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PETERSEN'S

BOWHUNTING®

The Modern Bowhunting Authority

August 2022

MEMORABLE MULE DEER

RAW EMOTIONS IN RUGGED COUNTRY

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WE TEST THE TOP
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PUBLIC-LAND
RAM OF A LIFETIME

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HUNTING HOW-TO

URBAN WHITETAILS

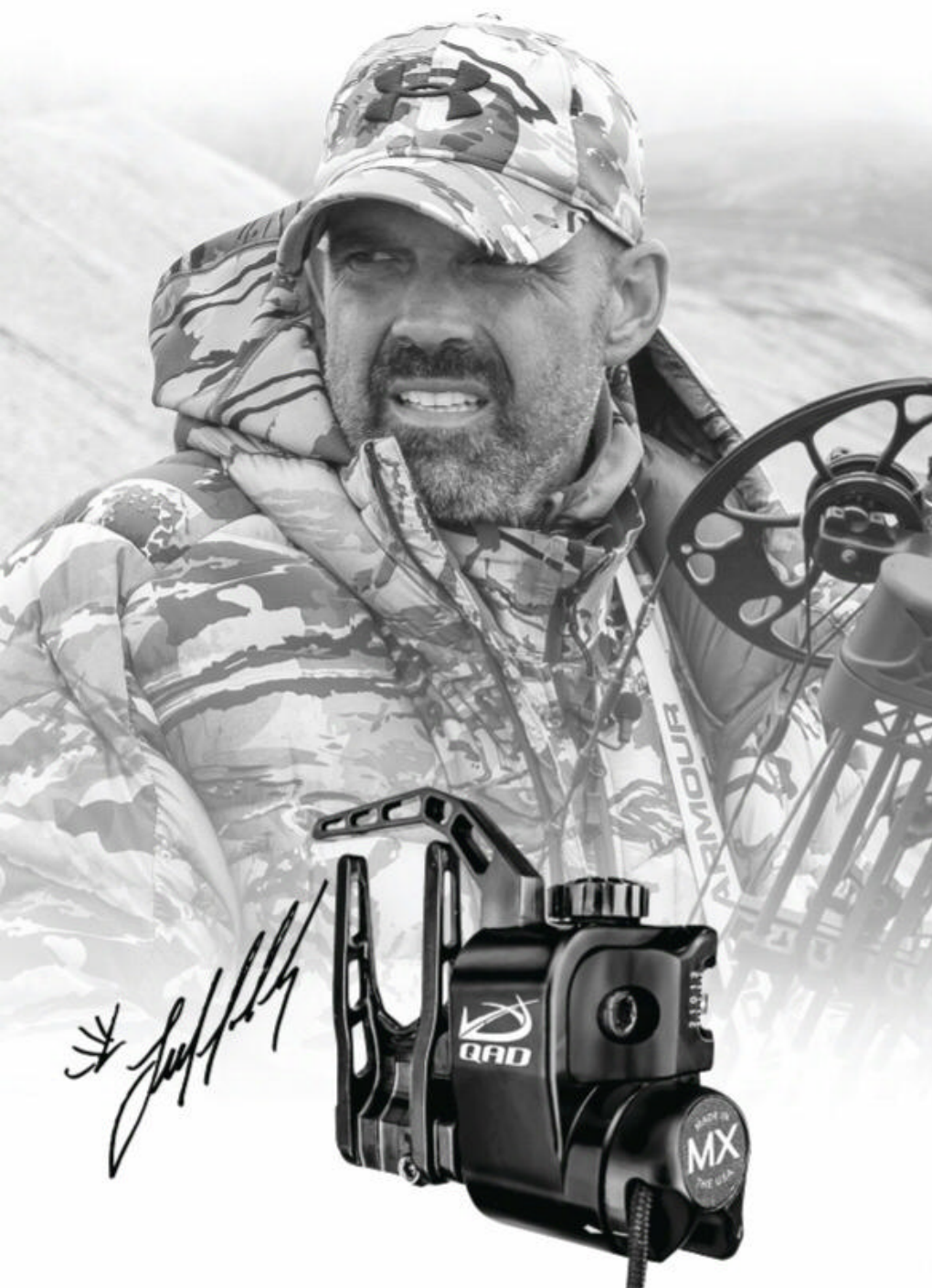
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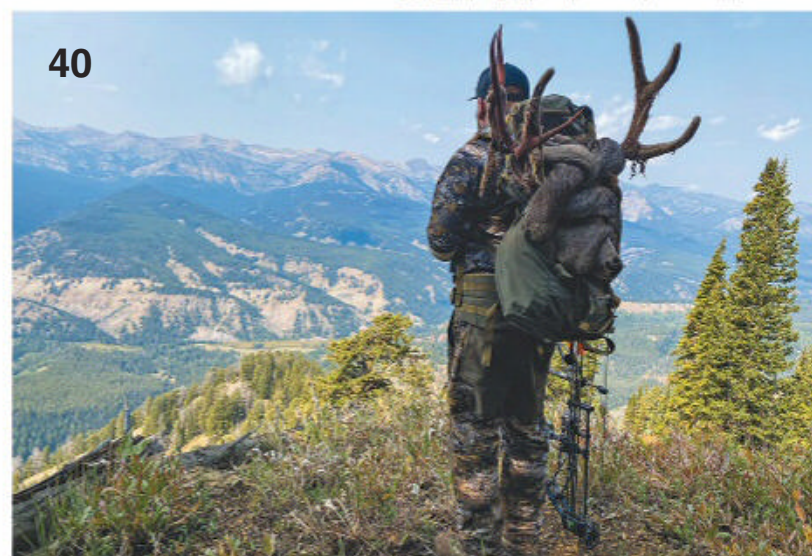
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By **CHRISTIAN BERG**

FIRST SHOT

GO WEST, YOUNG BOWHUNTER!

IT IS OFTEN SAID that youth is wasted on the young, and as a “middle-aged” bowhunter rapidly approaching the half-century mark, I’d have to agree!

You see, young bowhunters possess what is arguably the most crucial ingredient for success in the field — healthy bodies that can shoot bows, scale mountains and carry heavy packs with ease. The under-40 crowd will have to take my word for it, but it’s only once your body begins its long, slow decline — and the pain of yesterday’s hike is felt even more intensely today — that you truly appreciate the vigor of youth. In other words, you never know what you’ve got until it’s gone.

While it’s no secret young bowhunters can hunt circles around us “veterans,” most youngsters lack the wisdom and resources possessed by the senior set. From a bowhunting perspective, this presents a real dilemma. On one hand, we’ve got a bunch of young bowhunters with bodies perfectly suited to tackle physically demanding Western hunts but not enough time off or extra money to do them.

On the other hand, we’ve got piles of aging bowhunters with the time,

money and woods savvy for these hunts to go along with their aches and pains. To quote yet a third cliché, the spirit is willing, but the flesh is weak!

