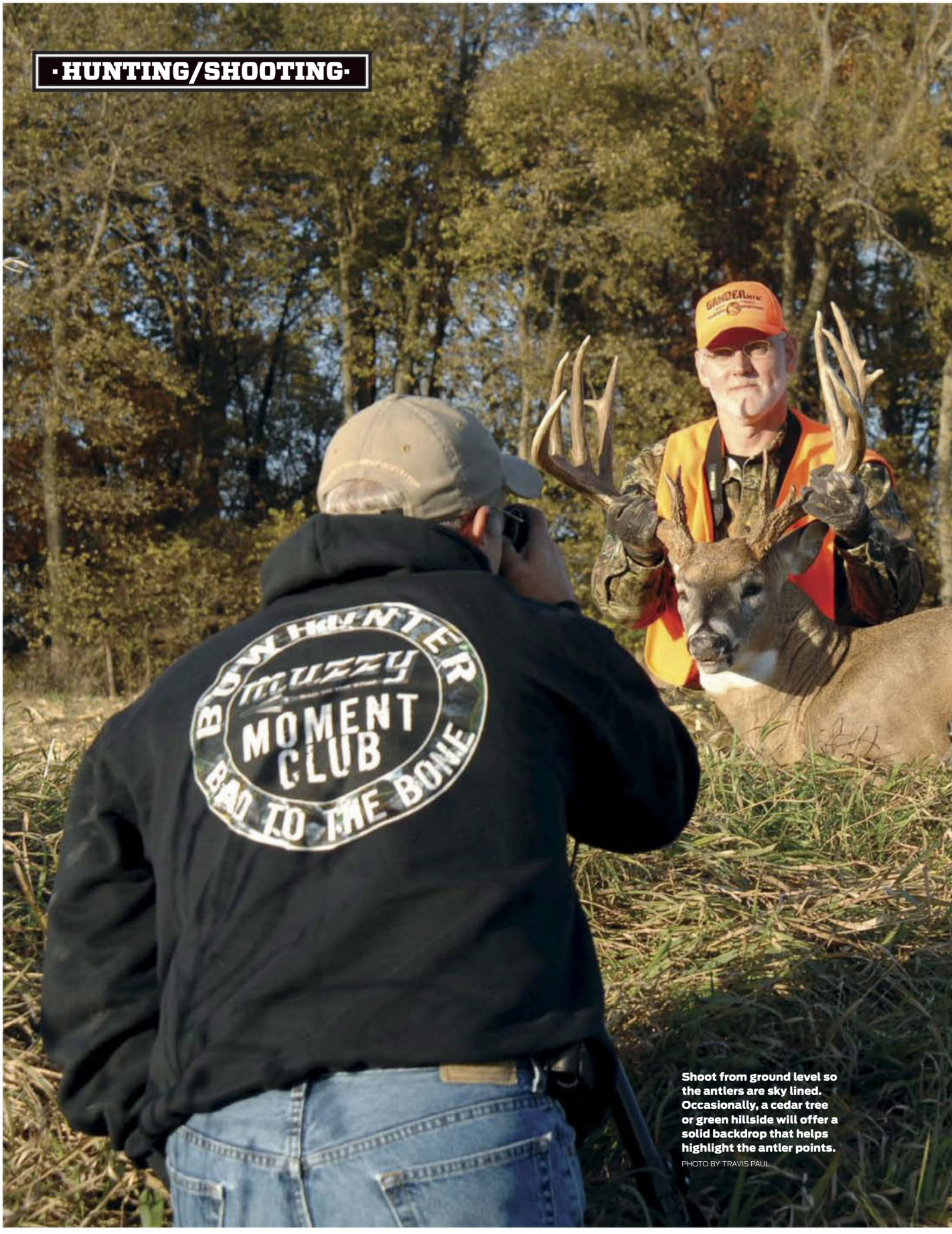
5. Remove the mixture from the heat and add the vanilla extract.

6. Pour the pudding over the wafers and bananas and set the dish aside.

7. Combine egg whites, sugar, vanilla extract and cream of tartar in a medium mixing bowl for the meringue. Beat until the mixture forms stiff peaks.

8. Spread the meringue over the pudding and bake at 400ºF for 10 minutes or until the meringue is light brown. Serve warm. MP

PHOTO BY THINKSTOCK



Shoot from ground level so the antlers are sky lined. Occasionally, a cedar tree or green hillside will offer a solid backdrop that helps highlight the antler points.

PHOTO BY TRAVIS PAUL

CAPTURE YOUR HUNT

HELPFUL TIPS FOR CREATING STUNNING PHOTOS

By Randy Templeton

The bull had no more than hit the ground when I realized my quest for a Canada moose was complete. I knelt beside the fallen giant for several minutes, reliving the events leading up to the shot. Suddenly, a swarm of biting black flies and mosquitoes snapped me back to reality. The mid-morning sun was heating up the south slope. My focus turned toward field-dressing, skinning and boning-out the delicious lean meat. But first, I wanted to snap a few pictures.

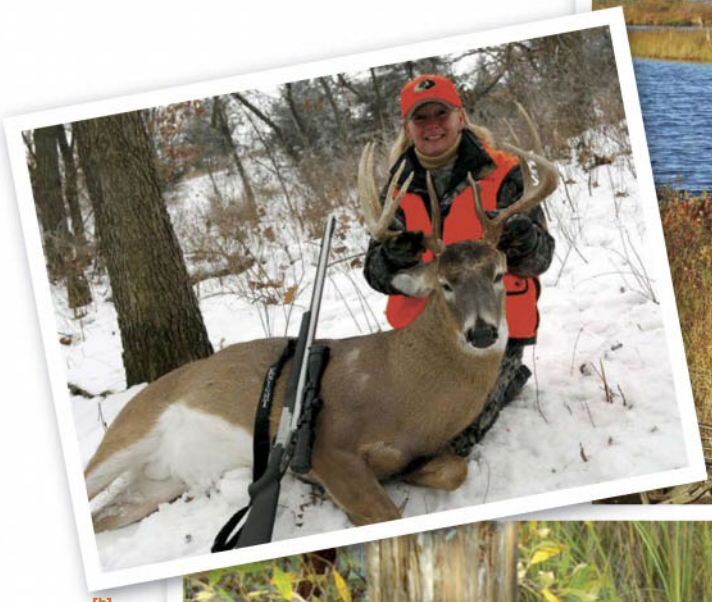
I suddenly realized I was missing several things, including my camera. It was in my pack all week, but for whatever reason, I'd taken it out that morning. Unfortunately, our camp was a good 4 miles away.

My buddy, Mark, and I jumped into our boat and headed back to camp. Things were a little chaotic as we gathered knives, game bags, a bone saw and pack frames and, of course, my camera.

When we returned, we studied the area and the bull's position on the steep hillside. Past experience proved moose rarely fall in a great place for shooting pictures. Two people can barely roll a moose over, let alone move it. In this particular case, we obviously couldn't roll the 1,200-pound beast over for the perfect pose without losing control and having him roll off the rock ledge. We decided to make the best of the situation and took pictures where he laid.

Every successful hunt deserves quality photos by which it can be remembered. The following tips are meant to shorten your learning curve and help you shoot better photos that'll tell and retell your story for years to come.

“Be observant and avoid locations that have roads, cars, powerlines and other clutter in the background.”



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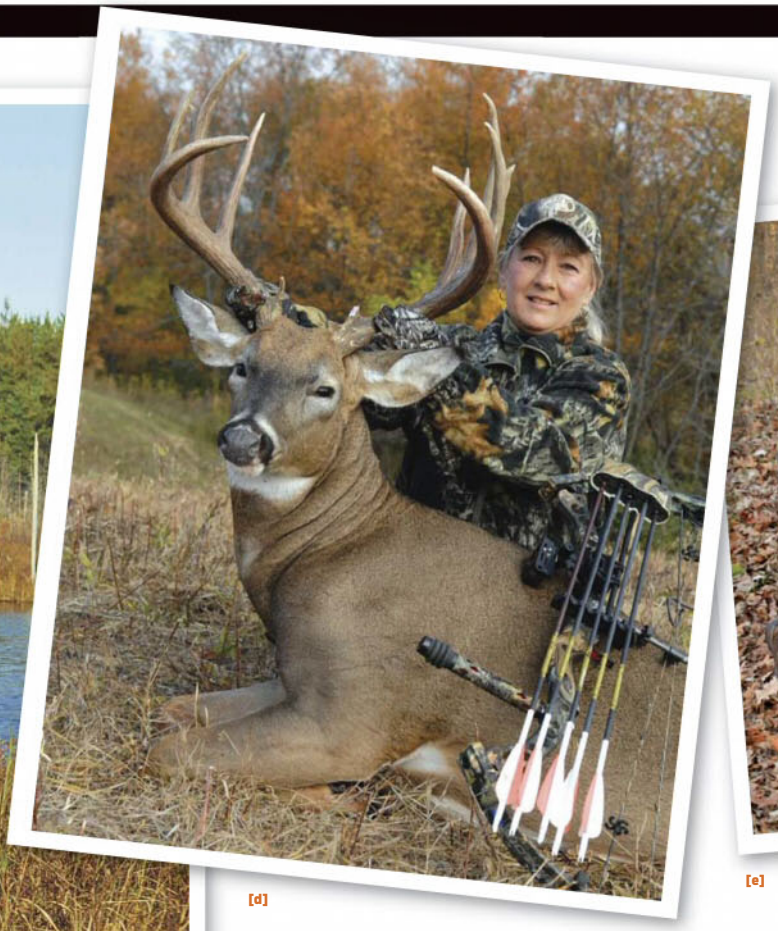

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[e]

[a] On a moose hunt, the author snapped a photo of his guide taking a much-needed nap.

[b] The author's wife, Pamela, poses with a nice muzzleloader buck in Iowa.

[c] Here, the author's buddy, Mark, attempts to call in a bull moose. It was a picturesque photo op.

[d] Pamela Templeton shot this buck just before sunset, but didn't take pictures until the following morning. Having the right gear, selecting the location and time of day, and preparing the animal beforehand all are important.

[e] Sometimes, taking a few pictures of someone getting ready to hunt makes an interesting shot.

Why Better Photos?

For me, every hunt is an adventure and each has a special place in my photo album. Photos capture a moment in time and tell the story of where it all took place, including the geography and topography. Like most, I like gazing at hero photos, but equally important are the non-staged pictures taken throughout a hunt.

Camera and Lens

To get started, you'll need a decent camera and lens. Although small point-and-shoot cameras will probably suffice, I prefer a lightweight DSLR that ranges from 16 to 24 megapixels. Not only are they affordable, but shooting at the highest resolution will deliver sharp, detailed images that can be printed as large as you like. My favorite lenses are: 17-55mm wide angle, 80-200mm and 28-200mm telephoto.

Know Your Equipment

You might not know all of your camera's advanced settings, but you must know its basic functions before crunch time arrives. Unfortunately, most amateur photographers buy a new camera and only read the "getting started" section of the owner's manual.

During the offseason, read the owner's manual to understand the very basic functions like ISO settings, manual and auto focus, self-timer, fill flash, aperture priority and white balance. The time spent experimenting now with the various settings will pay big dividends later when you're under pressure and the clock is ticking.

Learning to use a film camera was an expensive undertaking, but that's all changed with digital cameras. You can view your photos live on the LCD screen, delete those you don't like or want and continue shooting until you're satisfied.

Have a Plan

Shooting a big elk or whitetail is exciting, so it's not unusual to get wrapped up in the moment and rush into taking hero photos. The trophy you've taken may only come once in a lifetime, so instead of reaching for your camera right away, slow down and enjoy the moment. When your heartbeat returns to normal and your head clears, develop a detailed plan, including what's needed, location and the best time to take photos.

Know What You Need

You can't possibly carry everything in the list that follows in a backpack, but you can keep the essentials in your vehicle. Other than a camera and lens, have the following available:

- Carry a couple bottles of water and paper towels to clean up the animal.

(top) **During a scouting trip, the author snapped a few pictures of a bull in velvet. Although he didn't shoot an elk, he has some great pictures for his scrapbook.**

(opposite page) **Shoot from multiple angles and strive to have all of the antler points showing in the picture.**

- A dog brush or hairbrush works great for smoothing down animal hair.
- Glass taxidermy eyes replace dull, lifeless eyes with sharp, natural color.
- Rather than shoot freehand, use a tripod whenever possible. It's also a must for shooting self-portraits using the camera's timer.
- If the animal has been field-dressed, the stomach will appear flat. Fill a white garbage bag with leaves and stuff it in the chest cavity for a fuller look.
- Wedge a block of wood under the front shoulder facing away from the camera. This will help hold the critter upright, and make it easier to manipulate for various poses.

Choose the Location

You'll want to choose a location that best represents where the animal was shot. The exact location where the animal falls isn't always photogenic. Take, for example, a buck shot in dense timber where the antlers tend to blend in with tree branches and surrounding brush. Sure, you'll want the timber in the photos, but a better spot might be on an elevated point like a knoll or hilltop with the timber some distance away in the background.

Pick a spot where the sun faces the subject (hunter or deer). The sun should be positioned at the photographer's back. Be observant and avoid locations that have roads, cars, powerlines and other clutter in the background. Also, be aware of distractions in the foreground. Simple things like brush, blood and even a single grass blade can be distracting or result in pictures that are out of focus. Avoid draping the deer off your tailgate or hanging it from a noose in your garage.

The Best Time

The sun can be your best friend or worst enemy. Past experience proves the first and last hour of daylight—when the sunlight is weakest—renders the best shooting light. At times when the sun isn't ideal in the morning, it might be perfect in the afternoon. In such cases, get everything set up beforehand and begin taking pictures during the last hour before sunset.

Overcast days aren't all that bad either. Cloud cover diffuses harsh light and offers more time if you're forced to shoot pictures midmorning or early afternoon. Understand, however, the absolute worst time to take pictures is when the sun is directly overhead (high noon) and produces the strongest light. This too often yields shadowy or washed-out pictures.

"Every successful hunt deserves good quality photos by which it can be remembered."

If you shoot an animal just before last light and don't recover it until dark, consider waiting until morning—providing temperatures won't spoil the meat or cape—to take pictures. This was the case a couple of years back with a buck my wife, Pamela, shot just before sunset. Unfortunately, by the time we recovered the deer, it was too dark for photos. That night, I hung the deer by the antlers, then bent the front legs under in the bedded position and secured them with bungee straps. This kept the neck muscles limber and made the buck easier to manipulate for various poses the next day. Another option is to bend the legs under the deer before rigor mortis sets in then prop it up in the bedded position overnight.

Tell the Entire Story

There's certainly more to hunting than just gleaning a trophy animal, and not all hunts end with one anyway. Other than the standard hero photo, consider snapping a picture of a huge rub, giant track or a sunrise or sunset. Take one of your friend getting ready to head afield, or capture someone putting on face paint.

Too often I think about the pictures I should have taken during a hunt but didn't for one reason or another. Think like a photojournalist on assignment with a mission to capture the interesting sights and events that happen along the way that tell the entire story.

Conclusions

Some, including me, have regrets when they scrutinize their pictures, noticing all of the little mistakes that could've been avoided. You can use Photoshop, Lightroom or some other photo-editing software to make minor corrections, but they all have limitations. It's best to work on the front end and improve your photography skills during each hunt.

The preceding tips are meant to shorten your learning curve and help you shoot photos that reveal the details of your adventures, not just the end result. Review these tips beforehand, and strive to create good quality photographs. MP

COMPOSE THE SHOT

If a picture is worth a thousand words, then you must shoot strong photos to tell a story. Keep the following in mind:

- Think like a professional and strive for sharp, clear and crisp images.
- Clear the area in front of the animal of debris, sticks, blood and tall grass blades.
- Be sure the animal's tongue isn't hanging out.
- Tuck the front legs under the animal in the bedded position, if possible.
- Position the hunter behind the deer, either looking between the antlers or off to one side.
- Elevate the antlers so they're even with or slightly above the hunter's head for a larger-than-life appearance.
- Center the subject so all four corners of the frame have equal spacing.
- Always make the animal your primary subject, but incorporate a rainbow, autumn-colored tree or other interesting scenery in the background when possible.
- Shoot from ground level so the antlers are sky lined. Use a tripod whenever possible to avoid out-of-focus pictures.
- Rather than zoom in, move closer to the subject, zooming out, if needed. Close-up pictures tend to capture the finer details and show more emotion.
- Shoot from multiple angles and strive to show all of the antler points in every picture.
- Take a few pictures of the hunter admiring the rack. It adds emotion that everyone can see.
- Watch for antler-tine shadows casting onto the hunter's face.
- To minimize ball-cap shadows, tip the hat back slightly and use a fill flash.
- Be sure the subject is looking at you, not someone else on the sidelines.
- It's a happy occasion, so drop the macho look and smile!
- Review your pictures live, and if you're unhappy with the results, keep shooting.

Handmade Butter, Sour Cream and Farmer's Cheese

OUTSTANDING FROM-SCRATCH DAIRY RECIPES

By Kristi Cook

Once you tackle the self-reliant lifestyle, you quickly discover you can make practically anything on your own, and make it healthier and better-tasting than store-bought items. For my family, this means better meat, eggs and produce and much better dairy products. Among our favorites are homemade butter, sour cream and farmer's cheese. You don't even have to own a cow to make them.

Without further ado, let's review the ins and outs of homemade dairy products, as well as some recipes I believe will become your family's favorites, just as they have for us.

PHOTO BY THINKSTOCK

"... you can still buy butter churns, but they're unnecessary unless you plan to make lots of butter at one time."