OK, maybe I’m exaggerating just a bit here. The truth is, we oldsters can still move pretty well, and I am certain I have many good years of Western hunting left in me. After all, I’m in pretty good shape for the shape I’m in!

Still, after editing the articles in this month’s issue (which has a decidedly “Western” theme), I’d be remiss if I didn’t encourage our younger readers to make their hunting dreams come true sooner rather than later. Scaling cliffs in search of bighorn rams (*Once In A Lifetime*, p. 34) or climbing deep into the Wyoming high country to chase mature mule deer (*A Buck for Papa Dave*, p. 40) won’t be any easier next year. Take it from me; 30 isn’t 20, 40 isn’t 30 and 50 isn’t 40. And I’m willing to bet 60 isn’t 50 and 70 isn’t 60 either.

If you’ve been thinking about doing that DIY elk or mule deer hunt with your buddies, stop making excuses and make it happen!

If you’ve been eyeing a big, outfitted hunt that is a bit beyond your means, beg, borrow and steal until it’s on your calendar! Sure, you might be able to do it “next year,” but then again, tomorrow is promised to no one, and if the past few years have taught us anything, it’s that we live in very, very uncertain times.

Besides, you aren’t getting any younger. Unfortunately, neither am I. **B**

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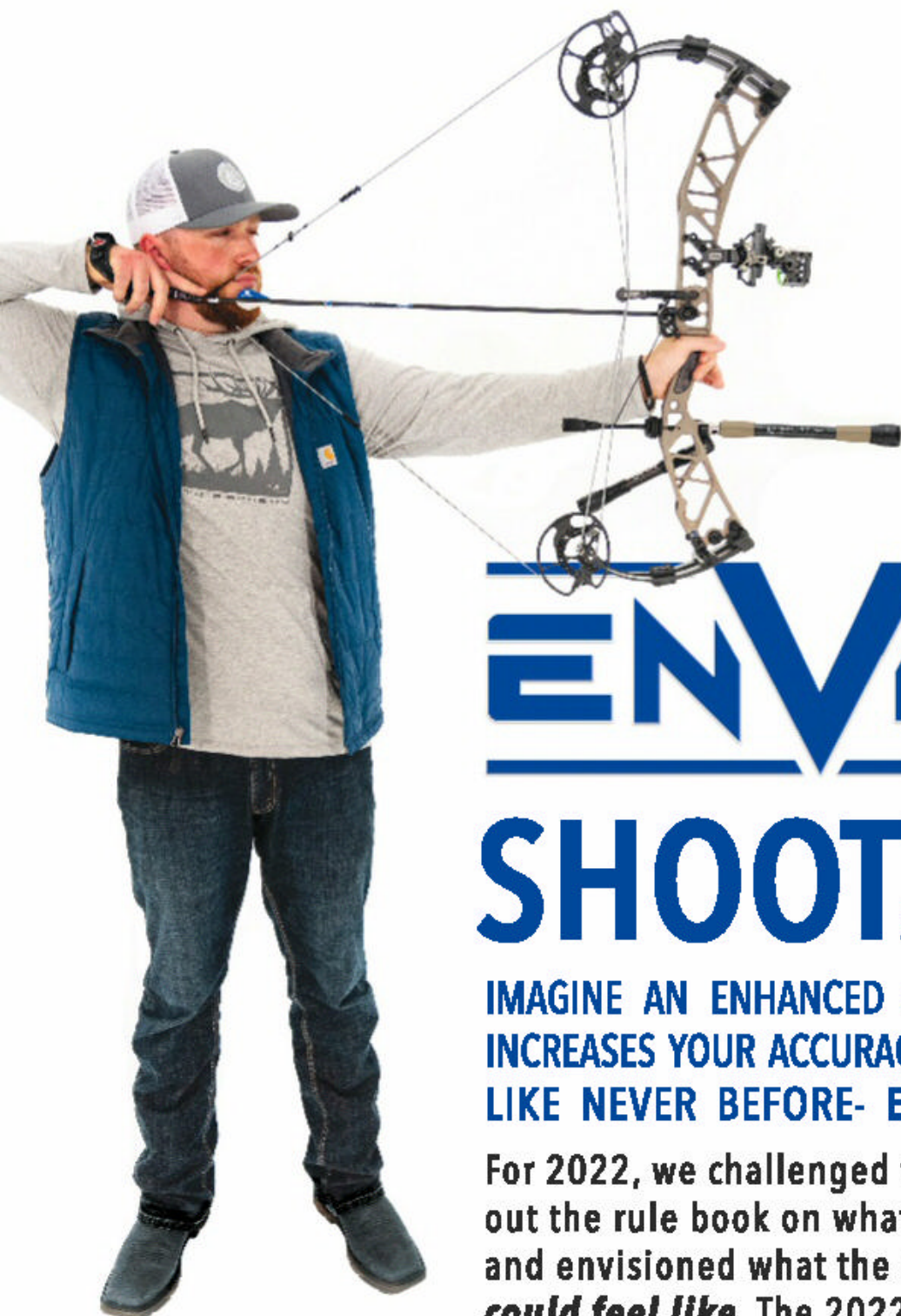
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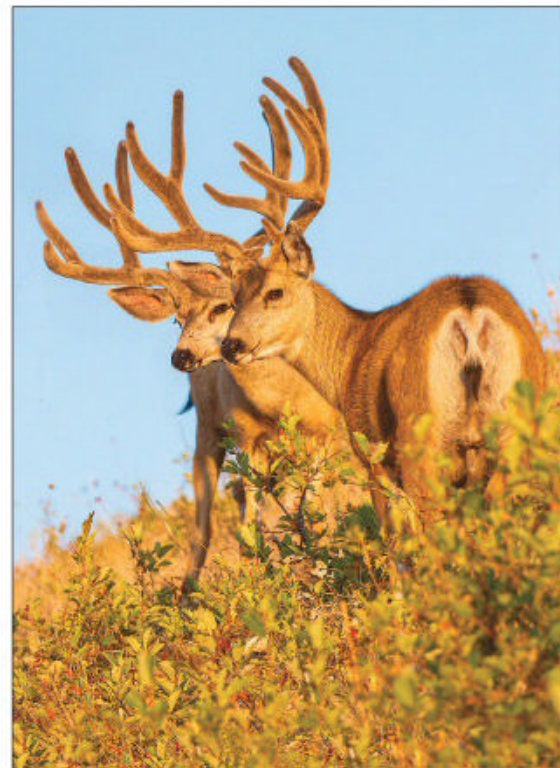
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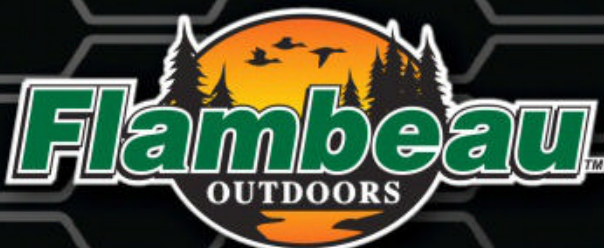
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By **CODY ROBBINS**

LIVE 2 HUNT



JUDGING SUMMERTIME BUCKS

Don't get fooled by that layer of velvet!

THE ANTICIPATION I feel leading up to deer season is unbearable. I get so excited about chasing big bucks, I start scouting probably a little earlier than necessary. But to me, a person doesn't need to be carrying a weapon to hunt.

Maybe the part I enjoy most about hunting a big buck is the process of finding one, and there's no better time to do that than summer. When I finally find a big, fancy buck, I sometimes quit looking in other country and toss all my eggs in his basket. That's totally fine; if he's the right buck for you,

then he's obviously worth all your attention. But you need to make sure he truly is what you think he is before investing your time and effort.

Scouting summertime bucks can be tricky, and I've definitely been tricked more than once! Whether it be locking onto them in my Vortex spotting scope or getting a great photo on my Stealth Cam, bucks can look very different in the summer than they will in the fall. A buck with a summer coat, a skinny little neck and a set of antlers covered in full velvet can appear way larger than it really is, and it's common for hunters who see them to assume such bucks will be mega giants come fall.

In reality, when you see that same deer three months later, his body and neck can seem twice the size as they appeared in summer. And his antlers, depending on how fleshy his velvet is, can look half the size once they're all shined up and ready for fall.

When you find summertime trail-camera photos such as this one on your SD card, it's easy to believe you've stumbled onto the biggest whitetail of your life. Just remember, velvet adds a lot of mass to a rack, and come November those antlers may score considerably less than you had imagined.

It's easy to be misled. A "big buck" will come into my life during summer scouting, and I'll fall madly in love with him. I'll make huge plans to give him my all come deer season, and then be completely flabbergasted when I see him again later on.

I'm not dragging out this rant to create some sort of summertime buck immunity for you, but to raise awareness for those who are passionate about finding big bucks. The deer you're dreaming about obviously exists in the summer. He's out there for you to find. Just keep in mind that a buck's appearance changes a bunch from season to season.

Off the top of my head, I can think of at least five times I've found a velvet buck and fallen in love. And I went through all the big-buck hunter motions, judging his score from photos or video, only to realize he was 15 inches smaller when I finally brought him home in the fall.

I'm still incredibly proud of every one of those bucks. But I definitely have lots of hunting buddies who tease me about the times I extremely misjudged a deer or two.

Here's a fun little rule to follow when judging velvet bucks in the summer: whatever you come up with for a score when field-judging this time of year, just subtract 10 inches. That way, you won't let some silly number even flirt with the idea of disappointment.

At the end of the day, if what you see gets you fired up, you're winning in my opinion. We should all be out there to have fun, and if you're that guy or gal who makes people laugh for repeatedly over-judging, that's OK, too. There's nothing wrong with being enthusiastic and positive! **E**

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By **JASON SNAVELY**

WHITETAILS



You can learn a lot about your shot by studying the deer's reaction and body language.

THE SCIENCE OF THE SHOT (PART 3 OF 3)

MAXIMIZING RECOVERY SUCCESS

Paying attention to all of the details is crucial.

THIS COLUMN MARKS the final installment of my three-part series on the science surrounding the anatomy and physiology of an arrow strike, tracking a wounded deer and recovering mortally wounded whitetails.

In Part 1, I covered the different types of shock and organ failure that result in the demise of a bow-shot whitetail. I also discussed the body's requirement for homeostasis between the circulatory and ventilation systems and discussed how an arrow can disrupt one or both of these systems. Part 2 was dedicated to the dreaded gut and single-lung shots and what they mean for you as a bowhunter.

This month, I will highlight some recovery tips and tricks my friend and retired surgeon Dr. Joe Bumgardner and

I have amassed over nearly a century of combined bowhunting experience. More specifically, I'd like to focus on the series of events that occur between the time you reach full draw on a whitetail and when that animal disappears from your line of sight.

Gather the Clues

It is common for many bowhunters to experience mental fog amidst the adrenaline-induced anxiety that comes from a close encounter with a whitetail. However, you should make a point to remain as clear-headed as possible, not only to make the best shot you can but to glean critical information relayed in the seconds after the shot. In short, every bowhunter should have a plan for the moment immediately after they dump the string. That plan involves answering as many of the following questions as possible:

- *Where did the arrow hit?*
- *Where was the animal standing when you shot?*
- *Did the arrow pass through or is it still in the animal?*

- *Did your arrow travel cleanly to the deer, or was there a deflection?*

- *Where did the deer go after the shot, and is there an easily recognizable landmark that will allow you to quickly identify where you last saw it as it fled?*

If you fail to "record" these facts in your mind, even as chaos ensues, you will diminish your odds of a successful recovery. Therefore, it is critical that you familiarize yourself with these key observations *before* that moment of truth this fall!

Shot Placement

While the topic is well covered in bowhunting media, it's worth mentioning here that the best aiming point for a successful shot at a whitetail is directly behind the front leg, in the lower third of the chest. Your best chance of an immediate kill is with a broadside, pass-through shot that affects both the circulatory system (heart) and the ventilation system (lungs). If the animal happens to "jump the string," this point of aim will still allow your arrow to pass through both lungs even if the point of impact is six inches higher.

Meanwhile, a shoulder blade, or scapular, hit with a broadhead-tipped arrow is generally a very bad shot location. Making such a shot with a rifle that delivers much higher kinetic energy allows energy to transfer to the heart and lungs, resulting in a very quick kill. This is why shots with archery gear must be extremely accurate.

Since bowhunting is a game of nerves, and the moment of truth finds even the most experienced bowhunter's heart doing backflips with excitement, it is wise to have a plan for closely observing the animal *after* the shot. How accurately you observe your shot placement and the animal's escape route and reaction to the hit will determine how successful you are at recovering your trophy in a timely manner. Keenly noting where you hit the animal will allow you to formulate an accurate recovery plan and get to the picture taking sooner. This is one reason why I like to practice and hunt with lighted knocks, so I can better see precisely where I hit the animal.

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WHITETAILS

Shot Reaction

One of the most valuable pieces of the recovery puzzle is the animal's initial reaction to the shot/hit. I then like to break the post-shot reaction down further by describing how the animal subsequently flees the scene. Together, these two observations will tell you a lot about the location of your shot. The more information you observe, the more accurate your assessment will be. While there are exceptions to every rule, these reactions serve as a very good rule of thumb:

Double-Lung Shot: Whitetails hit through the lungs generally run off with their tail down, and they waste no time doing it! Bumgardner notes, and I agree, that some double-lunged whitetails act as if nothing has happened, and when that's the case the hunter may very well watch the animal, much to its surprise, expire within sight. I have also personally made a perfect, double-lung, pass-through shot on a whitetail that the animal made look like a complete miss! I found my trophy, effortlessly, just beyond the edge of the thick brush line I was hunting. Again, this is where employing

lighted knocks, along with knowledge of how double-lung hit whitetails may react, helps me draw accurate conclusions. Of course, confirmation of a lung puncture will come from bubbles in the blood droplets once you pick up the trail.