Select Milk

Raw milk—unpasteurized or non-homogenized—produces the best-tasting products. Goat, cow, sheep and even llama milk may be used, with each lending the final product its own distinctive flavor and texture. This variety makes raw-milk products so appealing.

However, if you're unable to obtain raw milk, or are uncomfortable with the idea, you can still make great-tasting dairy products at home with pasteurized milk or cream. If purchasing commercial milk, only use the types labeled "pasteurized" rather than "ultra-pasteurized," because ultra-pasteurized milks often don't work.

Regardless of which milk you choose, the recipes that follow are adaptable, requiring no specific amount of milk or cream. So, even if you only have a quart of whole milk or a single cup of cream to spare, you can easily make any of these products to get a feel for what you like.

Two Types of Butter

Cultured butter is the butter your great-grandparents likely enjoyed and is produced with cream that has fermented or "soured." Its flavor is rather distinct, ranging from slightly tangy to profoundly sour. The intensity depends on the cream's ripeness and each specific cream's characteristics, since various creams ferment at different rates.

When obtaining cream for cultured butter, use only raw cream, because pasteurized cream has lost its ability to ferment and must have cultures added in order to ripen safely—a process we won't cover here.

Contrastingly, sweet butter has a more modern flavor and can be produced with both raw cream and pasteurized heavy whipping cream—again, avoid ultra-pasteurized cream.

PHOTO BY THINKSTOCK

Raw cream tends to produce a richer, more vibrant yellow butter than pasteurized cream and has a much sweeter taste. However, pasteurized works just fine, usually resulting in a milder flavor, much like store-bought sweet butter.

Butter-Making in a Nutshell—or a Mason Jar

Yes, you can still buy butter churns, but they're unnecessary unless you plan to make lots of butter at one time. I find simpler is better and opt for a single quart-sized mason jar, which holds the perfect amount of cream to make enough butter for a week or two for my family. The only other equipment needed is cheesecloth, a clean flour-sack towel or a jelly-strainer bag.

STEP 1. For cultured butter, allow raw cream to sour naturally in the refrigerator (this may take a week or longer), or pour cream into a loosely covered mason jar—no more than three-quarters full—and leave in a warm location until it smells slightly soured. As a general rule, the more soured the cream, the more soured, or tangy, the finished butter will be. Once you finish your first batch, you may wish to adjust the amount of time you allow the cream to ripen in order to obtain just the right flavor.

If making sweet butter, whether with raw or pasteurized cream, place the lightly covered jar on a countertop and allow the cream to reach room temperature. Understand that if the cream is left out past the "almost warm" stage, it will begin to sour if the cream is raw, or it will go rancid if using pasteurized cream.

STEP 2. Place the jar lid and band onto the jar. Briskly shake, slamming the cream against the walls of the jar. You'll notice a change in the cream's movement as it thickens within 5 to 15 minutes.

STEP 3. Once you notice clumps of butter forming and the mixture begins to leave the walls, reduce shaking to a moderate level.

STEP 4. When almost no liquid remains and jar walls are clear, pour the contents into cheesecloth or a towel to drain. Catch the liquid buttermilk in a glass container for later use.

STEP 5. Using a spoon, move the curds around, pressing out as much buttermilk as possible. Gently rinse with cool water until the water remains clear.

STEP 6. Place butter in a bowl and add salt or seasonings, if desired. Store covered in the refrigerator or freeze for later use.

PHOTO BY THINKSTOCK

PHOTO BY THINKSTOCK

"Sweet whey is the byproduct of cultured cheeses and is easily incorporated into pancakes, artisan breads and smoothies ..."

Oh, so Simple Sour Cream

Recipes for milk products, especially sour cream, vary greatly. Here's my favorite version, mainly because it readily adapts to the quantity of cream I have on hand, and doesn't require an online order for any type of starter culture.

STEP 1. Place 1 cup or more of fresh, raw cream or pasteurized cream in a sterilized pint jar.

STEP 2. Add 2 tablespoons of cultured sour cream for every 1 cup of cream. Gently stir to combine. The cultured sour cream you use as a starter can be store-bought sour cream as long as the ingredient list reads only "cultured cream" with no fillers, or you can use a previously homemade batch of sour cream.

STEP 3. Leave the cream at room temperature for 12-24 hours. Note: The added cultured sour cream allows pasteurized cream to ferment safely.

STEP 4. Taste periodically after 12 hours until the cream reaches your desired level of tanginess. Refrigerate and enjoy for up to a week.

Farmer's Cheese

Made from either raw or pasteurized whole milk, this cheese's simplicity makes it delightful. Its mild flavor and ability to accommodate tasty additions such as Italian, Cajun and Mexican seasonings, make it well worth your time.

STEP 1. Pour whole milk into a saucepan. Heat over medium setting to 180-190°F or until the first signs of boiling occur, stirring regularly to avoid scorching. Remove from heat.

STEP 2. To induce curdling, add an acid such as 100% lemon juice, distilled vinegar or citric acid. The amount required varies by batch, so begin with a small amount. For each ½ gallon of milk, start with 1 tablespoon of lemon juice or distilled vinegar, or ½ teaspoon of citric acid. After each addition, gently stir, watching for clumps of curds to separate from the liquid whey; this should happen immediately once you reach the proper amount of acid.

STEP 3. Once the curds have separated, let the pot rest for 15-30 minutes, allowing all of the curds to form.

STEP 4. Line a colander with cheesecloth and place over a bowl. Pour the curds and whey into the colander to drain, saving the liquid whey for later use.

STEP 5. The amount of whey you remove depends on how firm you want your cheese. For a softer cheese similar to ricotta, leave some whey in the final product. For a firmer cheese, drain as much as possible.

STEP 6. Once drained, season to taste. If the cheese is the desired texture, store it in an airtight container in the refrigerator for up to a week.

STEP 7. If you prefer a firmer, more sliceable cheese, shape drained curds into a flattened circle, like a hockey puck, and wrap in cheesecloth. Place on a saucer, and apply some weight on top of the cheese with food cans to press out any remaining whey. Place weighted cheese in the refrigerator to drain overnight.

STEP 8. Wrap the finished cheese in plastic wrap or waxed paper and store in the refrigerator for up to a week. Enjoy on salty crackers, crumbled over a salad, sliced onto a tomato sandwich or tossed in scrambled eggs. The options are endless. MP

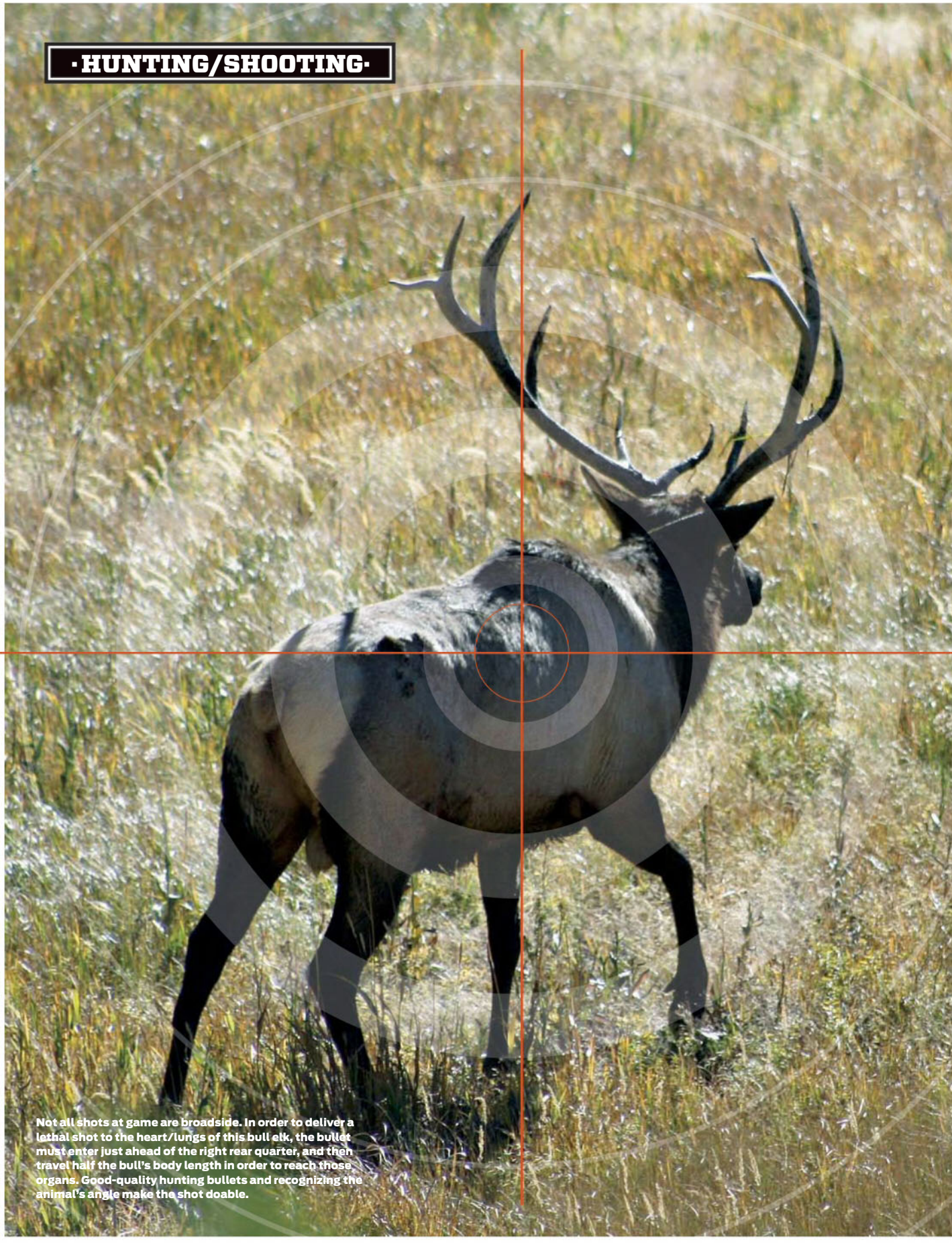
WHAT TO DO WITH WHEY

There are two types of whey: sweet and acidic. Sweet whey is the byproduct of cultured cheeses and is easily incorporated into pancakes, artisan breads and smoothies, or it can be used as a buttermilk replacement. It also makes a refreshing beverage.

Acidic whey, on the other hand, is created from products such as farmer's cheese, some mozzarellas and other cheeses that require an acid such as lemon juice, vinegar or citric acid. Finding suitable uses for the tangy, lemony flavor of acidic whey can be difficult, but a little creativity goes a long way.

Here are some ideas:

- Make "lemonade" by adding sweetener and ice cubes
- Blend with fruit juices for a tangy twist
- Substitute for lemon juice
- Add to smoothies (add sweetener to counteract the acidity)
- Add to meat marinades
- Replace part of soaking water for beans
- Substitute for milk in pancakes and waffles for a slightly different flavor
- Make hog, chicken or dog treats
- Fertilize acid-loving plants, such as blueberries (mix 1:1 with water)
- Add to the compost pile



Not all shots at game are broadside. In order to deliver a lethal shot to the heart/lungs of this bull elk, the bullet must enter just ahead of the right rear quarter, and then travel half the bull's body length in order to reach those organs. Good-quality hunting bullets and recognizing the animal's angle make the shot doable.

10 Tips for Better Shooting Results

A GUN GREAT SHARES HIS SECRETS

By Thomas C. Tabor

Becoming a proficient hunter and shooter certainly isn't easy. It's often a challenging proposition that involves many frustrating experiences. Most of my own abilities have developed throughout five decades of squeezing the trigger in various shooting and hunting venues around the world.

Unfortunately, some of my knowledge came after making mistakes and poor decisions. I learned from those blunders, though, and improved because of them. You can, too.

Following is a smattering of shooting knowledge I've gleaned throughout the last 50 years. Specifically, we'll review 10 tips I believe will improve your shooting.

Choose the Right Shooting Rest

Most hunters find shooting off-hand is the most challenging shooting position. I admit that when I attempt an off-hand shot, I have trouble slowing down my wavering rifle barrel. When time allows—even when shooting at moderate ranges—I try to steady my aim using some sort of a rest. You must select one carefully, otherwise your results could be sporadic.

When a rifle is fired, the barrel is subjected to a series of vibrations often called "harmonics of the barrel." For the best shooting accuracy, it's imperative that those harmonics remain consistent from shot to shot; however, they're disrupted if the stock or barrel is rested on a hard surface.

A hard surface makes a suitable rest if it has been padded with your hand, clothing, a

[A]

[B]

[D]

[C]

[A] Today, factory-loaded ammunition choices abound. Some come loaded with high-quality, premium hunting bullets. The author recommends shooting premium ammunition for best results while hunting.

[B] Bore-sighting is a great first step to get your bullets on paper, but range shooting must follow in order to fine-tune your sights.

[C] Bench-shooting helps shooters become familiar with their rifle and its recoil. It also helps evaluate the performance of both the firearm and ammunition. Still, hunters should also practice under realistic hunting conditions.

[D] Many shooters find it difficult to shoot off-hand. Use any available rest you can find—even a fencepost—to steady your aim.

backpack or similar materials. An alternative is a bipod like those produced by Harris Engineering. Most bipods attach to the front sling-swivel stud on the stock. I prefer one with extendable legs long enough to permit shooting from either the sitting or prone position.

Soil the Bore Before Hunting

While it might seem illogical, a shot fired through a sparkling-clean firearm bore will often impact differently than shots fired through a lightly soiled bore. The difference in the impact is minor at short ranges, but if your target is several hundred yards away, firing from a clean bore could severely affect your shot's outcome.

Obviously, I'm not recommending you avoid cleaning your firearms, but for the highest degree of shooting consistency, I seldom head afield without first sending a shot or two down the bore. When I return home from the hunt, I thoroughly clean the rifle to ensure it stays in top-notch shape.

Factory-Loaded Ammo Varies

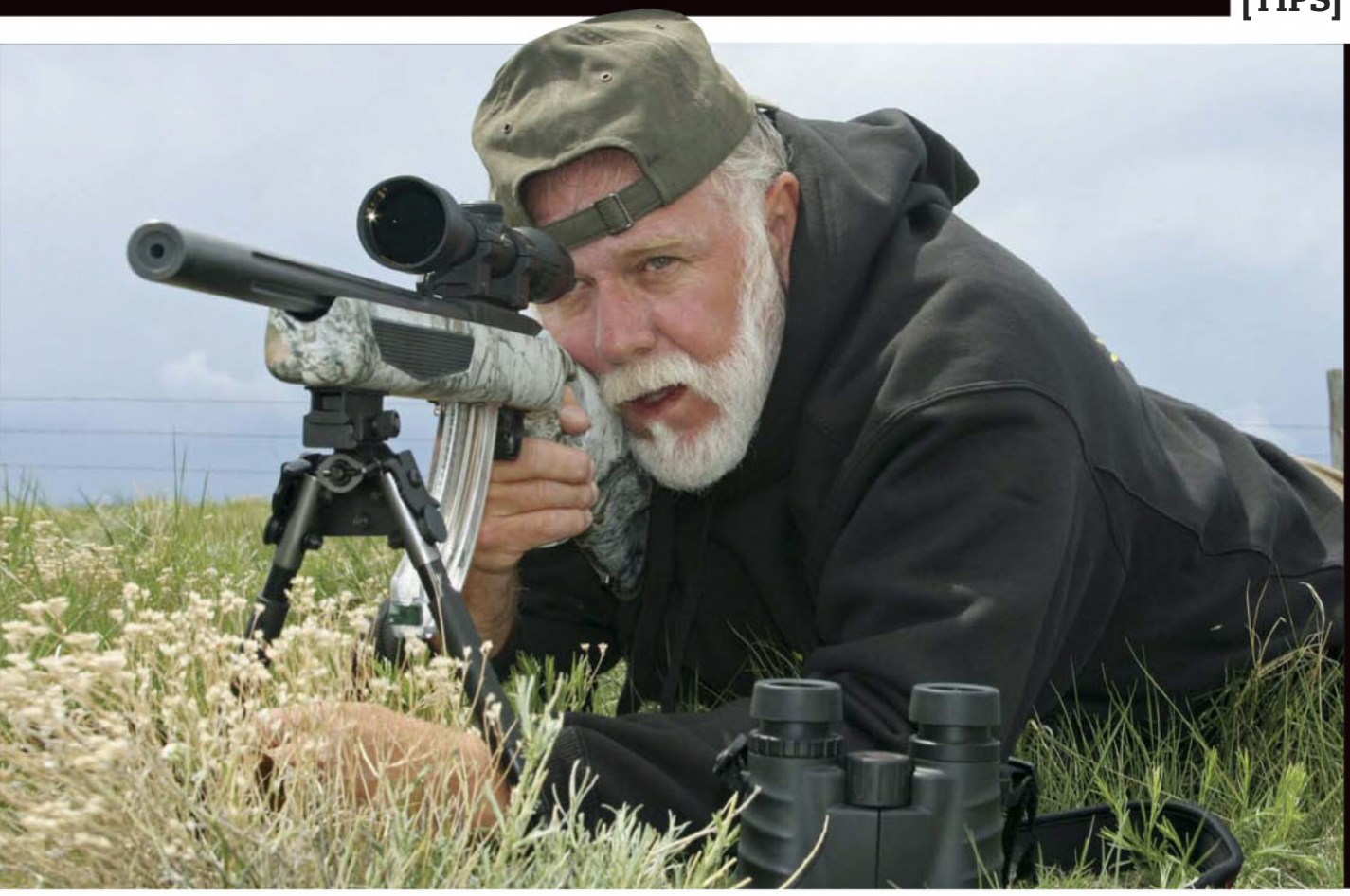
Today, I don't believe there's such a thing as a bad factory-loaded cartridge, but that doesn't necessarily mean all cartridges perform equally. Different manufacturers use different components to produce ammunition. Sometimes minor differences in the brass thickness or slight internal-dimension variations can change a case's powder capacity.