Heart Shot: Most bowhunters have witnessed the characteristic bronco kick of a heart-shot whitetail — this is a great sign! Experienced bowhunters have learned to associate this reaction with antlers on the wall. The heart is in a sack called the pericardium that contains fluid. When an arrow transects the pericardium to get to the heart, the nerve innervation commonly makes the deer do a bronco kick where all four legs come off the ground, with the hind legs pointing towards the sky. Confirmation subsequently comes through observing the heart at the skinning shed and noting the pericardium has been transected.

Gut Shot: An arrow strike in the abdominal cavity, paunch, large/small intestine or rectum commonly results in the animal hunching up and slowly walking off in a hunched position. This is not a welcome sight for bowhunters, as a tremendous amount of patience, and sometimes luck, are required for a successful recovery. An animal hit in the

gut is generally looking for a place to bed down as quickly as possible. So, it's wise to back out and give it some time. A gut-shot whitetail that is not pushed is generally an easy find. Unfortunately, sometimes it is a race between coyotes and hunter!

Spinal Shot: A high arrow strike in the spine can result in one of two reactions from the animal — either temporary or permanent spinal cord injury. If your arrow completely transects the spine, the animal will experience permanent spinal cord injury. But it is also possible to hit the spine and merely cause shock resulting in temporary paralysis, with the animal regaining its full range of motion within minutes. As such, it is imperative that you make a follow-up shot to the vitals of a spine-hit deer as quickly as possible.

Obviously, there are a number of other places where your arrow can strike a deer. A leg hit could result in an animal that limps off, and a ham or hind-quarter strike usually causes the animal to escape with its tail down. If your arrow strikes a major vessel such as the femoral artery or jugular vein, it is common for the animal to run off as though you completely missed. Blood color would help confirm such a hit location. **B**

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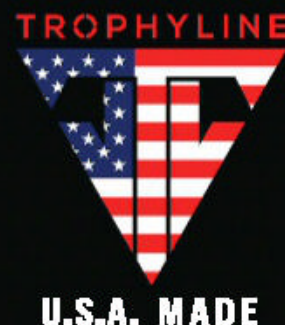
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By **BILL WINKE**

BOWHUNTING WISDOM



To consistently kill mature whitetails, you have to hunt where they exist.

BATTLING THE ODDS

Why are big bucks so hard to kill?

WHEN I STARTED WRITING for magazines, I wrote a lot of articles that profiled the biggest deer shot throughout the Midwest each season. I would make a loop from Iowa into Kansas, then down through Missouri into Illinois and back home again, interviewing successful hunters along the way. I learned a lot about deer hunting through those meetings.

The No. 1 thing I learned was that these hunters often didn't know why they killed their buck. The biggest deer back then seemed to go to the hunters with the least experience. I can't begin to tell you how many times I'd arrive at a person's home for the interview only to find out that the buck that shocked my eyes was the bowhunter's first. Maybe it was his first with a bow after having killed a few with a gun. Or, maybe it was the first after years of not hunting. Regardless of the story, it became clear that to kill big bucks, experience was not required.

That has all changed. Today, the biggest bucks seemingly go to bowhunt-

ers who are intentional about where they hunt and are experts in the art of running trail cameras. It now seems that everyone has some kind of history with the giants they shoot. Thirty years ago, these bucks were a big surprise, whereas today they're on the hit list well before they're on the wall. So, what does it all mean?

Are Big Bucks Smarter?

Obviously, these inexperienced hunters weren't outsmarting the bucks. They had simply captured lightning in a bottle. Beginner's luck seemed to make the difference rather than elaborate plans to kill a whopper. If

anything, they simply heard there was a big deer in the area, set up a stand 20 yards downwind of a beaten trail and got lucky.

The fact that these novices were shooting big deer used to frustrate the heck out of me. I had spent thousands of hours — in the tree and out — learning as much as I could about whitetail behavior only to be "shown up" by people who had almost no knowledge. Obviously, you don't have to outsmart these bucks to shoot them.

Two possible conclusions eventually explained this seeming break with common sense. First, maybe mature whitetail bucks aren't very smart. Second, maybe these novice bowhunters in their simple approach were actually doing something special. Maybe, the more we learn, the more we overthink. Maybe!

So, are big bucks smarter than other bucks? I can make a case for the fact that they aren't based on what I learned from these success stories. I'll come back to this question later.

Are Big Bucks Only Nocturnal?

If you are like most of our readers, you have a few trail cameras out in key spots gathering critical information. I'm guessing that when you look through your recent images going into the season that an overwhelming majority of the nicest bucks are only moving at night.

Just knowing a given buck is there probably makes you want to hold out for him, but in the end these nocturnal bucks are like ghosts. It can be a very bad experience to spend countless hours on stand hoping for a shot at a deer that rarely travels in daylight. I did that in 2010, when I hunted one buck for 50 straight days and never saw him. I had enough nighttime photos of him to keep my hopes up, but it got to the point where hunting wasn't even fun. For the first time in my life I was happy when the season ended, and I vowed never to let that happen again.

This begs the next question: are mature bucks only nocturnal? Again, I will come back to this question in a bit.

AUTHOR'S PHOTO



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BOWHUNTING WISDOM

Do Big Bucks Even Exist?

Trail cameras have forced us to ask this question. Maybe you have hunted a certain area for years and can count on one hand the number of really nice bucks you have seen or gotten on camera. Do they even exist in your area? If not, then what? When I wrap this up, I will circle back to this question, too.

Will a Big Buck Move In?

Even if there aren't any "shooters" on camera in your hunting area, one might move in during the rut, right? That raises the next important question in this struggle to understand why big bucks are so hard to kill — how much do they really move? No doubt you have heard that mature bucks cover tons of ground during the rut. If that is true, why aren't you seeing them?

Answering the Questions

I've asked some important questions, and now I'll try to answer them:

Are they all nocturnal? A certain percentage of bucks, no matter where they live, are nocturnal by nature.

Others learn to be nocturnal due to hunting pressure. I am going to guess at least half of all bucks are born with a tendency to be nocturnal once they hit age 4, about the time their antlers reach jaw-dropping proportions.

That's in areas *without* any hunting pressure. In areas with moderate to heavy pressure, those that live that long learn quickly that to avoid danger they can move only at night. That's one reason why they seem smart. In reality, they aren't; they're just nocturnal.

How much do they move during the rut? I don't believe mature bucks range as far during the rut as people think or hope. If they do, it is for very brief periods of time.

In areas with limited cover, studies show that bucks do tend to travel farther from home. However, in areas with lots of cover, they have a reasonably small range even during the rut. You may find this surprising, but back when I owned my big farm, I never shot a buck that I didn't already have on my trail cams. I never encountered a stranger; the bucks I hunted had relatively small ranges.