Different primers are sometimes used, which can affect powder ignition. Powders frequently vary between manufacturers, and at times even within one manufacturer's operation. Bullet weights and styles can vary, too. All of these factors influence ammunition performance. For that reason, wise shooters never mix ammunition from different manufacturers, or even cartridges from the same manufacturer if the case lots or the bullet weights and designs differ. If you do decide to change your ammunition, you must check it at the range before hunting.

Shoot High-Quality Hunting Ammo

Not long ago, high-quality hunting bullets like the Nosler Partition, Swift A-Frame, Norma Oryx, Barnes Triple Shock-X and Bear Claw were largely only shot by hand-loaders. Today, many ammunition manufacturers have incorporated these high-quality bullets within their premium hunting-cartridge lines.

Premium ammunition generally costs more, but it's well worth the money when your hunting success depends upon it. If all hunting conditions were ideal, you'd seldom need the



“Never assume that just because your rifle shot fine last season that it will shoot fine this season, too.”

enhanced performance these high-quality bullets provide, but broadside shots don’t always materialize. If the occasion requires that your bullet travel a great distance through heavy bone, cartilage and muscle in order to reach vitals, high-quality bullets will ensure a humane kill.

Bore-Sighting Never Equals Sighting-In

Bore-sighting helps you get your first shots on paper, but it doesn’t ensure you’re ready to hunt. Even when you’ve perfectly aligned your sights to exactly match the bore’s axis—achieved by bore-sighting—bullets rarely travel in that same precise manner.

Many factors affect the bullet’s flight path, and the only way to be certain your bullet will impact exactly where you want is to fine-tune your sights on the range through live-fire shooting.

Slight Variations can Hinder Accuracy

Most shooters know that dropping their rifle or bumping their scope can adversely affect shooting accuracy. Still, less obvious events can also affect where your bullets impact. Removing and replacing the stock during a cleaning operation, changing the tightness of the stock screws, removing and replacing the scope, and even slight changes in atmospheric conditions all can affect your shooting.

I’m always amazed by the accuracy changes that sometimes occur to my own rifles, even after being stored in my gun safe. Variations in temperature and humidity instigate changes to the contact points between the barrel and stock, which in turn can change the bullet’s flight.

Rifles are fine-tuned instruments, and even slight variations can affect how they shoot. Never assume that just because your rifle shot fine last season that it will shoot fine this

(top) **Shooting varmints and small game with a rimfire rifle helps develop proper shooting mechanics that’ll carry over to big-game outings.**

(below) **Shots fired from a clean bore commonly group differently than those fired from a lightly soiled barrel. In this case, the first shot from Tabor’s clean-bore .22-250 impacted several inches high and right at 100 yards as compared to the next two rounds.**

A single shot from the author's .300 Win. Mag. crumpled this bull elk from an estimated 375 yards. Tabor paired a quality hunting bullet to his rifle barrel's twist rate to make the one-shot kill.

season, too. Make it a habit to shoot your rifle periodically throughout the year, especially right before you hunt.

Select the Proper Bullet Weight

Cartridge manufacturers continually seek ways to persuade shooters to buy their ammunition. This sometimes means they offer cartridges loaded with bullets either heavier or lighter than normal for a particular caliber. But those unusual bullet weights sometimes perform poorly, because rifle manufacturers usually install barrels appropriately geared to shoot the standard bullet weights for a given caliber.

For example, many production-built rifles chambered in .270 Winchester leave the factory with barrels that possess a twist rate of 1:10 (meaning the rifling makes one complete 360-degree rotation in each 10 inches of barrel). While that may be the perfect match for a typical 130-grain .270 Winchester bullet, it likely won't shoot a little 90-grain bullet or a large 170-grainer as accurately.

While it's fun to experiment with bullets of various weights, it's often best to stay with bullets considered normal for the particular caliber you're shooting. Of course, a custom-built rifle could have a barrel with an unusual twist rate. The general rule for barrel twists is this: The faster the twist rate, the better the barrel will stabilize heavier, longer bullets. In contrast, slower twist rates will generally stabilize lighter and shorter bullets better.

Always Consider Bullet Path

Unfortunately, textbook shot opportunities rarely unfold. Often, the only shot available might be a quick, going-away shot where the bullet must enter far back and then travel through heavy bone, cartilage and muscle in order to reach vitals. In other cases, the animal may only be slightly angled to the shooter, but

KEEP BOTH EYES OPEN

It seems natural for a shooter to close their non-shooting eye while squeezing the trigger, but keeping both eyes open is advantageous during hunting situations or really any shooting scenario. It provides a better field-of-view, speeds target acquisition and keeps you cognizant of the target's surroundings. It may require some practice, but in the long run, it'll likely improve your shooting.

“All shooting helps shooters develop intimate familiarity with their firearm.”

if you aren’t totally cognizant of that, you could easily make a poor shot. Always consider the bullet’s path—where it will enter and exit—before you squeeze the trigger.

Shoot More, Shoot Better

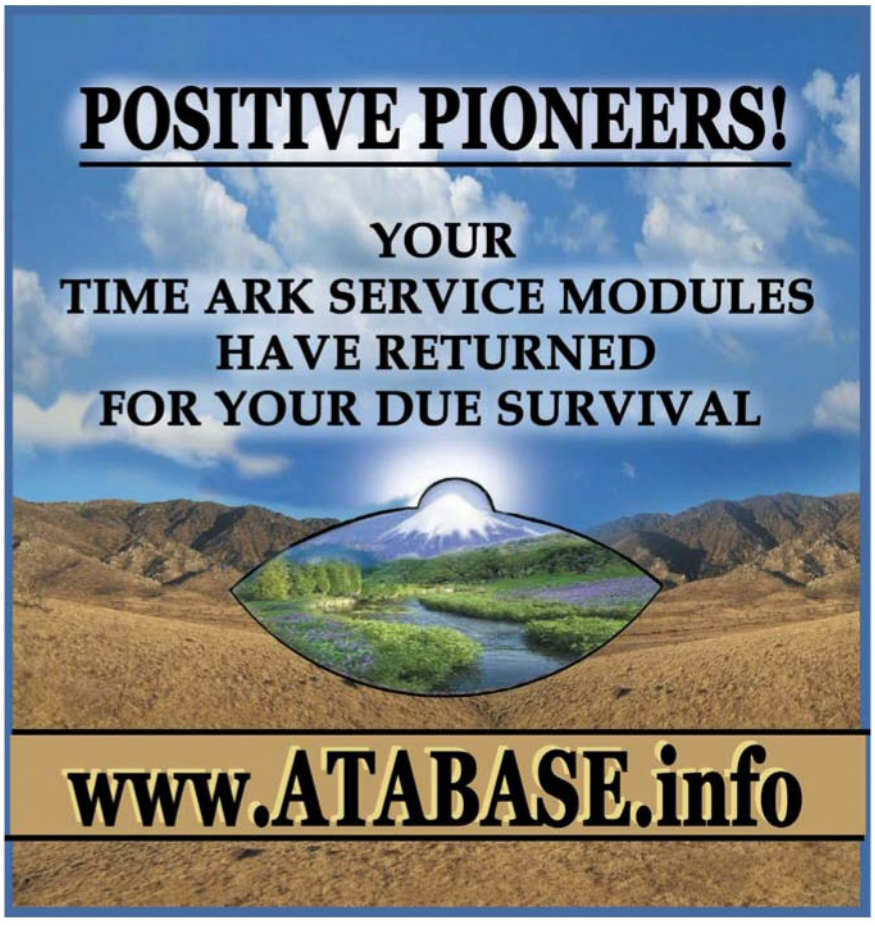
I once read an article written by a well-respected gun writer who lamented having wasted a great deal of ammunition and time throughout the years obsessing over having all of his rifles group within 1 inch at 100 yards. He admitted that he’d spent a lot of money searching for loads that consistently produced those results, and he regretted that his cash had been misspent.

When I read that I simply couldn’t believe that any knowledgeable shooter, let alone a well-known gun writer, would say such a thing. While most hunting situations don’t call for such a high degree of accuracy, it’s best to do all you can to shoot consistently tight groups before hunting, and to shoot often.

Each time a person fires a rifle, the act does far more than produce tight groups. All shooting helps shooters develop intimate familiarity with their firearm. It accustoms the shooter to the rifle’s report and recoil; it helps the shooter achieve a proper trigger squeeze; it bestows shooting confidence, and it allows the shooter to find the best-performing load for his/her rifle.

While you may never be able to punch all of your bullets within that elusive 1-inch circle, by shooting more, you’ll likely build confidence in your abilities, which will pay big dividends in the long run. If you’re concerned about the cost of shooting, a great way to save money is to incorporate rimfire practice. While rimfire shooting lacks the recoil of a centerfire rifle, it still helps you build confidence and develop proper shooting mechanics. The bottom line is shooters who are absolutely familiar with their firearm will perform better during an intense hunting situation.

These considerations have improved my shooting, and I believe they’ll improve yours, too. MP



DEADLIEST LURE

THE SIMPLE, VERSATILE AND INEXPENSIVE TUBE JIG

By Lou Phillippe

A modern outdoorsman who walks into a tackle shop is confronted with literally thousands of lures. Some are shiny, some strange, some ultra-realistic and some expensive. Most are crafted to catch more fishermen than fish.

These lures work under the right circumstances, but there's one lure that works everywhere, for virtually every fish species in freshwater and saltwater. It's not sexy or shiny. It's cheap and simple to fish. It's durable and can be manipulated in countless ways. It's basically impossible to fish it wrong.

Instead of targeting only trout or bass, this one will surprise you with, say, a big smallmouth when you're angling for crappies or a pike when perch are your target. If I had to catch a fish and my life depended on it, I'd choose this lure.

“Bites from even monster lake trout can be very light, and anglers must be prepared to set the hook on any line hesitation or slight resistance of the rod tip.”

PHOTO BY THINKSTOCK

"Serious outdoorsman shouldn't be without a selection of tube lures in their tackle boxes or vests. I even have a few in my survival kit ..."

Versatile and Inexpensive

In my opinion, a tube lure or tube jig is the deadliest lure. I've caught my largest of many species on variations of it. It also won't break the bank since it's among the market's least expensive lures. It comes scented or salted, and the hollow body allows insertion of scent, rattles or even little cyalume light capsules. Ranging in size from ½ inch to more than a foot long for saltwater squid imitations, it appeals to everything from panfish to ocean predators.

A friend recently returned from a Florida trip where he landed sharks, grouper, snapper and jack crevalle on tubes. That same week, I caught rainbow trout, yellow perch, walleye, rock bass and smallmouth bass on smaller versions from my local lakes in Colorado.

The plastic tube lure's magic is in the various ways it can be fished. Drop it through the ice and fish often nail it before it reaches bottom. Skip it under a dock and hang on for instant strikes. Toss it against rocks and twitch it back to imitate a crayfish or minnow and predators rush to grab it. Dangle it under a small bobber and it flutters with a tantalizing quiver. It's simply the most versatile lure ever invented.

Serious outdoorsman shouldn't be without a selection of tube lures in their tackle boxes or vests. I even have a few in my survival kit because they could save my life if I were in a bind and live bait was unavailable.

Rigging the Tube Lure

Tube lures can be fished weighted or unweighted. The most popular method is to insert a weighted jig hook into the open end, push it forward and poke the eye out the top.

In open water, you can simply cast and retrieve, either hopping it along the bottom or reeling in with a steady or erratic retrieve to imitate a minnow. Keep your line tight as it sinks, because fish often grab it on the drop. Where spring fishing is permitted for spawning walleyes, the only lures I carry are a pocketful of 2 ½-inch chartreuse tubes and extra hooks. It's not uncommon to catch perch, bass, crappies, catfish and even carp in my lake when trying for walleyes, because fish cannot resist this lure.

My all-time favorite way to rig it for most open-water fishing is beneath a small bobber, suspending it at different depths until I find the one where fish are holding. The important element of this style is to ensure it hangs perfectly horizontal, like a minnow. I tie a double-improved clinch knot and pull it as tight as possible. Then, I pull it back slightly toward the hook's bend so it balances in a straight line when submerged. If a fish strikes and straightens it out, it's usually necessary to reposition the knot to bring the lure horizontal again. Many anglers neglect this critical detail, but it greatly improves the lure's effectiveness.

Fishing the Tube

For crappies and smallmouth bass, I like a 1 ½- to 2-inch chartreuse version beneath a bobber. If it sits for a few seconds without a hit, I twitch the bobber, let it settle, pull it forward a few inches to a foot, stop and prepare for a strike. Pulling the bobber forward causes the tube to rise, like a minnow rising for a bit of food, before dropping back down. Casting the bobber next to a dock often brings instant strikes once the lure stops.

Similar results ensue when lobbed beneath overhanging tree branches. I usually suspend it about 2 to 3 feet below the bobber and increase the depth after a few casts until I find the magic spot. The only downside to this method is that big pikes will sometimes run out and grab it, and unless it hooks their lip, their sharp fangs will cut the line. But that's the risk of fishing with a deadly method that works on virtually all fish species.

Open-Water Fishing

The tube lure really stands out in every type of open-water angling. Fish often munch on the squishy plastic, instead of spitting it like a conventional lure. Black, brown and green versions imitate leeches and crayfish, while lighter colored tubes mimic minnows. When fishing from a boat, I like to pitch a lightly weighted, motor-oil-colored 2- to 3-inch tube against rocks or into flat shorelines and swim it back like a darting crayfish.

Bass anglers have learned how to "wacky-rig" them, which means they put the hook through the middle, instead of from front to back, and skip them beneath docks where lunkers lurk. They're also extremely effective on beaver-pond trout.

For stream fishermen who prefer spinning gear to fly rods, the tube lure can make the difference between a so-so day and an epic adventure. Where hardware and spinners must be carefully worked to prevent hang-ups and spinner blades need to keep moving, it's virtually impossible to fish a tube lure incorrectly in moving water. You can swing it down and across like a minnow. You can cast it upstream and let it tumble down like a wounded minnow, or use a darker one to imitate a hellgrammite, stonefly nymph or even a worm. When allowed to sink into a deep hole or worked along an undercut, it'll draw out the biggest, wariest old brown trout and smallmouth bass.

(top) **Max Meland has learned chartreuse tube lures produce big smallmouth bass.**

(opposite) **Jumbo perch can't resist a tube twitched above the weeds.**

(top) **Lou Phillippe hauled in this big lake trout on a cold day after it nailed his white tube jig.**

Steelhead anglers have learned how to fish them suspended beneath a small float, using either fluorescent tubes to imitate an egg cluster, or darker ones to represent natural food. The depth can be controlled to bring a natural drift exactly where steelhead are holding, and the tentacles resemble residue from a freshly dropped egg sac.

One memorable spring morning at a local lake inlet, my fishing buddy and I used nothing but yellow-and-white 1 ½-inch tubes beneath a tiny red-and-white bobber, drifting them in the current where spring runoff was pouring in. We each landed more than a dozen lunker rainbows and cutthroats up to 6 pounds, and after the trout slowed down, we moved out into the slack water closer to the lake and landed several largemouth bass. Total cost of our lures that day was less than a dollar, only because we each had a few chewed up so badly that they had to be replaced.

Ice Fishing

The tube jig is my all-around standard lure for ice fishing. I love watching it in clear water, the tentacles dangling and waving with a lively and tantalizing dance. For trout, if the water is too cloudy or I'm fishing too deep to see it, I always use a tiny bobber to detect strikes. I lift the bobber a foot or so every 30 seconds, then let it drop and settle. The drop often attracts trout, but they usually want it sitting still before they hit. The water turbulence causes it to flutter with lifelike quivers. But a sudden hard twitch when trout are deliberating often spooks them.

Lake trout are the exception. They're accustomed to baitfish darting away when they approach, so a continuous lift-drop-stop method works best. Also, the tentacles will create water vibrations, which draw lakers from a distance.

Bites from even monster lake trout can be very light, and anglers must be prepared to set the hook on any line hesitation or slight resistance of the rod tip. This applies to open-water lake-trout fishing, too. My largest open-water laker, weighing 36 pounds, hit a jig so softly the rod tip barely moved. My largest laker through the ice was just less than 27 pounds, and he hit the tube jig as it dropped, so my line simply went slack.

For panfish though the ice, I prefer a small wire-spring indicator on the rod's end. The difference is due to a trout's propensity to shy from jigs actively moving in the water, where the motion attracts panfish and warm water predators like perch, walleye and bass.

"Once you get hooked on tubes, you'll ignore those glittery $5 trinkets tempting you to open your wallet at the tackle shop."