I also asked a big outfitter in that area how often his hunters shot new bucks during the rut, and he said it was very rare. So, if you're holding out for some mystery buck to show up this fall, you are likely in for disappointment.

Are big bucks smarter? No, but you definitely have to hunt them carefully. Big bucks are harder to kill than other deer because they aren't moving in daylight or simply don't exist.

To wrap this up, there are two main points. First, if you really want to shoot a big-antlered, mature buck, you may have to find a new hunting area where they actually exist in reasonable numbers. If they aren't there, you aren't going to shoot them.

If you find them on camera, but only after dark, you have to hunt very carefully to keep your pressure low until that buck starts moving in daylight. Second, you may just need to set realistic goals. If you're trying to shoot a buck that doesn't exist — or trying to kill a buck that only moves at night — bowhunting will soon lose its attraction. Again, you should either hunt somewhere else or pick a class of bucks that are daylight-active and exist in huntable numbers. **B**

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B O W H U N T I N G

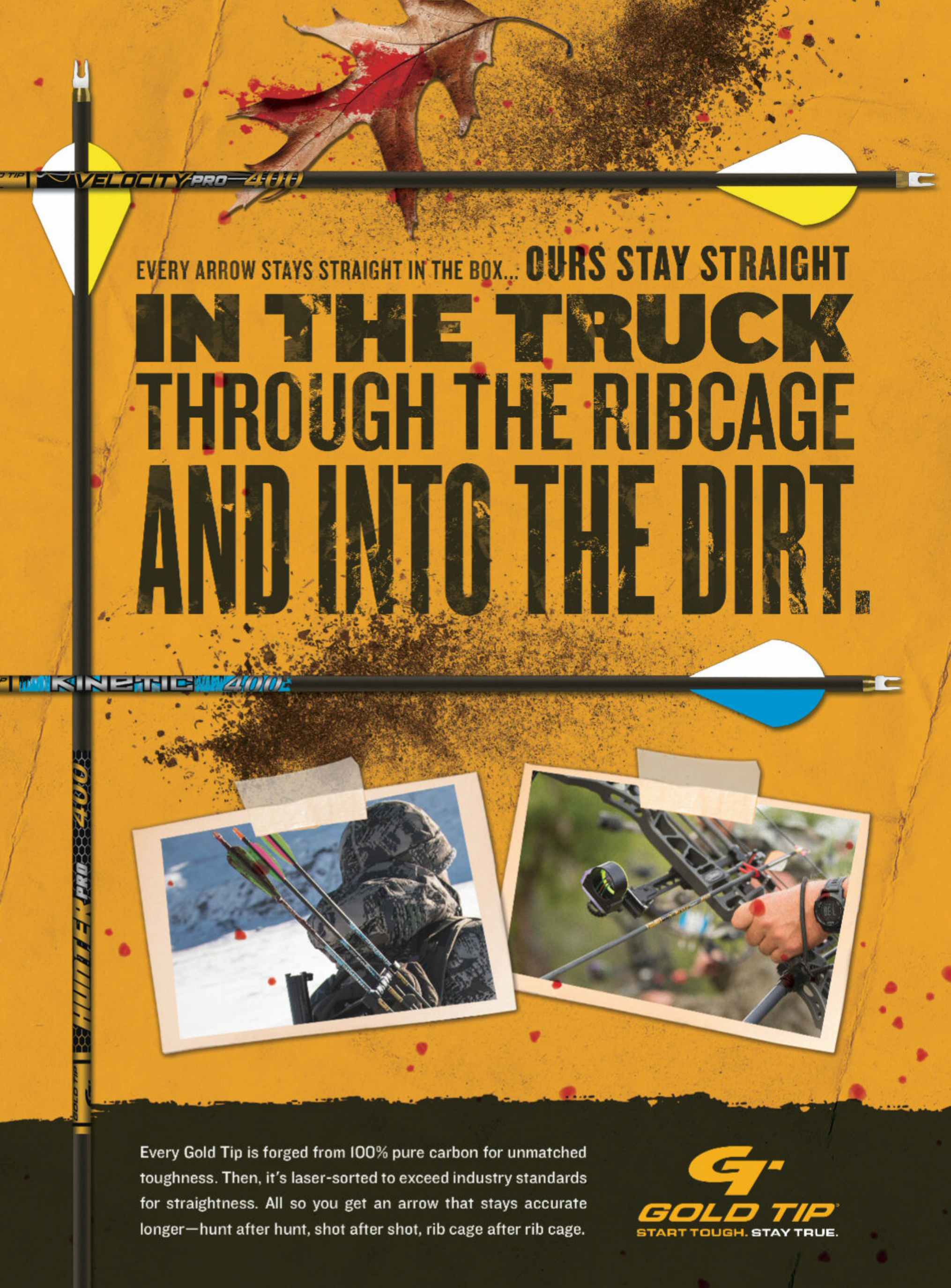
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By **RANDY ULMER**

BETTER BOWHUNTING

PART 3

STRING JUMPING

Is a faster bow the answer?



These video screen grabs from a 2009 hunt by Field Editor Bill Winke show just how much a deer drops in a fraction of a second. The buck was 35 yards away; the image on top shows the deer just prior to the shot, along with Winke's aimpoint, while the photo below shows the arrow glancing off the buck's back right at the red dot.

based on many variables. It is important for you to be well educated before making this decision. This requires a discussion of scientific data as well as some empirical observations; I will also give you my opinions.

Sound and Distance Matter

The most important question is whether the deer is going to react immediately to the sound of the shot. This is dependent on the proximity of the sound to the deer and the volume of the sound. As I stated in the last column, we need to do everything we can to decrease the volume of the sound the deer hears. We can do this in two ways: by silencing our bows and/or by shooting from further away.

A sound source's volume decreases with the square of the distance from the source. This means that the same sound energy from the source is distributed over a larger area, and the energy intensity declines with the square of the distance from the source. So, a bow will be four times as loud at 20 yards as it will be at 40 yards, and it will be 16 times as loud at 20 yards as it will be at 80 yards. Thus, the further away from a deer you are at the time of the shot, the less likely it is to react immediately to the sound.

Past a certain distance (for argument's sake, let's say 25-30 yards for the average arrow speed we shoot nowadays) it doesn't matter how fast your bow shoots; an alert deer will have time to react before the arrow gets there. There are many variables involved in determining what this distance is, including the particular individual's reaction time and attitude, the speed of the arrow and the size of the chest cavity. To reiterate, if the deer immediately reacts to the sound of the bow past

ONE OF THE MOST COMMON reasons archers miss or wound deer is from the animal "jumping the string." This phenomenon may seem like a conscious effort on the deer's part to duck the arrow, but it is merely an involuntary reaction to loud noise. The animal drops down to load its legs in order to sprint away from perceived danger.

In my last column, I discussed ways to make your bow quieter to minimize the volume of sound a deer hears. The thought process goes like this — the quieter the bow, the less likely the deer is to react quickly and violently.