Saltwater Fishing

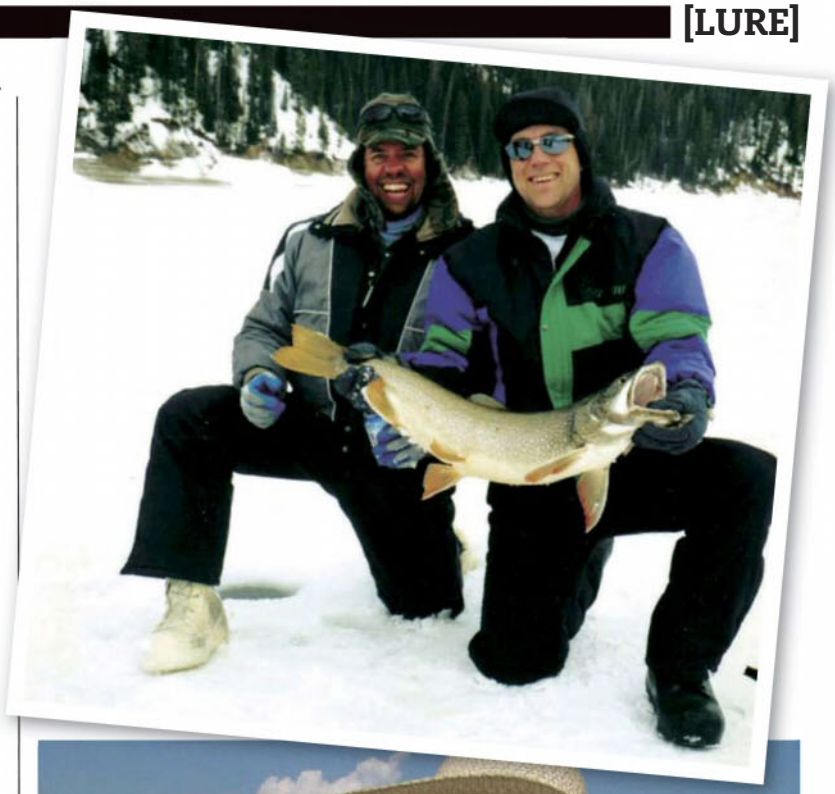
Most ocean fishing is done with a charter boat and crew, and you'll be set up with their preferred bait or lures. But, if you're like me and enjoy doing it yourself, a tube lure is the ticket. Root beer-colored and pink versions imitate shrimp, while white, yellow and chartreuse varieties simulate minnows. I like to wade a shoreline and flip them back under mangroves for snook and sea trout, and I have caught everything from baby tarpon to small barracuda, too.

Once, when fishing beneath a bridge in the Florida Keys, I tipped one with a small shrimp and hooked something that ran deep into the ocean so fast I had to break it off so I didn't lose all of my line. With tube lures, you just never know.

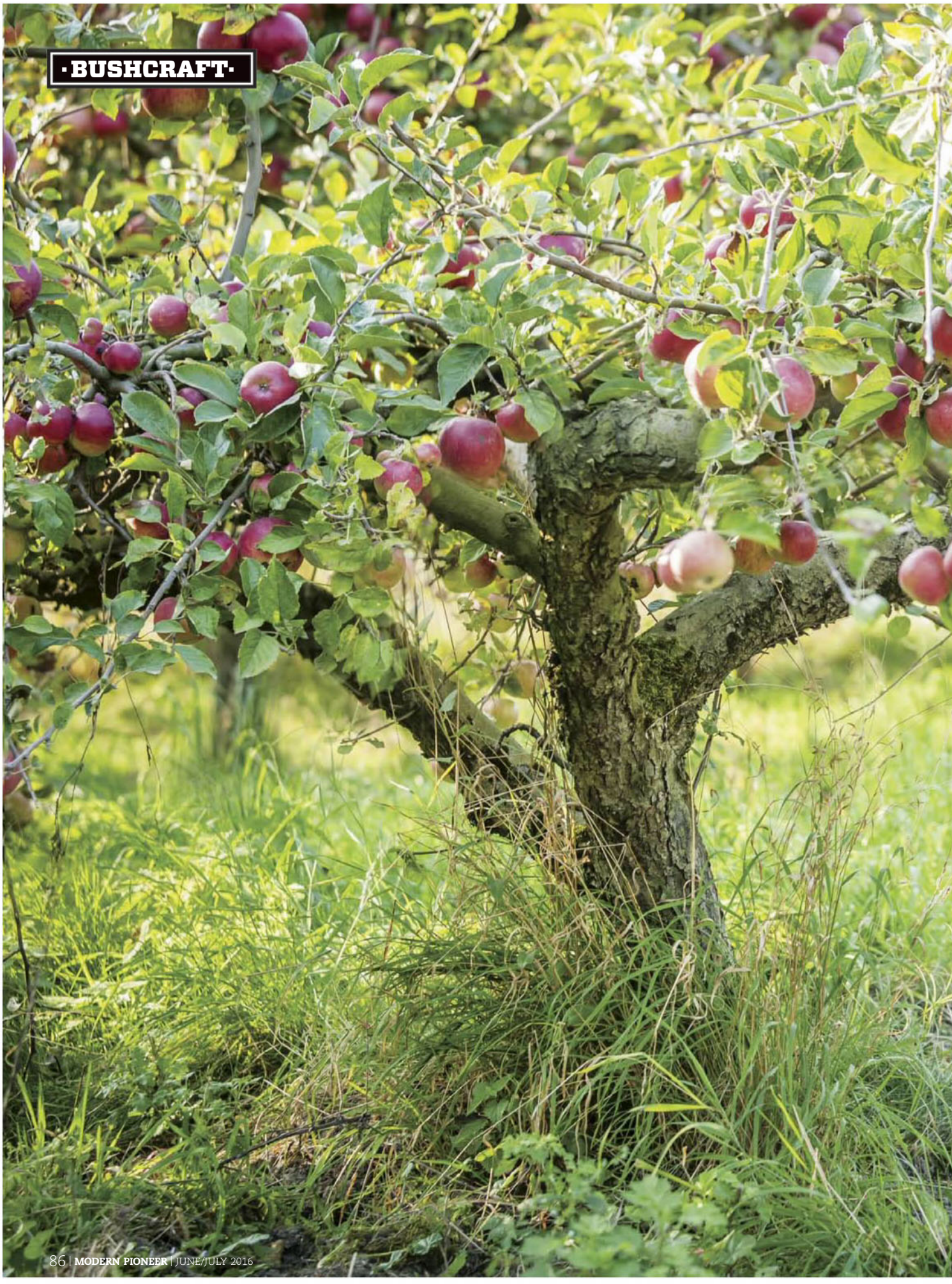
The Deadliest, Most Versatile Lure

For many years I suffered from a lure addiction. I couldn't go into a fishing store without buying something new. Yet despite owning hundreds of lures, the one I use most often is a tube. In my more than half-century of fishing, I've never found a lure so versatile and so effective. It can be fished so many different ways under different conditions. Even beginners can have epic days on the water with them, and they don't break the bank. A dozen or so with a few hooks cost only a couple of dollars, but if you're like me and start finding new ways to use them, you'll soon have boxes of different sizes and colors. More often than not, when I find the right color and size for the day, no other lure is needed.

When your favorite lure isn't producing, tie on a tube jig and give it a go. Once you get hooked on tubes, you'll ignore those glittery $5 trinkets tempting you to open your wallet at the tackle shop. You can use the money saved to buy a new smoker to preserve all of the tasty fillets you'll be bringing home. MP



(top) **A tube jigged beneath the ice can produce surprises of every size. This big lake trout grabbed a glow-in-the-dark tube on a cloudy day.** *(below)* **Dorothy Sprackling fills the freezer with crappie fillets using tube jigs tipped with a minnow or night crawler.**



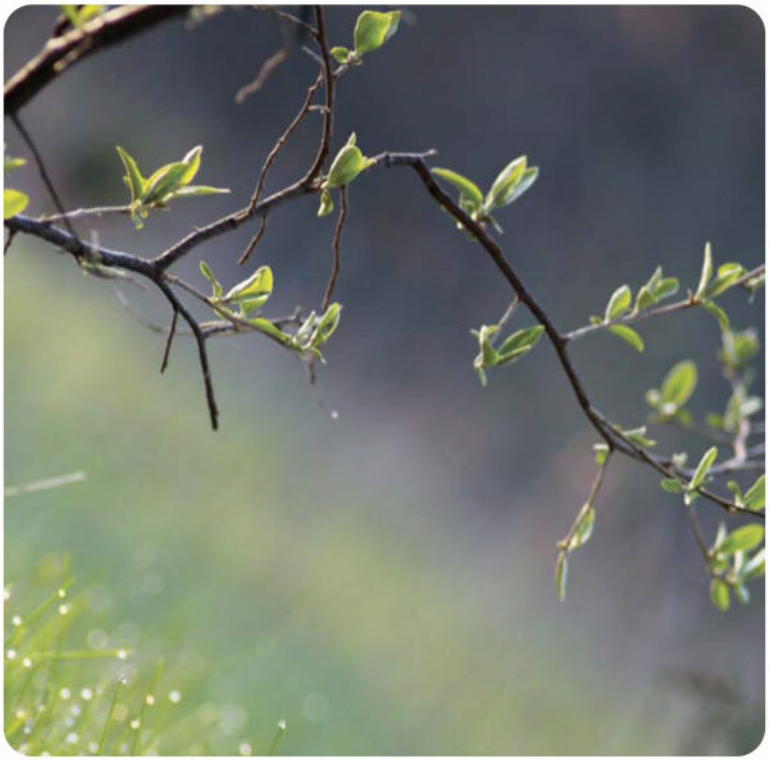
IMPROVING DEER HABITAT

TRANSFORM YOUR SMALL PARCEL INTO WHITETAIL PARADISE

By Tony Hansen

Food plots are all the rage these days, and one must admit, they're pretty darned effective in many instances. But there are some caveats that should be taken into consideration if you're thinking about growing some yourself. Food plots are expensive; they're time-consuming, and they require substantial acreage to produce the results and year-round forage most hunters desire.

PHOTO BY THINKSTOCK



(top) **Young trees and shrubs combined with native grasses can provide a tremendous amount of year-round browse and forage for whitetails. The key is to ensure you have varying stages of succession—some new growth, some old.** *(below)* **The emerald ash borer has taken a serious toll on ash trees in the Midwest. Removing those dead trees not only makes your woods safer, but allows for new trees and shrubs to fill in and provide abundant browse.**

"Deer (and other critters) survived just fine on native browse and vegetation before the advent of modern food-plotting tactics."

They're also invasive. Before you fire off a response, let me explain. Invasive plants, by definition, are species not native to the location in which they're growing. I don't know about you, but I've never encountered a wild-growing turnip or sugar beet, nor have I stumbled across a patch of wild corn or soybeans. I'm not saying food plots are harmful like invasive phragmites, destroying native beaches and shorelines, but they are usually comprised of non-native plant species.

Deer (and other critters) survived just fine on native browse and vegetation before the advent of modern food-plotting tactics. They're still eating the same plants today, and odds are high they're getting their food on the property you hunt. So why not improve native browse and, for that matter, the cover deer and other wildlife call home?

Bigger Isn't Always Better

A few years back, I managed to fulfill a lifelong dream when I closed on the purchase of my very own hunting parcel. At just 17 acres, it's by no means a sprawling ranch, but it does have remarkably diverse habitat for its size, and I saw the property's potential long before signing the papers.

Still, I knew the property needed two critical elements to become a truly stellar piece of hunting land: food and cover. With just 17 acres to work with, I knew I'd need to overcome some challenges if I wanted to provide both.

The Problem With Food Plots

Traditional food plots can provide tons of forage, but to make that happen you'll need to clear and prep a fair amount of acreage. Every acre of ground I clear on my parcel reduces the amount of deer-holding cover by 1/17. I'm not a fan of that fraction.

Owning land isn't cheap. The costs of maintaining a property can add up. Planting food plots each year is expensive no matter how you

Pruning trees and shrubs, particularly those that bear soft mast like apples, can greatly increase their production.

slice it. I wanted to spend cash wisely on habitat enhancements that would pay off for years to come with minimal additional expenses.

My property had a couple of natural openings, and those were used to establish standard plots, like clover and brassicas. The remainder of the property was designated for cover and food. Believe it or not, you can have both.

Another Approach

I purchased a book that identified native trees, shrubs and plants in southern Michigan. With that book in hand, I scoured my property for species that would benefit wildlife, particularly deer. I found all manner of shrubs that provided cover value and were browsed by deer. The property already had about a dozen mature apple trees scattered about. The first year I owned the ground, they produced tons of apples, so I knew they would bear fruit.

I also found plenty of less valuable species. Each got its own colored ribbon: green for good, red for poor. The green ribbons remained, while the red ribbons marked species for removal.

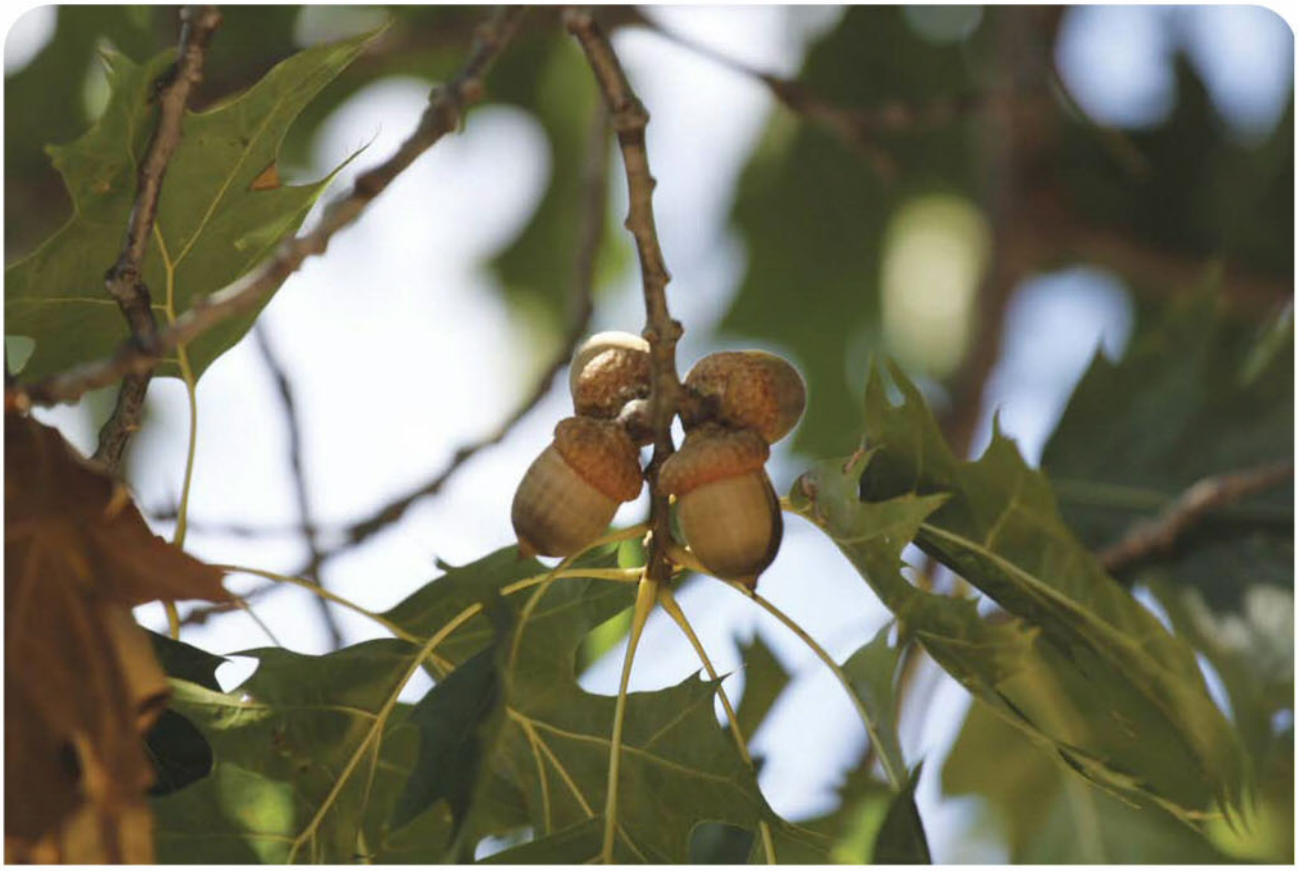
Trees and Shrubs on the Cheap

Most counties in the United States have a conservation district. Those outlets can be a land manager's best friend. Many of them offer spring tree sales, and you can find some real bargains.

I bought all of the trees and shrubs for my property at one such sale. The cost was less than $1 per tree or shrub, and the available options were chosen specifically for their traits of benefitting wildlife and their ability to flourish in my region.

Many conservation districts also have reference books and resource materials available free of charge, and the staff can help answer many of your habitat questions. Often, they'll have equipment available for use at little or no charge. My local district, for example, rents out a tree planter for planting large numbers of seedlings and also offers use of a seed drill.

Local chapters of conservation groups, like the Quality Deer Management Association, National Wild Turkey Federation and Pheasants Forever, are also great resources. They offer low-cost seed programs (as well as a tree/shrub program) and have planting equipment available, too.



Most deer hunters understand the attraction of acorns. You can enhance the production of existing oaks by removing competing tree species to increase the amount of available sunlight, water and soil nutrients.

From there, I made a list of beneficial shrubs and trees the property lacked, and then I went shopping.

For less than $300, I obtained 400 seedling trees and shrubs. I opted for a mix of highbush cranberry, American hazelnut, red oaks, white swamp oaks and a few apple trees.

Mapping Improvements

The first order of business was to enhance and improve, and I started by creating a map of sorts. Using an aerial photo, I defined areas of the property where I wanted deer to bed and feed, and identified locations for stands between the two. This was important because I only had several trees large enough to support a treestand.

The emerald ash borer hit southern Michigan hard, and the majority of trees on the property were ash trees. They were dead and needed to be removed. The remaining stand trees needed to be considered so I could orchestrate deer travel past those trees. The aerial image helped me define areas where the cover needed to be enhanced, and where natural terrain features would facilitate deer movement.

Improving Existing Flora

Next, it was time to enhance those species marked with green ribbons and to remove (if necessary) those marked with red. The mature apple trees and oak trees were addressed first. I pruned the apple trees in late winter and removed competing trees around them to allow more sunlight. I did the same with the oaks.

The existing desirable shrub species followed. There weren't many of them, but any that existed received a shot of fertilizer in the spring and fall. I simply broadcasted 20-20-20 using a hand-held spreader around the base of each shrub and removed any red-ribboned shrubs nearby. Reducing competition and providing additional nutrients can have a surprising impact on the overall size and health of shrubs. It worked great.