In the next few columns, I will discuss whether making your bow faster will help in dealing with this issue.

Obviously, the faster the arrow, the less time deer have to react. There is an ongoing debate as to whether making the bow faster is a good tradeoff, because the faster the bow, the noisier it tends to be.

Determining whether shooting a faster arrow is going to help significantly is a decision you must make



HUNTING

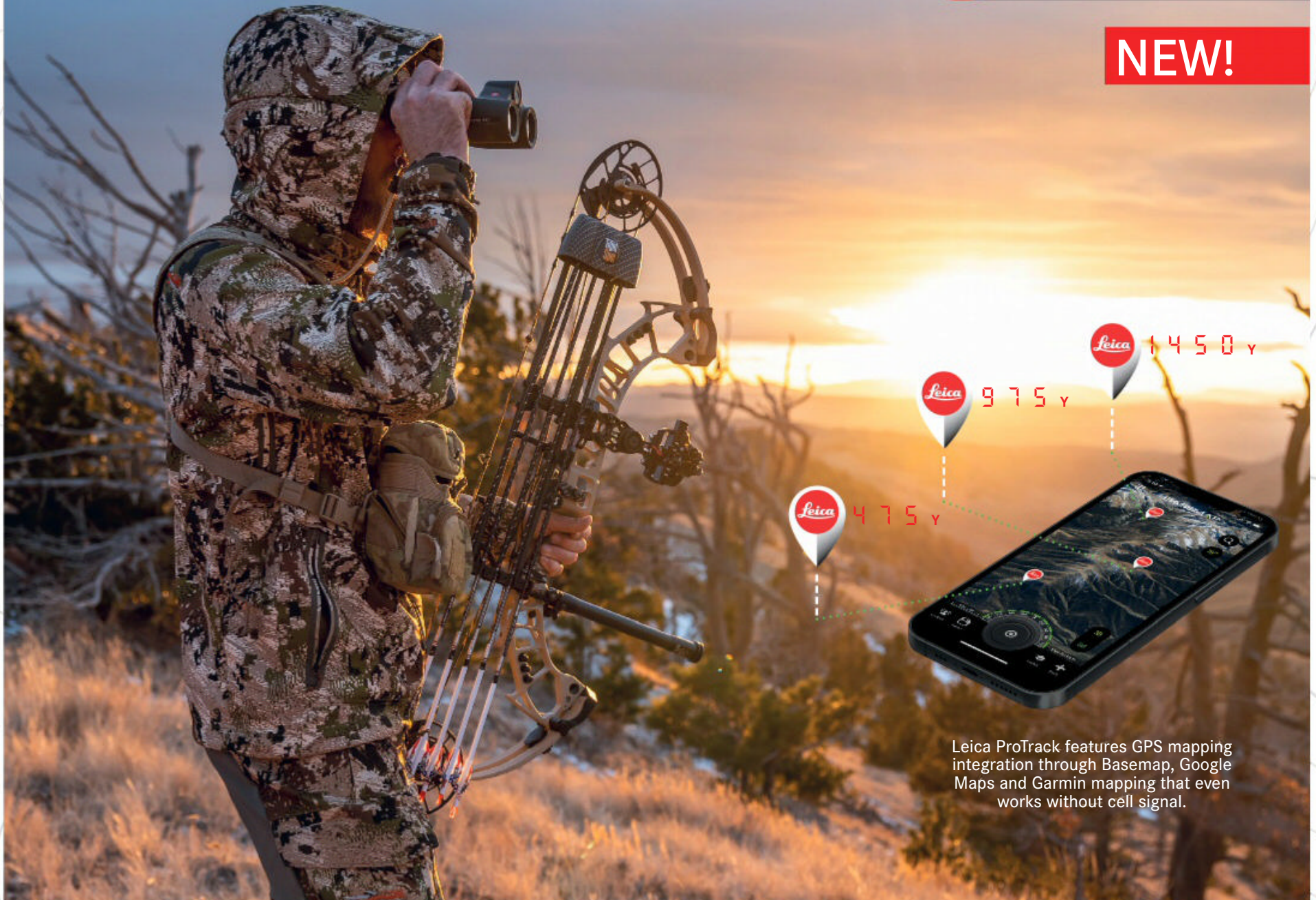
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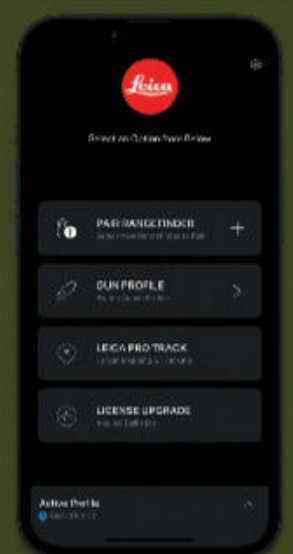
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BETTER BOWHUNTING

about 25 or 30 yards, it doesn't matter how fast your bow shoots an arrow, the animal will not be there when the arrow arrives.

When the bow is fired, the noise travels to the deer at about 1,100 fps. Once it gets to the animal, the inner ear must generate a nervous signal to send to the brain. The brain interprets this signal and produces a separate signal that travels down the spinal cord and out through the peripheral nerves and

to the muscles. The muscles then take time to react to this signal to produce movement.

All of this takes time, although not all that much time. This relay system and how it works is well-known, proven science. What we are never sure of is how a particular animal will behave at any given moment in any given situation. So, if we want to do the math, so to speak, it all boils down to reaction times, which we can measure.

Reaction Time Impacts Aim Point

I'm a veterinarian and happen to know that all mid-sized mammals are built pretty much the same. Other than a few notable exceptions, all the bones and muscles in a human, dog or deer have the same basic functions and names. So, deer are much like us neurologically.