Planting and Transplanting

The real work came in the form of planting and transplanting. The 400 seedling trees and shrubs were planted in early spring in locations marked on the aerial image. I planted on a rainy day and used a simple hand spade to do the work.

If you have desirable shrub species already on the property, you can transplant them to other locations, if necessary. This can be a great way to increase the forage base if you're lucky enough to have populations of species like greenbrier and honeysuckle in one area but not another.

Each of the shrub species I planted, as well as existing ones, were chosen because they provide

“Using an aerial photo, I defined areas of the property where I wanted deer to bed and feed, and locations for stands between the two.”

forage to deer on a year-round basis. But they also go one step further than common food plots: They provide great security cover, too.

Cranberry bushes, for example, produce prolific amounts of red berries all wildlife will eat. They also grow thick and tall. You can use landscaping staples to pin low-hanging shoots to the ground, and a new shrub will take root, which helps expand a cranberry thicket’s size.

Each spring, I hit the shrubs, grasses and weeds with fertilizer. I can’t overstate how important this is or the difference it makes. In less than an hour, I can use a basic tow-behind spreader to lay down 20-20-20 fertilizer on much of my property. I do this just before a rain, and the “thick factor” is easily noticed by midsummer.

There’s no shortage of information available on transplanting shrubs and plants, just be sure to do the research first. Each species requires a slightly different approach.

A Little Slice of Heaven

I don’t think you’re ever really finished with habitat work on a property, but three years into the process, I have roughly 2 acres of traditional food plots and 15 acres of deer-holding cover that doubles as a year-round food source. From apples to honeysuckle to cranberries to hazelnuts to native forbs and grasses, I’m developing a buffet of natural browse and forage amidst a sea of security cover.

I don’t have to plant it each year. There’s no tilling, discing or adding glyphosate. Each spring, I do some maintenance pruning, planting and transplanting as needed, and apply fertilizer. Every fall, I sit in a treestand and look over what God has created. MP

Identifying desirable tree species is a critical first step before doing any habitat work. Some species, like the swamp oak that produces these acorns, are easily misidentified. Know your trees before cutting.

Protect Your Investment

When planting (or transplanting) trees and shrubs, especially seedlings, you must protect them during their first couple of years from deer, rabbits and other gnawing critters.

Tree shelters are awesome, but they can be expensive. My local conservation district wanted $7 per shelter. At 300 trees and shrubs, that was well beyond my budget. So, I made my own for about 40 cents each.

I started by visiting a local saw mill and walked away with a load of slab wood for almost nothing. I ripped the slabs on my table saw and created stakes that were 2 inches square.

I pounded three stakes into a triangle around each freshly planted seedling and shrub and wrapped plastic garden netting around the frame. I secured the netting to the stakes using zip-ties. The netting and zip-ties were purchased from a local Tractor Supply store, and a single roll (about $25) was enough to do all 300 plantings.

Many of the seedlings and shrubs are now big enough to handle browsing, and I’ll be removing the shelters and storing the stakes for future use.

Water Purification for Home and Field

HOW TO ENSURE SAFE, BACTERIA-FREE DRINKING WATER

By Larry Schwartz

Water is one of our most crucial resources, both in the field and on the homestead. Access to clean, drinkable water is so integral to our daily lives that we often take it for granted. But what would we do if we couldn't get to a ready supply?

Fortunately, there are some basic techniques that have been used successfully for decades. While some are simple, others are more sophisticated, and there are a variety of methods that can be deployed in a backcountry situation or at your home or homestead. The great part is that these methods don't include buying expensive commercial water filters or using other complicated methods. They're all simple and easy to do on your own.

PHOTO BY THINKSTOCK

WATER PURIFICATION DROPS AND TABLETS

Brand	Active Ingredient	Form
Potable Aqua	Iodine	Tablets
Micropur	Chlorine	Tablets
Aquatabs	Chlorine	Tablets
AquaMira	Chlorine	Drops

Homemade Water Filters

Bottled-water companies often talk about how their water is filtered naturally by passing through the Earth's various geologic layers. You can do the same thing that nature does with filtration systems you can make with materials in the field or at home. All it takes is a container, sand, charcoal, gravel and some paper or vegetation. These filters work best when you want to clean out organic and other solid materials from your water source. Once filtered, you should still boil the water to eliminate any bacteria or viruses that may be present.

In the Field

You'll likely be able to find anything you need to filter water along the trail. Sadly, that also includes the 2-liter bottle needed to make your filter.

First, cut the bottom off of the bottle; you can use it as a catch basin for the water that you run through your filter. Punch three or four holes along the cut edge and run some wire or cord through them so that you can hang the filter from a tree or tripod rather than holding it throughout the process. Then, punch a hole in the cap so water can drain through it.

The first layer is made up of filter paper or grassy vegetation. Push the material down into what was the top where the cap screwed on. This will keep the other filtration material from falling out. Next, add a layer of ground charcoal made by grinding or crushing burnt wood from your campfire. The following two layers are coarser. First, add a layer of fine sand, followed by another layer of coarser sand. The last two layers are medium gravel and coarse gravel. Each layer, from the coarse gravel to the ground charcoal, is made up of smaller pieces that catch progressively smaller contaminants as the water filters.

At Home

Water barrels make excellent storage containers and filters for the homestead or even for the urban homesteader in an apartment building. You can add a filter to the barrel's upper half and use the water that's in the lower half. Also, you can make the whole barrel into a filter and draw the water out through the bottom with a hose or faucet.

Better Living Through Chemistry

Water purification is very challenging. You not only have to get rid of the solid materials in the water, but also bacteria and viruses. Those biologic hazards are why water must be treated with chemicals. Chemical treatments have been used since World War II in the form of iodine and halazone drops and tablets.

These were followed with better formulations of chlorine, which proved to be more effective, potent and had a longer shelf life.

In the Field

If you're in the backcountry and need to purify water chemically, your best bet is to use chlorine-based drops or tablets. Before following the directions on the package, get the water as clear as you can by running it through a filter or even a T-shirt to remove solid materials.

Then, add the recommended amount to your water, shake it and let it stand in a cool, shaded place for the amount of time stated in the directions. Be sure to loosen the cap on your container and let some of the purified water run out; this cleans anything off of the threads so you don't accidentally drink some untreated water.

If you don't have any of these products, you can use regular or unscented household chlorine bleach the same way as the tablets or drops; see the table on page 97 to determine how much to use. Let it sit for 30 minutes. If the water is cloudy or cold, double the amount of bleach.

At Home

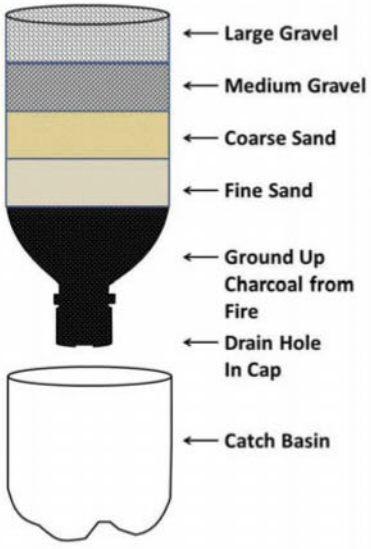
You can use bleach to purify your water supply at home as well as in the field. As shown in the table on page 97, you should use 2 teaspoons of liquid household bleach for every 10 gallons of clear water you want to purify. Just as in the field, the water should have a slight chlorine smell to it after you've treated it. If not, repeat the process until an odor is detected.

(top, left) **Progressively better water is obtained by running it through the filter numerous times.**
IMAGE BY CONCERNUSA.ORG

(top, right) **Water barrels, like this large plastic model, make excellent storage containers and also great filters.**
IMAGE BY FLICKR.COM

(center) **A number of companies make drops or tablets that you can use to purify your water for drinking.**
IMAGE BY YOUTUBE.COM

(right) **The increasingly finer materials catch contaminants in the water to make it safe for drinking.**



Hanging your water filter makes it much easier to use since you don't have to hold it over the catch basin the entire time the water is filtering through the layers.

IMAGE BY THESURVIVALISTSBLOG.NET

Also, for large volume applications, you can use powdered bleach instead of normal liquid household bleach. The powdered formulation can be found specifically for water purification, but the chlorine powder used for in-ground pools to help balance the pH factor can also be used once you determine the proper proportions to get the needed 5.25-8.25% concentration.

The bleach you use must be unscented. The chemicals used to provide pleasant scents are actually toxic and can be fatal if ingested.

SODIS PURIFICATION TIMES

SODIS Suggested Treatment Times

Weather Conditions	Minimum Treatment Times
Sunny (less than 50% cloudy sky or less than 50% of the treatment time)	6 hours
Cloudy (50% to 100% cloudy, little to no rain, or cloudy for more than 50% of the treatment time)	2 days
Continuous rainfall or cloudy	SODIS is ineffective, use other methods for obtaining drinkable water such as rainwater collection

"The chemicals used to provide pleasant scents are actually toxic and can be fatal if ingested."

Make absolutely sure that your container of bleach has no mention of scents or fragrances of any kind.

Let the Sun Shine In

While chemical treatment is an effective method for purifying water that's been filtered or is already clear of solids, it can also be expensive. You must carry or store the chlorine in its powdered or liquid form, or carry water-purification drops or tablets. It also requires time and effort on your part. An alternative method is to use the power of ultraviolet (UV) light to do the work. There are tools that do this for us with small quantities of water for use in the field, and ancient technology has provided a method for larger-scale use on the homestead.

In the Field

For use in the backcountry, small UV emitters, like the Steripen, are available to purify the water in your drinking bottle or hydration reservoir. These battery-powered devices either screw onto the top of the container, or you hold them in place while they do their work. Some can even be dropped into the bottle and submerged. They work by stopping bacteria growth and viruses in water, making it safe to drink.

Since the device uses a light source, the water must be clear. If not, its effectiveness greatly diminishes. Be sure to filter the water beforehand to get rid of any solids. A sophisticated filter isn't necessary, running water through cloth, like T-shirts, or through paper coffee filters, does the trick.

At Home

The acronym "SODIS" stands for "SOlar DISinfection." It refers to a method used in countries or locations without a heavy technology infrastructure or where the cost of modern water-purification techniques makes their use impractical.

The UV rays in sunlight kill viruses, bacteria and parasites in the water. All that's

required is a clear PET-branded plastic bottle and sunlight. Most bottled water and soft drinks come in PET bottles, so they're not difficult to obtain. The PET qualification is needed to prevent harmful chemicals from leaching out of the plastic during the SODIS process.

The process is simple and straightforward. Just fill a clear plastic bottle with clear water, almost to the top; leave some air in the bottle. Shake the bottle to mix the air into the water. Then, place the bottle in a bright area and let the sun's UV rays do their work. Placing the bottle on a reflective surface helps the process because it reflects the UV rays back through the water a second time. Aluminum sheeting works well for this, but any reflective surface will help.

On a clear, sunny day it should only take six hours to disinfect the water. If the sky is cloudy or if it is sunny less than 50% of the time, you should give it two days. If it's continuously cloudy or rainy, the SODIS method most likely won't work because there won't be sufficient UV rays to disinfect the water. In this case, other methods, like rainwater collection, should be used to obtain drinkable water.

CHLORINE DISINFECTING DOSAGES

Use unscented household bleach containing 5.25-8.25% chlorine to treat water at home or in the field

Volume of Water to be Treated	Bleach Solution to Add
1 quart/1 liter	5 drops
½ gallon/2 quarts/2 liters	10 drops
1 gallon	¼ teaspoon
5 gallons	1 teaspoon
10 gallons	2 teaspoons

In Summary

Each of these techniques is effective, but none of them address all of the contaminant triad of solids, chemicals and biologics. For that reason, it's always best to use them in combination based on the water you're trying to purify. If the water isn't clear, you'll want to filter it in some way to remove solid materials. Since the danger of bacteria or viruses is always present in both the backcountry and the front country, you should disinfect using chemical methods, UV treatment or the old standbys of boiling or distilling. MP

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FLETCH YOUR

OWN ARROWS

STUNNING RESULTS IN A FEW EASY STEPS

By Darin Potter

Each year, I shoot hundreds of arrows, either at a 3D course, or in my backyard, to hone my shooting skills for the archery deer season. Unfortunately, these arrows occasionally stray and miss the target or strike one another, damaging the vanes.

Of course, damaged fletching renders the arrows unusable. Tired of the expense of having a pro shop do the job, I began fletching and refletching my own arrows.

With a little education, a good fletching jig, vanes or feathers and fletching glue, you too can make your arrows usable again without frequent and expensive pro-shop runs.

The Fletching Jig

The most basic jig costs about $30 and includes a straight-, right- or left-helical clamp, depending on your choice of arrow rotation in flight. Fletching jigs usually come with only one clamp, but additional clamps can be purchased. Some jigs convert to fletch crossbow bolts, too, and some fletch three vanes at once. One example is the Crossbow Tower by Bohning.

Fletching jigs typically come manufactured with predrilled holes in the base that allow you to permanently fasten them to a workbench or small piece of wood for stability. If you're interested in fletching numerous arrows at once to save time, certain companies offer multi-arrow fletching jigs. For example, the Jo-Jan Multi Fletcher allows you to fletch six arrows simultaneously. This works great if you have several arrows with damaged vanes and feathers, or if you're fletching arrows for friends or family.

It's extremely important to read and follow the manufacturer's instructions included with your fletching jig for optimal results.

About seven years ago, I finally switched from aluminum arrows to carbon arrows. I'd spent the previous 19 archery seasons shooting aluminum arrows and was looking for a dozen arrows that would shoot more

(top) **The author stores all of his fletching essentials in a plastic organizer.**

(bottom) **Potter recommends fastening fletching jigs to a solid base for stability.**

"Tired of the expense of having a pro shop do the job, I began fletching and refletching my own arrows."

accurately and penetrate deeper.

I eventually settled on Carbon Express' Maxima Hunter 350. These arrows came fletched with 2-inch Blazer vanes, which meant that if I wanted to replace them on my own, I'd need to purchase a fletching jig made specifically for carbon arrows. Once I learned that Bohning Archery manufactured a version called the Blazer Fletching Jig Helix, I immediately ordered one.

Once my new fletching jig arrived, I mounted it onto a small board right next to my other jig, which I used to fletch 5-inch plastic vanes to aluminum arrows. This board is portable and can be stored safely when not in use. If you frequently fletch or refletch arrows, you might consider mounting it permanently to a workbench. It's essential to fasten the fletching jig to a platform—permanent or portable—in order to properly attach plastic vanes to an arrow.

Whether you purchase this type of jig or another one for fletching carbon arrows, I advise that you closely follow the manufacturer's instructions so your fletching properly adheres.

Accessories

Before you begin fletching your own arrows, you'll need a few items on hand in order to prepare them for fletching. First, you must have a tool that scrapes damaged vanes or feathers and the dried adhesive off the arrow shaft. I use a tool called the "Saunders Fletch Stripper," which works great for removing the glue. This L-shaped tool sits on the arrow, and deploys a small blade to strip the vane and

FLETCHING GLUE

My glue of choice for fletching is Bohning's Fletch-Tite Platinum. It comes in a ¾-ounce tube and can be used for fletching on wood, carbon, aluminum and fiberglass arrow shafts. It's extremely durable and bonds well. Fletch-Tite Platinum remains flexible and won't become brittle or hard like other types of fast-drying fletching cements. Fletch-Tite has a five-minute dry time and a full cure time of 48 hours.

When used properly, it holds vanes in place. For example, I arrowed a buck several seasons ago, and my vanes were all intact after the pass-through shot. I rinsed off the blood, and the arrow was ready to go again. Visit bohning.com for more information on Bohning Fletch-Tite.

adhesive. Similar tools can be found at most archery shops and sporting-goods stores. You can also research and purchase them online.

Once you remove the vanes and dried adhesive, some residue will be left behind. To remove it, sprinkle some cleansing powder, like Comet, on the old glue and scrub the area using a moist Scotch-Brite pad. This will also roughen up the shaft surface for better adhesion when you refletch. Next, use acetone or rubbing alcohol to clean the portion of the shaft you'll be fletching.

Arrow Wraps

Before applying vanes to your arrows, you might consider attaching an arrow wrap to the shaft. Arrow wraps come in various colors and designs, which will help you find them more easily after shooting at game. I prefer using a 4-inch fluorescent orange wrap, which I can easily spot from a distance.

To apply an arrow wrap, lay the adhesive side up on a flat surface, and line up the arrow so that the wrap is even with the end of the carbon shaft's nock end. Next, use both hands to roll the arrow evenly over the wrap.

Adjust and Glue

Adjust your jig so vanes or feathers rest perfectly on the shafts. Once the adjustments are made, place the arrow into the jig and begin gluing the new fletching onto the arrow.

Insert the vane or feather into the clamp then apply glue along the glue channel. It's extremely important to have the clamp aligned with the magnets on the base, otherwise, the fletching won't position properly, which could affect arrow flight. Finally, allow the glue to dry the recommended time.

After you remove the arrow shaft from the jig, apply a small dot of glue to both the front and the back of the vane. This will help hold it in place, and prevent it from peeling up.

Always make sure the vane sits properly on the shaft when in the clamp. If it does not, adjust the jig before gluing the vane.

Potter places a glued vane onto a carbon arrow shaft.

"... you may want to buy several different types of fletching to experiment with arrow flight on the shooting range until you find one that performs optimally ..."

ALTERNATIVE FLETCHING

If conventional fletching isn't your thing, try the boiling method using Bohning Blazer QuikFletch. In seconds, your arrows can be fletched and ready to use.