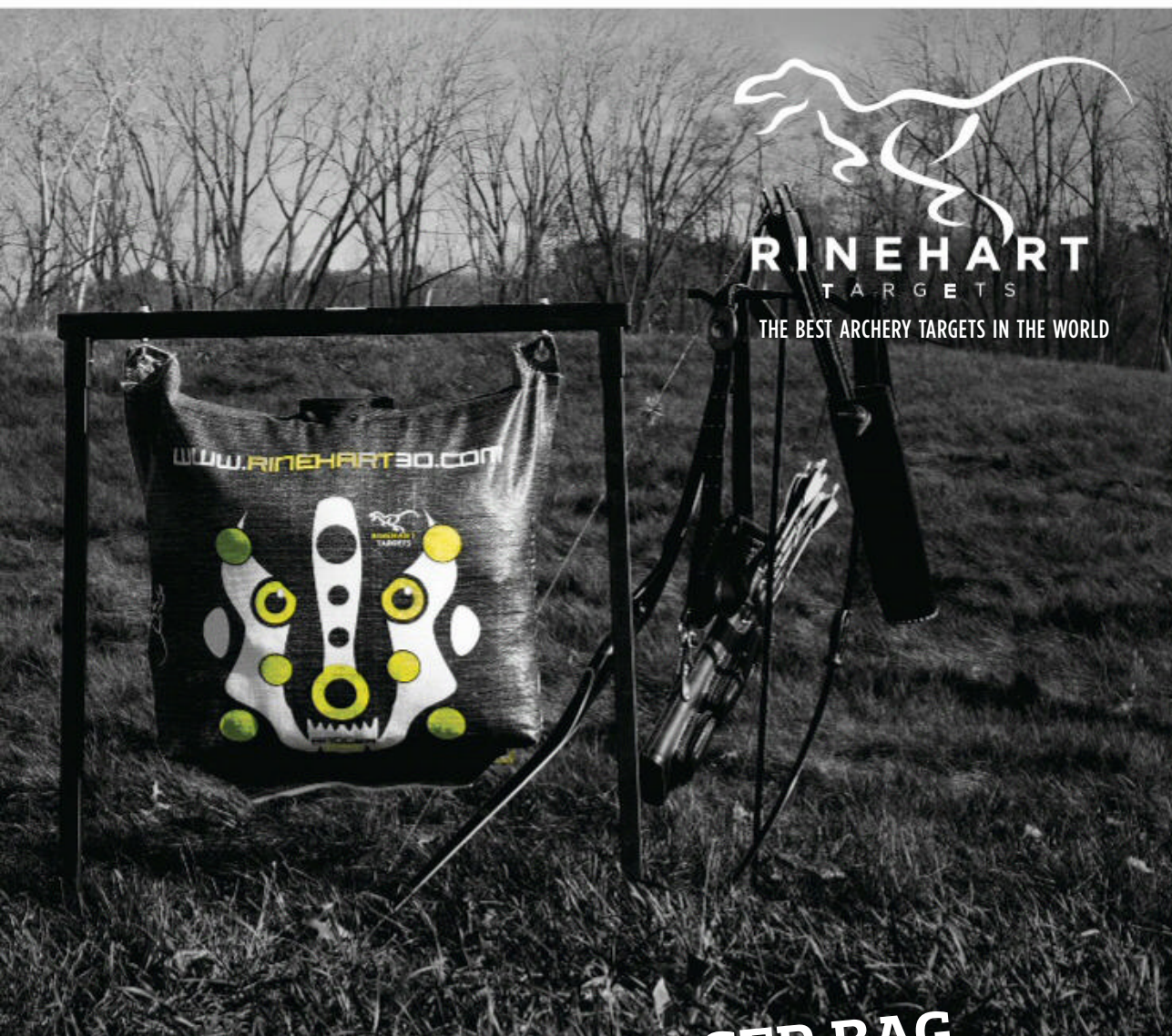
The reaction times of the fastest humans on earth — sprinters — have been well studied and thoroughly documented. To make sure there is no delay from the time the starter's pistol goes off until the sprinters hear it, speakers are placed very close to the runners. So, we can reasonably eliminate the variable of distance from the sound's source to the ear of the runner.

Elite, world-class sprinters in the starting blocks take about .15 to .18 second to react to the starting gun. If a sprinter has a reaction faster than .1 second, he is considered to have anticipated the gun and it is regarded as a false start. Remember, too, that unlike a deer, sprinters have their muscles tensed and are already in the crouched position, ready for the sound of the gun. They do not have to drop down to begin their forward spring; they are primed and ready for the starting gun in all regards.

Field Editor Bill Winke, who is an expert on all matters related to white-tails and shooting, has studied many slow-motion videos of whitetail deer being shot at with a bow and arrow. He estimates a deer's reaction time is approximately half that of an elite sprinter, so approximately .075 second.

The speed of sound is exactly four times as fast as an arrow traveling 275 fps, so the sound arrives well before the arrow. At 20 yards, it takes approximately .056 second for the sound of the bow to reach a deer, but it takes the arrow approximately .23 second to arrive. This leaves the deer approximately .17 second to react.

Winke estimates that at 20 yards, you need to aim about 6 inches low on a string-jumping deer with an arrow flying 230 fps, and with a 280-fps arrow you need to aim about 3 inches low. At 30 yards, you need to aim about 17 inches low with the 230-fps arrow, and about 10 inches low for the 280-fps arrow. These findings argue strongly for shooting a fast arrow; however, don't run out and buy a faster bow or lighter arrows just yet, since there is much more to this story. We'll pick this topic up again next month. **E**



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By **BRAD FENSON**

CROSSBOWS



GOING WESTERN

Practice is key to success
on your big-game hunt.

WHEN MOST HUNTERS THINK of hunting the West, elk, mule deer, pronghorns and open-country whitetails come to mind. The region is a mecca for big-game hunters, with plenty of opportunities and often low hunter densities. Wyoming, for example, is a state with more antelope than people.

For many, a trip west is a chance to get out of a treestand or blind and wear out some boot leather. However, the biggest mistake is thinking you can approach animals like you would with a firearm — think "archery" for success and strive to be within 30 yards for any shot. Crossbows definitely open up opportunities, but users need to stay focused and hunt strategically to succeed.

Know Before You Go

When it comes to bowhunting, every big-game species has its allure. For example, few hunts are more rewarding than a spot-and-stalk mule deer hunt in open country — sneaking in on a bedded buck and waiting for it to stand is simply addictive. Pronghorns decoy

exceptionally well during their mating season. Calling elk during the rut is magical, and having a big bull charge in close can increase your heart rate and make the hair on your neck stand on end. No matter which species you choose to target, it's important to do your homework and know what techniques are required to get close to the animal. To this end, get the right calls or decoys and know how to use them.

If you plan on using decoys or blinds, set them up on a windy day to learn how to manage them, stay quiet and still raise and shoot your bow. When hunting out west, knee pads can be a blessing as you crawl through the prairie where everything pokes or sticks you. It's also a good idea to prac-

tice shooting from the prone position in anticipation of your hunt.

Leather gloves will protect your hands in cactus country and on rocky slopes, and it's important to practice engaging the trigger with your gloves on, since it changes the feel, and maintaining consistency and accuracy are paramount. As for footwear, a good pair of boots with solid grip and support is a must for many western hunts. However, make sure to break in your new boots well before using them on your hunt.

The Optical Advantage

Steep slopes and open plains make ranging animals challenging, especially if you haven't done it before. Modern technology, however, can provide a major advantage when it comes to accuracy and reduction of movement. To this end, consider a crossbow optic that can range and provide a direct aiming point. The Garmin X1i, Burris Oracle X and Halo Optics Hyper X Laser-Rangefinding Scope all take the guesswork out of range, angle compensation and aiming point; the advanced electronics sort out the details and provide a dead-on hold in the optic.