To apply these to your arrows, bring about 6 inches of water to a boil. Next, slide on the QuikFletch—making sure to align it beneath the nock—then slowly submerge it into the boiling water for 10 seconds. After removing it from the water, carefully twist the arrow back and forth between your fingers to remove any air bubbles, if necessary. This type of fletching is accurate and easy to install, which is great for the traveling bowhunter who needs to pack light.

My Fletching Box

A plastic organizer with multiple trays and adjustable compartments keeps all of your fletching equipment orderly. For example, I include glue, vanes, feathers, a stripping tool and arrow wraps in my fletching box. This helps me quickly locate all of the necessary items and smooths the fletching process.

Initially, you may want to buy several different types of fletching to experiment with arrow flight on the shooting range until you find one that performs optimally from your setup. If you plan to do all of your own fletching and refletching, I recommend purchasing vanes and feathers in bulk. You'll always have plenty on-hand, and you'll save money, too.

Keep Fletching

Fletching your own arrows is a great way to spend time when you're not bowhunting or shooting at the range. After completing the fletching process, you can release your string with the satisfaction of knowing you fletched your own arrows. MP

Fletching arrows is a craft that inspires satisfaction and confidence every time you bowhunt.

Heirloom Seed Bank

PHOTO BY THINKSTOCK

GROW YOUR OWN FOOD AND SAVE THE SEEDS

By Dana Benner

In our age of fancy electronics and grocery stores on every corner, some people struggle to believe most folks used to grow their own fruits and veggies, and saved seeds from their harvests to be planted the following year. We've come to view this as something new or a breakthrough in healthy eating. It's actually not new, and you need not be some new-age guru to do it.

Growing your own food does require hard work, research and a whole lot of trial and error. The best thing is that anyone, anywhere, can do it.

PHOTO BY THINKSTOCK

"To make the most of each growing season, I grow plants in containers and in my small garden, which is about 20x20 feet."

Before You Begin

Before you till your backyard, set some goals. Are you growing vegetables to feed only your family? Do you have extended family you want to feed, or do you plan to provision the entire neighborhood? Consider that a little goes a long way.

Next, decide what you want to grow. If you and your family aren't going to eat it, why grow it? Many people like eggplant, but I can't stand it, so I don't grow it.

Remember, cultivating a garden requires a fair amount of work, so don't bite off more than you can chew. Start small, grow the crops you know you will eat and adjust accordingly.

Getting Started

This is the hardest part and it's very easy to feel overwhelmed. Understand that it takes only a little space to grow food, but use it wisely. Food crops can be raised in a small garden plot or even in 5-gallon buckets. It all depends on what you have to work with and the time you can devote to the venture. The larger the garden, the more effort it takes to care for it.

During the winter, I figure out what I'm going to plant and how much. This involves drawing a diagram that's as close to scale as possible. On this diagram, you must plot out your rows, walking paths between the rows and how many rows of each plant you'd like. Then, stick with your plan. It's very easy to get carried away.

Planting by Climate

When picking which crops to grow, many things must be considered. The most important factor is climate. Here in New Hampshire, we usually have a fairly short growing season. Some years, we can begin working the soil in early April; other years, not until the end of May. The first hard frost, which marks the end of the growing season, can arrive as early as September. Certain plants won't grow properly in my climate at all.

Choose crops that do well in your region. Most seed packets have charts on the back that provide this information. They show the climates where the crop does best, as well as information regarding the best time to plant, germination time and when the crops can be harvested. That said, don't be afraid to experiment with different plants and planting times. After all, this is gardening, not rocket science.

Space Considerations

The next thing you must consider is the space you have to work with. If you're growing crops in containers, you'll want to avoid things like melons and some

(this page, top) **The author advises buying heirloom seeds from a trusted source like Botanical Interests, a Colorado-based supplier.**

(opposite, top) **The author's garden was planted using heirloom seeds.**

SEED SUPPLIERS

BOTANICAL INTERESTS
660 Compton St.
Broomfield, CO 80020
botanicalinterests.com

JOHNNY'S SELECTED SEEDS
955 Benton Ave
Winslow, ME 04901
johnnysseeds.com

members of the squash family, because they require roomy accommodations. Crops that work well in containers include, but are not limited to, root crops such as potatoes, carrots and turnips. Lettuce, tomatoes and fruits, such as strawberries, also do well in containers. To make the most of each growing season, I grow plants in containers and in my small garden, which is about 20x20 feet.

Choose the Right Seeds

To discover which crops work best in my area and could be stored for long periods without freezing, I asked several local long-time farmers. After gathering my information, I opted for roots crops—they keep for long periods with little effort—and crops such as pumpkins, winter squashes and tomatoes, with the last three being great candidates for drying. I also chose beans and peas because the seeds can be stored almost indefinitely, and dry themselves right on the plant.

The seeds you choose are very important. I started with heirloom seeds, which have remained genetically unchanged for at least 50 years. Most are open-pollinated with the plants growing true to the parent plant. This is very important for those who're trying to build up a seed bank for future use.

Many seeds sold at discount stores and in the big box stores are lab-developed hybrids. These artificially engineered seeds are called GMO (Genetically Modified Organisms). Many of the seeds produced by these plants are sterile and won't produce future crops. While this is good for seed producers—obviously, they sell more seeds—it's bad for those of us thinking long-term. Heirloom seeds are more expensive, but you'll only have to buy them once. Not only will they last for years to come, but they'll provide plenty of seeds that can be used in trade. They're like money in the bank.

Buy seeds from people you can trust. Two sources I buy from are Botanical Interests in Colorado and Johnny's Seeds in Maine.

"Growing your own food ... enables you to put healthy, untreated food on your table ..."

Collection and Storage

I keep the seeds from every plant I grow, and it's easily done. I spread the seeds onto a sheet of newspaper, and allow them to dry in the sun. Once thoroughly dry—this is very important because moist seeds will rot during storage—I put them into zip-top bags or plastic containers with lids that seal tightly. Then I date and label each bag or container.

While some seeds like beans, peas and corn can be kept almost indefinitely, others cannot. Squash, pumpkin and tomato seeds are only good for a couple of years. Store the saved seeds in a cool, dry environment.

The very first mistake I made was harvesting too soon. For eating purposes, the smaller, younger fruits are the best, but for seed production, you must wait. The seeds of young fruits aren't worth saving because they're immature and won't germinate. Leave a few squash and pumpkins on the plant and allow them to grow. Those huge squashes will produce the most fertile seeds. With beans and peas, allow some to mature on the plant. When the pods turn big, brown and hard, the seeds are ready to be harvested.

The next common mistake is not letting the seeds dry thoroughly. Moisture is your enemy. All seeds must be completely dried. If there is any moisture, the seeds will rot in storage. After spreading my seeds onto newspaper (usually with some wet vegetable matter still attached), the mess begins drying and I remove the seeds and transfer them onto a clean sheet of newspaper for further drying. The entire process may take up to a week, depending on the seeds and the temperature where you live.

Closing Thoughts

Growing your own food serves several purposes. First, it enables you to put healthy, untreated food on your table. Second, it gets you up and away from the electronics and outside. There's nothing wrong with fresh air and exercise. Last, but not least, it helps us stay in touch with our past. MP

Long Island Cheese winter squash
PHOTO BY JOHNNY'S SELECTED SEEDS

UNTREATED HEIRLOOM SEEDS

Many people ask me why I choose heirloom seeds as opposed to more readily available, less expensive seeds. To answer that question, we must distinguish between treated and untreated seeds. There are heirloom seeds available on the common market, but many of them are treated with chemicals. While some of those chemicals help the seeds germinate, more often they're designed to make any seeds produced by the plant sterile, thus forcing you to buy more seeds every year.

I like to use untreated heirloom seeds for multiple reasons. The seeds are what they are because of nature. These plants are pollinated naturally, either by pollinating insects, birds or the wind. If the seeds are fertile or infertile, it's because of the natural process. The fewer chemicals, the healthier the plant and the fruit it produces will be. Untreated heirloom seeds produce fruit whose seeds can be saved for later use, which saves money on seeds for years to come.

Where you purchase your seeds makes a big difference. If you get them from a discount store, chances are very good they've been treated. The old adage, you get what you pay for, applies here. Read packages very carefully.

Packaged seeds from Botanical Interests are clearly marked as "heirloom" and "untreated." If not clearly marked otherwise, the seeds you purchased probably have been chemically altered in a lab.

Honeybees are busy in this hive. The queen is the large bee marked with red dots.
PHOTO BY DENNIS DAGGETT

THE BEEKEEPING BUSINESS

WHAT YOU NEED TO KNOW BEFORE STARTING YOUR OWN HIVE

By Dana Benner

The concept for this article was sparked when I considered introducing one or two honeybee hives to the Benner homestead. Having more bees around would help the garden, and who doesn't like honey?

Before taking on a new pursuit, though, I always do my homework. I spoke with local beekeepers, contacted the state agriculture department and looked into research done by the United States Department of Agriculture (USDA). My search turned up results that not only amazed me, but also made me reconsider the prospect of beekeeping.

Bee Facts

Contrary to what I'd originally thought, honeybees aren't native to the Americas. Like the wild horses roaming the American West, honeybees were first brought here by Europeans. The wild honeybees we find today are descendants of those that first arrived on our shores in 1622 in Virginia.

Without honeybees, how were plants in North America pollinated, and how did the Native Americans get honey? To answer the second question first, the Native Americans didn't have honey prior to the arrival of Europeans. Numerous documents claim they often referred to the honeybee as the "white man's fly" due to its swarming nature. As for pollination, according to the USDA, there are 4,000 species of native bees in the United States, ranging from the Rocky Mountains to the deserts of Arizona and from Alaska to Florida. Each bee has special duties.

"... honeybees were first brought here by Europeans. The wild honeybees we find today are descendants of those that first arrived on our shores in 1622 in Virginia."

All bees are vegetarians, consuming pollen for food. Wasps and hornets are carnivorous and prey upon other insects. According to the USDA publication titled, "Bee Basics: An Introduction to Our Native Bees," bees are descendants of wasps.

All Bees are not Created Equal

Bees pollinate about 75% of all the fruit, nuts and vegetables grown in the United States. With the various types and shapes of flowers available, one type of bee can't do it all. Over time, most bee subspecies have become specialized, meaning they've adapted to pollinate certain plants in specific locations.

(top) **Honeybees are most commonly kept in specifically designed boxes.**
PHOTO BY DENNIS DAGGETT

(bottom) **Bumblebees are recognizable by their furry bodies and black-and-yellow markings. Here, one pollinates a flower.**
PHOTO BY PIXABAY

Honeybees originated in Asia, then spread to Europe and Africa. They're genetically predisposed to plants native to those areas. On the other hand, bees native to North America are predisposed to plants originally found here. So what does that all mean? Without getting too heavily into the complex science of the issue, it means that as remarkable as honeybees are, they don't pollinate plants native to the Americas as effectively as one would think. As a person who grows lots of food, this fact really surprised me.

Though honeybees do pollinate some native plants, they do much better with imported plants. Plants like clover, non-native grasses—Kentucky Blue grass, for example—dandelions, apples and other introduced fruit trees are all great for honeybees. Studies show honeybees don't pollinate tomato and eggplant flowers, and they do poorly with squash, pumpkins, native cherries, blueberries and cranberries, which are all native florae. Native bees pollinate these native plants far more effectively.

One example is the southeastern blueberry bee. One of these visits as many as 50,000 blueberry flowers during its lifetime, which equates to around 6,000 blueberries.

Blueberries are big business across the South, as well as here in the Northeast; plus, they're vital to local economies. Without these little, highly specialized native bees, blueberries and the blueberry industry wouldn't exist.

Another good example is the squash bee. This native bee is dependent only on the pollen from cucurbits (squash, pumpkin, melon, cucumbers, etc.). Squash bees resemble honeybees, but they're active at different times than their imported relatives. Squash bees have adapted to the flowering timetable of cucurbits. Unlike other plants that flower in full daylight, plants like squash and pumpkins flower at or before dawn, which is when this bee is most active. Honeybees are active later in the morning, and often arrive at the squash flower when it's past prime.

While most of our native bees are highly specialized, the bumblebee could be considered a jack-of-all-trades. With about 50 species in North America, the bumblebee is the most common and easily recognized bee. I have hundreds of them around my home.

Bumblebees are large, furry and usually black and yellow, though some may have a little white and orange coloration. The beauty of these bees is that they'll collect pollen from just about any flower. They're especially fond of tomato plants, which makes them welcome in any garden. In fact, I credit my success with tomato plants more to the bumblebee than my own work.

Why all the Hype Over Honeybees?

Honey is big business worldwide. Honeybees produce honey and wax, which

(top) **Beekeeper Dennis Daggett shows where his bees added comb to a sleeve from one of his hives.**

(bottom) **These honeybee hives are kept by Daggett.**

PHOTO BY GAETANE BENNER

“Unlike native bees, honeybees are susceptible to a disease known as Colony Collapse Disorder. Its causes are unknown ...”

are used as food and found in everything from cosmetics to floor polish. Some countries, including all of North America, support huge industries, besides crop production, that rely heavily upon honeybee products. Unlike native bees, which don’t build huge hives or produce wax and honey beyond what’s needed to feed their young, honeybees produce wax and honey in large amounts that can be harvested.

Many native bees are ground-nesters, whereas the honeybee will nest in hollow trees and boxes made specifically for them. These boxes allow beekeepers to harvest excess honey and wax to sell or use for commercial purposes. Honeybees even nest in attics, sheds or holes in the sides of cliffs. While in Arizona, I actually ran into a cliff-side hive while exploring Sedona.

Unlike native bees, honeybees are susceptible to a disease known as Colony Collapse Disorder. Its causes are unknown, but a combination of factors, including stress, genetics, nutrition and pesticides, may contribute to it. The disorder can kill an entire hive. Honeybees are the only domesticated bees, and just like any domesticated animal, they rely upon new genes to be healthy. Without the introduction of these new genes, the entire population can become susceptible to viruses and other problems.

Caring for honeybees requires time and dedication. Combining that with information I obtained through research, I’ve decided not to start beekeeping. Instead, I’ll continue supporting local beekeepers by buying their honey and other products.

I’ve also decided to encourage native bees to hang around by planting more native plants and flowers. I believe having them around will help my garden be more productive. It’s a win-win proposition. MP

A sleeve full of honeybees is removed from the hive.
PHOTO BY DENNIS DAGGETT

Backyard Beekeeping

It was a cool day in March when I paid a visit to beekeeper Dennis Daggett in Bow, New Hampshire. Daggett has been beekeeping since 2012 and proved a valuable information source regarding all things bees.

Daggett graciously showed me his operation and gave me some pointers. Specifically, I asked him to tell me 10 things a new beekeeper must know.

WORK WITH EXPERIENCED BEEKEEPERS.
Daggett advised there's much to learn, and while he mentors others, he still relies upon the advice of other beekeepers.

GO TO SCHOOL.
According to Daggett, most states have schools and classes conducted by both state officials and by beekeeping organizations. Take some classes before you make a financial investment.

STAY FOCUSED.
While honeybees aren't aggressive, they do sting when threatened. When working with these creatures, it's very important to stay focused. No perfume, aftershave or sudden moves are the rules.

EXPECT TO MAKE MISTAKES.
Mistakes happen, especially when entering into a new venture. New beekeepers must be prepared to make those mistakes and learn from them.

GET TWO HIVES.
According to Daggett, all manuals tell new beekeepers to start with one hive due to the monetary investment. Daggett recommends new beekeepers start with two hives in case one fails—mistakes can happen. The second hive will keep you going in the face of problems. If nothing happens, you'll have two hives producing honey.

DON'T WORRY ABOUT SCREWING UP.
Bees are extremely smart creatures. Despite mistakes beekeepers make, bees know what they need to do. When everything looks bad, "listen" to the bees.

HAVE ENOUGH ROOM.
Sometimes everything goes perfectly: The queen produces plenty of young, and the hive produces honey. Then, you notice the bees are spending more time than normal outside the hive. This could mean the hive is overcrowded, which is a sign to start a new one. Do so before the bees start to swarm.

EVERY YEAR WILL BE DIFFERENT.
Dealing with honeybees is no different than it is with any other domestic animal. Beekeepers are at the mercy of Mother Nature and can't control the weather. Some years are wet and cold; others are hot and dry. Each year will be different, and you must adapt accordingly.

KEEP DETAILED RECORDS.
How can you adjust what you're doing if you don't keep records?

JOIN A LOCAL BEEKEEPING GROUP.
No matter what you think you know, someone out there knows more. Join a local beekeeping group and tap into the knowledge of others.

Sources:
Dennis Daggett
dennisdaggett.com

Moisset, Beatriz, Ph.D and Stephen Buchmann, Ph.D, "Bee Basics: An Introduction to Our Native Bees." USDA Forest Service.

Honey and wax products are sold commercially and contribute millions of dollars to economies.
PHOTO BY DENNIS DAGGETT

·COVER STORY·

BUILD YOUR OWN Laminated Recurve Bow

SPICE UP YOUR NEXT ARCHERY HUNT WITH A SELF-BUILT BOW

By Tony Hansen

Building a bow isn't as difficult as one might think, but crafting a top-end bow, of course, requires plenty of practice, patience and repetition. This is a good thing, because after you've built one bow, I'll wager you'll want to build more.

Let's get started with your first. We're going to build a laminated recurve, meaning it'll use wood laminations backed by fiberglass for the limbs. When finished the bow will measure 60 inches from tip to tip and should draw about 55 pounds at 28 inches of draw length. To modify the draw weight to your preference, you'll need to vary the fiberglass and limb lamination thicknesses—more on that later. Let's get building.

PHOTO BY THINKSTOCK

▶ STEP 1: Gather Materials

To build the bow, we're going to need some materials. The first is a form, which is merely plywood laminated together and cut into the shape of the bow. You can design your own bow or use pre-made blueprints (see sidebar).

Next, you'll need a bow oven. My oven is made of ¾-inch OSB. It's glued and screwed together and lined with aluminum foil. I wired in a series of basic light fixtures, which are wired to a switch on the end of the oven with an inline 185°F thermostat. Anyone with basic wiring knowledge can build the oven in about 90 minutes.

Of course, you'll also need the laminations and riser materials. For this recurve, you'll need two 72-inch fiberglass pieces, one 72-inch parallel-ground lamination and two 36-inch limb tapers. Unless you have access to a taper grinder, you'll need to order the fiberglass and limb laminations from a supplier. A supplier also can help you determine the lamination thicknesses for your desired draw weight.

The last thing you'll need is a good two-part epoxy. I prefer Smooth-On or D.E.R. 383. One pint is enough for multiple bows.

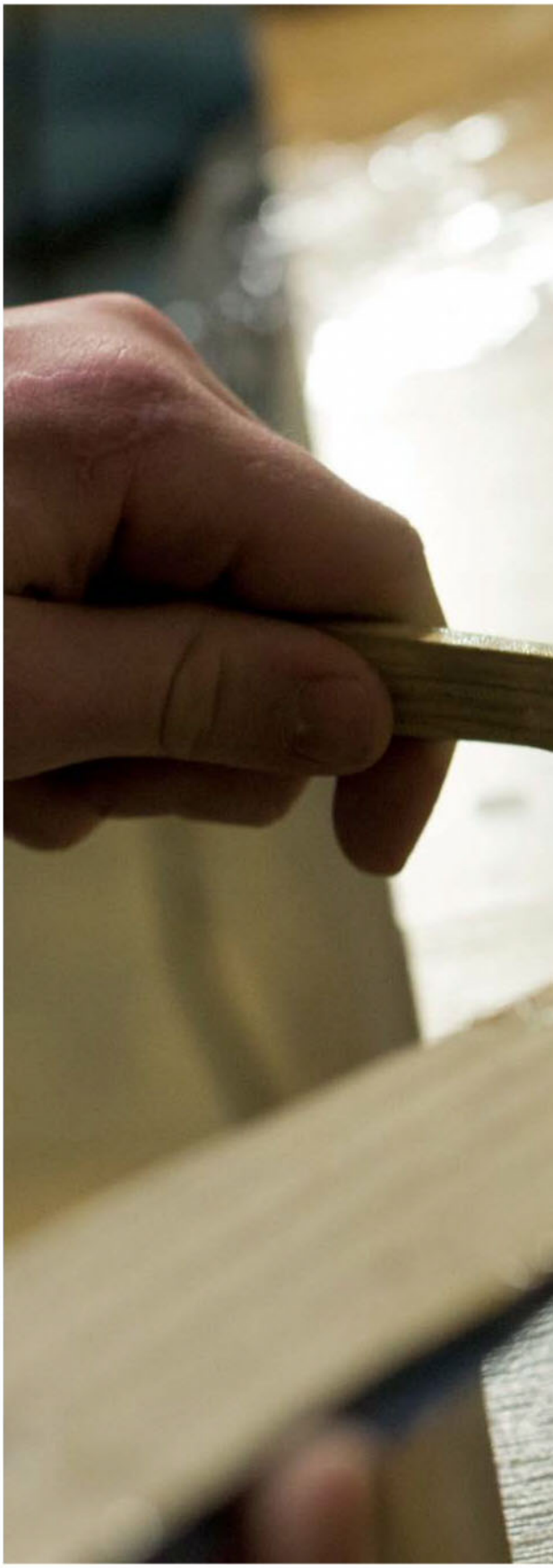
▶ STEP 2: Plan and Prepare

Forming your bow is a messy process. You're going to be spreading sticky two-part epoxy and pressing laminations. Before starting, make sure you've covered and treated everything the epoxy could possibly contact.

I begin by applying car wax to the form's exposed surfaces. This keeps any epoxy that finds its way to those surfaces from sticking. I cover the entire form with plastic wrap, and I also cover workbenches and any other surfaces I'll be using.

(below) **Mixing Smooth-On epoxy**

(opposite) **The author applies epoxy to laminations.**



WOOD OPTIONS

Traditional bows are personal. Most are custom-made, and it only seems right that you carefully choose the woods used in your bow. Here's a secret: The type of wood you choose for a fiberglass-backed traditional bow will have little, if any, impact on bow performance. For the most part, the wood is little more than a filler to ensure limb thicknesses are correct to produce the desired draw weight.

That doesn't mean wood type has absolutely no bearing on overall performance. It can, but the amount of variation in performance between woods—at least in terms of bow speed and limb recovery—is so small that I don't concern myself with it. I choose wood I think will look best under the glass.

For riser woods, certain types outperform others, but that's because some are stronger than others. For handles and risers, use hardwoods. Pine, cedar and other soft woods can be used, but should be relegated only to decorative duty.

Red elm and Osage are arguably the most popular limb woods. They look great and have no performance drawbacks. When choosing the laminations, you'll need to decide between edge-grain and flat-grain cuts. Edge grain costs less because it's easier to cut and makes the most use of a piece of lumber. It also has less figure and grain. Face grain is cut across the face of the board. It'll cost a bit more, but will have more figure and grain curl.

For handle woods, the sky is the limit. You can choose from domestic hardwoods like walnut, oak, hickory and elm. Just keep in mind that some woods—like walnut—are tougher to work with. They tend to chip and tear when worked and can be more difficult to sand. Exotic hardwoods like cocobolo, bacote, purple heart and others are gorgeous when finished but can be pricey.

Cover the fiberglass' "finished" side with either high-temp masking tape or painter's tape. High-temp tape is preferred, but I usually have painter's tape handy, and it works beautifully.

Before mixing epoxy or making cuts, be sure you have all of the materials you'll need on hand. Once you start applying epoxy, you're past the point of no return and must finish forming it up.

▶ STEP 3: Cut the Riser

The riser can be made from a single piece of wood, but I like to use contrasting hardwood laminations. The finished product is stronger, plus, you can create striking color combinations.

For this recurve, I used walnut, cherry and zebrawood. Cut the pieces to fit your blueprint, epoxy them together and place in the oven to cure. Once cured, cut the riser to shape using a band saw and sand to final dimensions using a belt sander.

Make sure you keep the riser as square as possible. Achieve this by marking both sides of the riser with your blueprint to ensure they're uniform.

▶ STEP 4: Glue it Up

Cut one of your 72-inch fiberglass strips in half. Those will become the "belly" laminations, and we'll start there with the epoxy.

Coat the non-taped side of each fiberglass lamination with epoxy, then do the same to one side of each tapered riser lamination. Make sure the taper's thick end is towards the middle of the bow.

Place the fiberglass on the bow form, then add the limb taper on top. Spread epoxy on the top side of the limb taper. You don't need a thick coat; keep it thin, but make sure every inch has been coated.

Next, place the riser on the form (I have a ⅜-inch metal rod inserted in the center of the bow form) and drill a hole in the center of the riser to ensure the bow is centered. Simply place the riser so that the rod slides into the riser hole.

Finish forming the bow by coating the top of the riser and one side of the parallel lamination with epoxy. Stack those on top of the riser. Epoxy the remaining face of the parallel lamination and the remaining fiberglass piece's rough side.

Lay those in place and, starting from the center of the riser and working towards each limb tip, press the laminations together. Make sure the edges are lined up, and use duct tape or strapping tape to hold tight to the form.

▶ STEP 5: Clamp It

Depending on the type of bow you're building, you have several options for clamping the bow in place while the epoxy cures. When building a longbow, you can use rubber bands. Since we're building a recurve, we need a bit more pressure to force the limbs into their proper shape. An air-filled tube works great.

First, put a barrier strip of aluminum flashing (coated with wax) into place followed by the pressure hose. Then, bolt on the top of the form. With everything in order, inflate the hose to about 40 PSI. At this point, you'll see epoxy oozing from the bow edges, indicating all surfaces are tight.

Into the oven it goes. For this bow, we're using Smooth-On epoxy, which requires about four hours of curing time at 150-180°F.

▶ STEP 6: Clean it Up

Once the bow is cured, things start to get pretty exciting. When you pull the bow out of the oven and remove it from the form, you'll see those laminations are starting to look like a bow.

You'll also have plenty of excess epoxy on the edges. Clean those up by running the edges carefully on a sander. We aren't doing any final shaping here, just cleaning things up so we

(below left) **The riser is cut to shape on a band saw. Always keep an extra blade on hand.**

(center) **Wrap the form with plastic wrap so epoxy doesn't stick to it.**

(right) **Hansen's bow riser in its finished shape before sanding**

MATERIALS AND PLANS

After building a few bows, there's no doubt you'll want to eventually design your own bow from start to finish, choosing the riser's amount of reflex/deflex, the overall length and more. That said, I highly recommend a careful approach, and a good place to start when tackling your first bow is with a time-tested design.

The bow in this article used a form and design (modified slightly) from Bingham Projects, Inc. I ordered the 60-inch recurve kit about 10 years ago. It included all of the blueprints needed to create the bow form, the bow oven and the templates for cutting out the riser and limbs. It also included an invaluable step-by-step instructional book.

Tackling a recurve as your first DIY bow project may seem daunting. If that's the case, you can start with a longbow, which requires far less shaping and sanding, but still makes a sweet hunting tool.

can proceed.

At this point, I pull the tape off to admire the limbs. Should I leave it on? Yes. It will protect the fiberglass while sanding and shaping, but I just can't help myself.

I also add a pair of blocks to the bow's belly at this step. Those will help create the final riser and handle shape.

▶ STEP 7: Rough-Shape Riser

Now the real work begins. For this recurve, we'll have a handle that's highly contoured. I start by tracing the handle shape and cutting it out using a band saw. This is tough work for any band saw, and you'll want to have a spare blade on hand.

Take your time and make small cuts; this isn't the time to rush. Refer to your blueprint often and check your progress. I always cut less material than needed and make final adjustments with the sander.

▶ STEP 8: Sand, Sand, Sand

A powered belt sander is an immense help and does tons of shaping. Take your time and only remove small amounts of material with each pass. If you're hardcore, you can perform this work with a hand rasp and file, although it'll take considerably longer.

As I sand, I'm constantly testing the bow for fit. Each riser/handle will be unique. There is no right or wrong way. Simply sand the handle to your preference.

With the handle's rough shape in place, begin to final-sand using different grits. I like to start with 80, move to 100 and then jump to 200. A Dremel-type tool with a barrel sander attachment works well for detailed sanding.

▶ STEP 9: Cut the Limbs to Shape

Now, it's time to cut the limbs to length, reinforce them and cut them to near-final shape.

If you plan to use a fast-flight string, reinforcing the limb tips is important. You can reinforce with a piece of wood or colored fiberglass. On this bow, I used a remnant piece of cedar left from the riser.

Epoxy the tips into place and allow to cure. Cut each limb to the proper length and shape, and use the sander for final shaping. The final step is to create string grooves using a file.

▶ STEP 10: Tiller It

Make sure the limbs are straight when drawing the bow. To do this, I use a tiller stick, which is nothing more than a 20-inch piece of pine with a notch cut in one end for the handle and one for the string.

Place the tiller stick on the handle and draw the bowstring to place it in the other notch. Look down the length of the bow. The limb tips should be straight. If not, sand limb material away from the limb points. Do this very carefully. Don't narrow the limb by more than ¼ inch on either side.

▶ STEP 11: Finish It

There are many ways to finish your bow. A quality polyurethane is inexpensive and easy to apply.

Hang the bow using fishing line and apply the finish in thin coats. Multiple thin coats look better than a single heavy application.

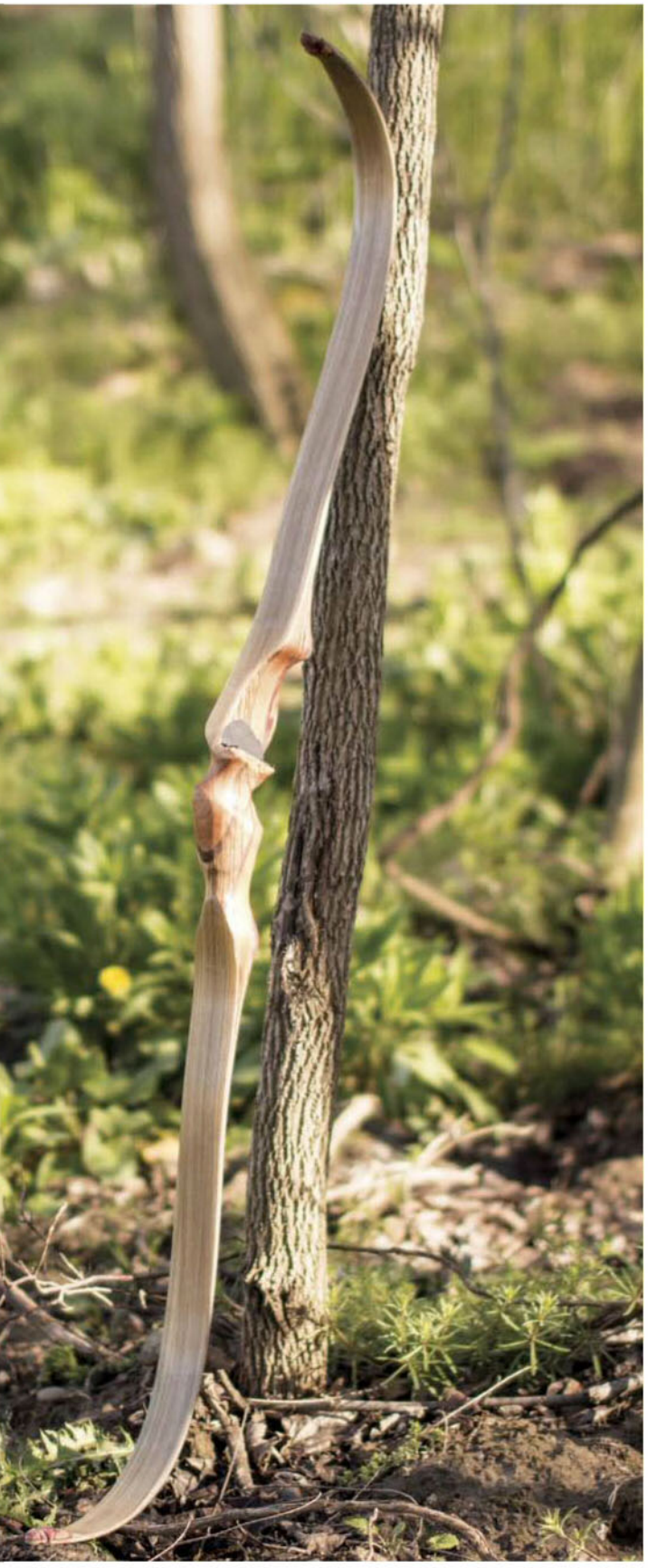
Gloss polyurethane dries to a harder finish than matte. To remove shine, simply buff with ultra-fine steel wool when fully dried to achieve your desired sheen.

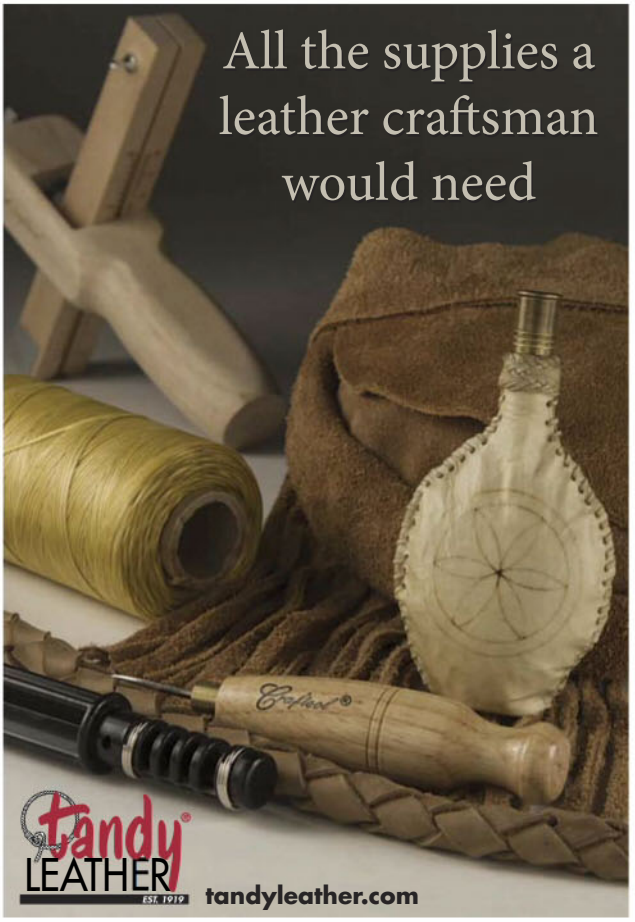
That's it; you've built your own recurve bow. Get out in the backyard and practice, practice, practice. Become proficient enough to take it into the woods this fall. Using your new homemade bow will surely to spice up your next bowhunt. MP

(left) **The author sands the bow riser on his belt sander.**

(center) **The limb laminations are strapped down after being glued.**

(right) **This is author Tony Hansen's self-made recurve bow, a stunning final product.**

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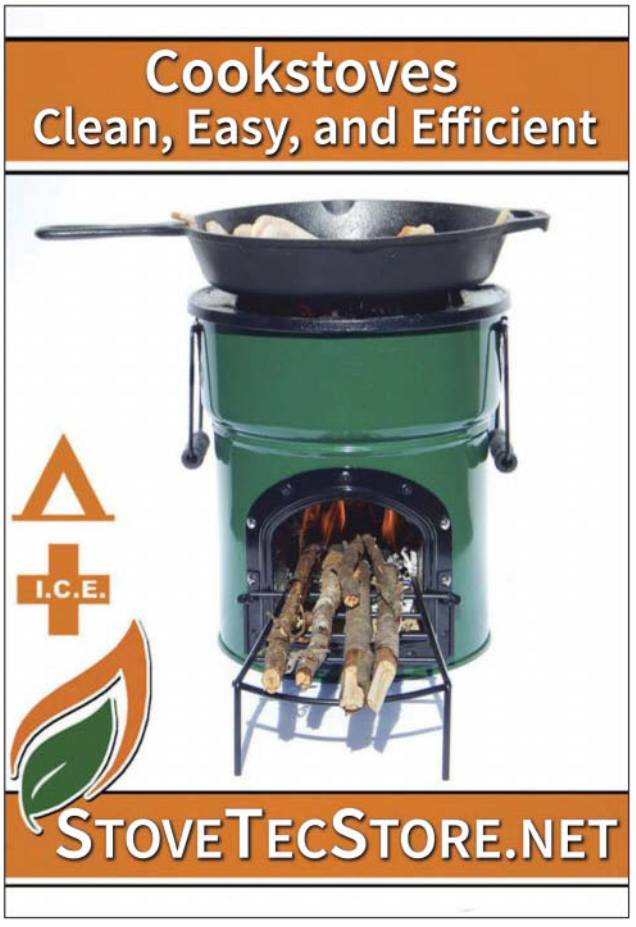
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RUGER Gunsite Scout Rifle

Tabor mounted a Redfield Battlezone 3-9x42mm scope in the traditional manner on top of the receiver using Ruger rings included with the rifle.

VERSATILITY AT ITS FINEST

By Thomas C. Tabor

Ruger first offered its Gunsite Scout rifle in 2012. At that time, it was only available in .308 Winchester. As the rifle became popular, however, more design diversity surfaced, including the chambering for the ultra-popular 5.56 NATO/.223 Remington cartridge.

In general appearance, the Ruger Gunsite Scout rifle reminds me of a modern-day version of the British Lee-Enfield jungle carbine. Its short overall length, extended 10-round magazine and flash hider at the muzzle all are throwbacks to the era of historic jungle carbines. Obviously, though, the new Gunsite Scout is more modern in its overall design and comes with many favorable attributes geared for today's shooters.

"In general appearance, the Ruger Gunsite Scout rifle reminds me of a modern-day version of the British Lee-Enfield jungle carbine."

“Another great feature worth noting is the stock’s length of pull, which adjusts ... by simply installing or removing spacers positioned between the recoil pad and stock.”

(below) **The length of pull can easily be adjusted by installing or removing the plastic spacers located between the recoil pad and the buttstock.**

Built-in Versatility

In my opinion, Ruger’s Gunsite Scout is one of the most distinctive and unique rifles currently made. Ruger has combined many interesting and somewhat unusual characteristics in this model that make it extremely versatile.

Individuals who decide to take advantage of the Gunsite Scout’s fast handling capabilities for close-quarters shooting might use the rifle’s standard iron peep sight and blade front sight. Others might install a scope to enhance accuracy at longer ranges.

Shooters have two scope-mounting options. First, you can install a traditional scope with the usual eye relief of around 3 inches on top of the receiver using the included Ruger rings. The other option is to use the Picatinny rail in front of the action in order to install a scope with long eye relief. This particular mounting option comes with significant advantages and is often referred to as a “scout mount,” hence the name “Gunsite Scout.”

To better understand this rifle’s full potential, I first mounted a scope with long eye relief, but followed that by mounting a more conventional scope. For the long eye-relief scope, I used a set of Leupold QRW (quick release) rings, which permits the scope to be easily removed and replaced without changing accuracy. For the traditional scope, I simply used the included Ruger rings.

Another great feature worth noting is the stock’s length of pull, which adjusts to match the shooter’s arm length by simply installing or removing spacers positioned between the recoil pad and stock. This feature really benefits young shooters who naturally have shorter arms. By removing a couple of the ½-inch spacers, the rifle can be quickly converted from an adult firearm to a rifle perfectly tailored for youngsters.

The Test Rifle

To date, there are 11 rifles within the Gunsite Scout series: three chambered for 5.56 NATO/.223 Remington and eight available in .308 Winchester. The latter include a choice of either stainless or blued models, two different barrel lengths (16.10 inches or 18.70 inches) and a choice of stock material, including American walnut, a few colored, laminated stocks and some synthetic versions.

The .223 model I selected came with a matte-finished, stainless-steel barrel and a black-and-gray laminated stock. Its 16.10-inch barrel promotes the gun toward fast handling. The adjustable length of pull—12 ¾ inches minimum and 14 ¼ inches maximum—varies the rifle’s overall length, depending on how many ½-inch spacers are installed. With all three spacers in place, the rifle measures 38 ½ inches overall.

I found the black-and-gray laminated wood stock to be very durable, functional, weather

(above) **Visually, the Ruger Gunsite Scout appears similar to the jungle-style carbine rifles of the past.**

(right) **The versatility provided by the Gunsite Scout's iron peep sight, and the option of installing either a traditional-style riflescope or a long eye-relief scope, provides shooters many advantages.**

RUGER GUNSITE SCOUT SPECS

MANUFACTUER: Sturm, Ruger & Company
MODEL: Gunsite Scout
CALIBER: 5.56 NATO/.223 Remington (also available in .308 Winchester)
WEIGHT: 7.10 pounds
SIGHTS: Blade front sight and adjustable rear peep sight
ACTION: Bolt
BARREL: 16.10 inches
STOCK: Black-and-gray laminated wood (also available in green laminate, black synthetic and American walnut)
MAGAZINE: Box-style removable magazine with a 10-round capacity (both .223 and .308 caliber)
MSRP: $1,139-$1,199

resistant and quite attractive; it tastefully complements the stainless-steel matte barrel. The stock features two checkered panels on the pistol grip and a wraparound checkered pattern on the forearm. Sling swivel studs are installed on the stock, which could be used for mounting a sling and/or a bipod.

In this particular case, the included scope rings were colored gray to match the rifle's other metal components. These are intended for mounting a scope over the top of the receiver. If you choose to mount a scope in scout fashion, you must purchase another style of rings and use the Picatinny rail for mounting.

Throughout the years, I've learned to appreciate the benefits associated with long eye-relief scopes. In this case, the scope's rim is typically set several inches farther away from the shooter's face, which essentially ensures the shooter doesn't get "scoped" in the forehead, which often equates to severe bruising and even bleeding, as the gun recoils.

Aside from solving recoil concerns, scout-mounted scopes come with other positive benefits. A good habit all shooters should adopt is shooting with both eyes open. When a rifle has been equipped with a long eye-relief scope, most shooters find shooting with both eyes open is easier. Doing so speeds target acquisition, provides better field-of-view and allows the shooter to monitor the target's surroundings. This is especially beneficial during up-close-and-personal encounters.

(right) **Ruger Gunsite Scout rifles come with muzzle flash-hiders or a suppressor, depending upon which model within the series is chosen.**

(above) **Using a Caldwell Lead-Sled, the author checks the Gunsite Scout's accuracy with the Leupold scope mounted ahead of the receiver in the scout position.**

When evaluating any firearm, I generally highlight the trigger's feel and functionality. I must confess I've never been a huge fan of Ruger's triggers. I suppose I'm not alone, because the company introduced a new-and-improved trigger called the "Marksman Adjustable." Additionally, Ruger now markets its own aftermarket triggers for use on its AR and 10/22 rifles.

The Marksman Adjustable is a major improvement over the company's past trigger designs, and I was surprised and initially disappointed when I found the Gunsite Scout wasn't so equipped. That disappointment, however, was short lived. The Gunsite Scout's trigger is one of Ruger's finest. It's exceptionally sharp and crisp in its movements and contains little to no creep. When I tested its pull weight using my Lyman trigger pull gauge, I found the five-pull average came in at 3 pounds 12 ounces, right out of the box.

The Optics

As I mentioned earlier, I chose to mount both a long eye-relief scope, as well as a traditional eye-relief model, on the Gunsite Scout for testing and evaluation. The first of those was a 30mm Leupold VX-R 1.5-5x33mm Scout FireDot duplex scope. I used a set of medium-height Leupold QRW (quick release) rings and mounted the scope using the rifle's included Picatinny rail.

After running the rifle through its paces on the range, I swapped the Leupold for a traditional eye-relief Redfield Battlezone Tactical 3-9x42mm duplex scope. I did find that in order for this particular scope to clear

RUGER GUNSITE SCOUT 5.56 NATO /.223 REMINGTON ACCURACY CHART

AMMO	SCOPE	BEST 100-Yard Group	AVERAGE 100-Yard Group
Federal Premium With 43-Grain Speer TNT	Leupold 30mm VX-R 1.5-5x33mm Scout RedDot	13/16 inch	1 7/16 inch
Norma 55-Grain FMJ	Redfield 3-9x42mm Battlezone Tactical	5/8 inch	1 3/8 inch

"... the Gunsite Scout's trigger is one of Ruger's finest. It's exceptionally sharp and crisp ..."

its impediments, I had to remove both the Picatinny rail and the rear sight.

Gunsite Scout Meets the Range

Two types of ammunition were shot to produce three-shot groups at 100 yards off the bench. Those cartridges included Federal Premium factory-loaded ammunition with 43-grain Speer TNT Green bullets and Norma factory-loaded ammunition loaded with 55-grain FMJ bullets. The Federal cartridges were shot with the Leupold scope mounted, and the Norma shells were fired with the Redfield scope in place.

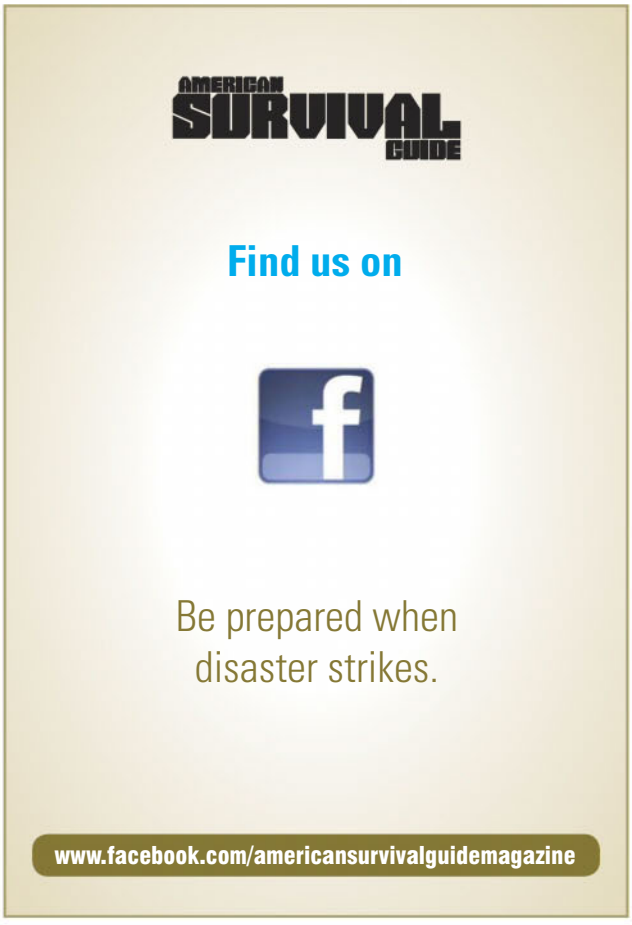
It's important to realize every rifle performs better with certain types of ammunition, bullet styles and loads. For that reason, the accuracy data shared in the accompanying chart (see sidebar, "Ruger Gunsite Scout 5.56 NATO/.223 Remington Accuracy Chart," pg. 128) should be considered only as a vague indicator of this rifle's potential. With further testing, including shooting a wider selection of cartridges, I believe one could further shrink the group sizes. Nevertheless, I was happy with the accuracy this rifle and ammo produced.

The Way I See It

Ruger's Gunsite Scout rifle has a lot to love. I'm particularly fond of its trigger design. The three-position Mauser-style safety is a great feature as well, and I also like the Mauser-style bolt release.

This might be considered a minor point, but I appreciate the magazine's shape, which is flat on the bottom, letting it free-stand in upright fashion. This makes loading it a bit easier by placing it on a hard surface, then feeding in the cartridges. The magazine's 10-round capacity certainly is also a favorable trait, since most rifles have much smaller four- or five-shell capacities. The ability to adjust the length of pull with spacers is also a nice feature, which allows for a tremendous amount of adjustability for various shooters.

Whether pursuing wild hogs, coyotes, foxes or other predators, this rifle is well designed, and if your prey of choice is deer, a Gunsite Scout rifle chambered in .308 Winchester would make a fantastic choice. MP



John Chapman "Johnny Appleseed" (1774–1845)

> By ***Darryl Quidort***

Many books, films and stories have been based on American folk hero Johnny Appleseed's life. He's often cast as a kind, gentle wanderer who happily planted apple trees as he traveled. Cartoons depict him wearing ragged clothing and carrying a bag of apple seeds over his shoulder. However, few people are aware Johnny Appleseed was a real person.

John Chapman, aka Johnny Appleseed, was born Sept. 26, 1774, in Leominster, Massachusetts. When Chapman was about 2 years old, his mother died during childbirth. Meanwhile, his father was away at war, serving under General George Washington as a Continental soldier in the American Revolution.

The Journey Begins

A hectic childhood led Chapman to be apprenticed at a young age to a Mr. Crawford as an orchardist. This apprenticeship began his life as a dedicated nurseryman who planted apple orchards. He's known to have planted apple trees from the Pennsylvania Alleghenies westward into the frontier of Ohio, Indiana and Illinois. He sold or gave away thousands of seedlings to settlers, and the resulting orchards became his living memorial.

Legend has it that Chapman happily roamed the wilderness planting apple seeds at random wherever he went. Many early pioneers remembered the barefoot wanderer with long, flowing hair and a gray beard, wearing ragged clothes and a tin pot on his head that served as both a hat and cooking utensil. He was often described as eccentric.

As a kind, caring person, Chapman opposed violence of any kind toward man or beast, including insects. It was said he often refused to have a campfire because bugs would fly into the flames and be burned. He admired Native Americans and loved animals. Later in life he became a strict vegetarian.

A Mind for Business

Chapman didn't plant apple seeds at random, however. Actually, he had a firm business plan. He began by collecting seeds from cider presses in Pennsylvania. It was reported that he took 16 bushels of apple seeds down the Ohio River to the frontier. He anticipated the arrival of settlers, and he

PHOTO BY H.S. KNAPP

planted trees ahead of them to be sold or traded later. Planting orchards also fulfilled the legal requirements of establishing land claims on the frontier. Chapman planted nurseries of apple trees, fenced them in for protection from animals and livestock, and often left them in the care of a neighbor who sold the seedling trees on shares. Seedling trees brought about six cents apiece, and entire orchards were sometimes sold as communities grew up around them. Chapman used the profits to buy more land for planting more apple trees. Traveling from plot to plot, he returned periodically to tend the trees in each orchard.

Appleseed's Beliefs

A lifelong wanderer, he occasionally traveled back east to visit his sister. Chapman enjoyed visiting people, often singing and preaching the gospel of "The New Church" as he traveled. As a follower of Emanuel Swedenborg's teachings, he believed the more he endured in this life, the greater his happiness in the hereafter. Therefore, he led a simple life with minimal worldly comforts. He didn't believe in marriage and expected to be rewarded in heaven for his abstinence.

Although apple quality could be greatly improved by grafting, Chapman didn't believe in it. Because of his religion, he viewed grafting as a mutilation of God's gifts to man. The small, tart apples that grew on Chapman's trees weren't very good to eat and were best used for making cider. Many early American settlers were transplanted Europeans who came from areas where water was of poor quality, and they were raised on fruit juices rather than water. In Colonial times, cider was a staple beverage.

Cider leads to hard cider and applejack. Simply press the apples into juice, let it ferment in a barrel for a few weeks, and it becomes an alcoholic beverage. The fact that his apples were typically used to produce alcohol was excluded from the legends and children's stories. Author Michael Pollan wrote, "Really, what Johnny Appleseed was doing and the reason he was welcome in every cabin in Ohio and Indiana was he was bringing the gift of alcohol to the frontier."

The Journey Ends

Chapman died on March 18, 1845, near Fort Wayne, Indiana. The March 27, 1845, issue of the Goshen Democrat newspaper printed his death notice. "In Fort Wayne, on Tue., 18th. Inst John Chapman, commonly known by the name of Johnny Appleseed, about 70 years of age. Many of our citizens will remember this eccentric individual, as he sauntered through town eating his dry rust and cold meat, and freely conversing on the mysteries of his religious faith. He was a follower of Emanuel Swedenborg, and notwithstanding his apparent poverty, was reputed to be in good circumstances."

The Legend Continues

Chapman's estate left more than 1,200 acres of apple-tree nurseries spread across Ohio, Illinois, Indiana and Pennsylvania to his sister. Other plots were sold for taxes following his death.

The actual gravesite is disputed. One source claims that a rock near the location where a pioneer cabin once stood marks Chapman's grave. Another source places his grave in the Archer Cemetery in Fort Wayne, Indiana. In 1916, that gravesite was marked off with an iron fence provided by the Indiana Horticultural Society in honor of Johnny Appleseed. MP

Sources

wikipedia.org, biography.com, history.com and *New World Encyclopedia*.

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