The Huskemaw Crossfield scope was created for western hunting, with a range, dial and shoot system. Adjustable turrets for windage and elevation provide downrange accuracy with a calibrated bolt-drop compensator. The Sig Electro-Optics Sierra3BDX Crossbow package uses ballistic data collected from your bow and bolt to light up an aiming point on the reticle. The rangefinder and scope pair through an app and Bluetooth for accurate results.

Open Country

Although the West features plenty of open country, this doesn't mean you can plan on long-range shooting. Using a crossbow is still archery, and even though these tools can shoot 100 yards, the trajectory and energy can be problematic at greater distances. Even if you are using a high-performance crossbow, 60 yards is a



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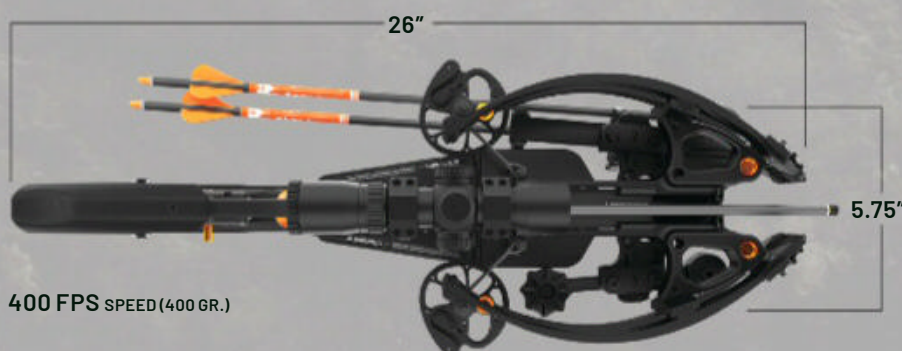
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CROSSBOWS

long shot. The good news is that the wind is almost always blowing in the West, which can help cover the noise of a bolt coming off the rail. However, it's crucial to practice shooting in the wind and know how to adjust for windage.

It's also important to keep your bow level. The topography in the mountains or on the prairie can fool the human eye when determining level, so having a level attached to your crossbow scope helps confirm that you are holding the bow correctly. If you take the time to shoot with a canted crossbow at the range, you'll quickly see how your bolt is no longer on the mark. Make sure to use a level and practice checking it before each shot.

It's easy to overlook the bubble on your bow when the animal of a lifetime shows up. Checking the horizontal axis needs to be part of the routine of shouldering the bow, looking at the level and finding the target in your optic.

As far as scopes go, the Sierra3BDX has indicators on both sides of the horizontal reticle to show the level. The

rangefinding optics also have level indicators built into the optic. So, the process is quick and intuitive.

Bolt Options

There is an incredible assortment of crossbow bolts to enhance speed, penetration or wind resistance, and customizing your projectile can generate benefits for different species. Antelope are diminutive compared to elk or even mule deer bucks, so a lightweight bolt and broadhead are speedy options. On the other hand, a hefty bolt and broadhead will increase kinetic energy and penetration on an animal such as an elk, which has more prominent bones and greater mass.

There has never been a better time to take advantage of new bow technologies, but don't get fixated on speed alone. The velocity of modern crossbows is impressive, but converting some of the horsepower into kinetic energy requires minor adjustments and minimal loss of speed. Most modern crossbow scopes have a speed dial for adjusting the reticle for impact at different distances. The intelligent rangefinding scopes allow the user to set up specific bolt profiles, which means you

can have three different hunting bolts ready for the season and dialed-in accurately.

Practice Is Essential

Accuracy and consistency come with practice. Many western hunts take place on foot, and opportunities are generated by actively pursuing game. Hence, it's a good idea to hike a set of stairs several times and then pick up your crossbow and try to shoot accurately. An increased heart rate and winded lungs can make it challenging to shoot, so it's best to know ahead of time if you require a few seconds before taking a shot, or if using a shooting rest can help stabilize your shot.

You also should practice belly crawling with your crossbow. It isn't easy, so trying different ways to carry it or move it forward will make a difference on the hunt. Many believe the primary advantage to using a crossbow is not having to draw. At times that may be true, but try shouldering an 8-pound bow and holding it steady for 60 seconds. You'll learn to look for the window of opportunity to raise your crossbow and shoot within a limited time to ensure muscle fatigue does not set in. **B**



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By **CABÉ JOHNSON**

SPOT-ON

DON'T MISS OUT

Stabilizers matter!

RECENTLY, we've noticed a lot of big-time bowhunters are missing out on something that could really help them in field.

We're talking about stabilizers. What are the right kinds? How should they be balanced? How much should they weigh? What about vibration absorption? Many of us have pondered these questions, but finding the right answers is hard.

Our experimentation has shown that adding a stabilizer to your bow means holding steadier. And we've also learned that the heavier the stabilizer is, the steadier we can hold. Over time, our bows got heavier and heavier. When we were shooting spots, it was awesome; we could hold steady as a rock. But when we went hunting, we stripped off all the extra weight. Packing a heavy bow all day was no fun.

Amazingly, the steadiness we came to enjoy during the summer disappeared during hunting season. Our holding patterns tripled in size, and so did our groups — and that was before we screwed in broadheads! So, it didn't take long to put the heavy stabilizers back on, and we learned to use one of our most valuable pieces of hunting equipment, a bow hook. We attach a bow hook to our belts so we can use it to carry our heavy bows on our hips while in the field. We decided the extra accuracy was worth the inconvenience of a heavy bow. After all, when better to hold like a rock than when that big buck steps in front of you?

We wanted to know more about stabilizers and what kinds worked best. What we found was the ones with most of the weight out on the end were far superior to those with more weight closer



Long, weighted stabilizers help you hold steadier and make an accurate shot when it counts!

to the bow. Our holding patterns went from large, fast and jittery to small, slow and smooth. Sure, we had the nifty adjustable stabilizers and the ones with noise- and vibration-dampening abilities. But the ones that helped us hold steadiest were the simplest, holding weight as far away from the bow hand as possible. The further from the hand, and the more weight we added, the steadier our sight picture became.

To further understand this, we had to look to the laws of physics and inertia. These laws tell us that things at rest tend to stay at rest, and the heavier those things are, the more effort it takes to get them moving. Physics also tells us that the less leverage you have in a system, the more force is required to move the weight. So, it makes perfect sense that you will hold steadier and shoot more accurately if you get as much weight on the bow as you can handle and put that weight as far away from the bow hand as possible.

Many of today's most popular "hunting" stabilizers are designed more to reduce bow noise and vibration than to help you hold steadier. Personally, we would rather trade a little extra vibration during the shot for the opportunity to hold better and shoot better groups. Besides, most of the bows nowadays are a lot smoother and have more built-in anti-vibration technology. So, the need for vibration-reduction is less critical.

Paying a little more attention to these underrated and overlooked accessories can really help your shooting. So, buy a bow hook for your belt, get some weight on that bow and stop missing out! **B**

CHRISTIAN BERG PHOTO

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By **JON E. SILKS**

BOW TEST

MATHEWS V3X 29

Built for seamless integration of accessories and a superior shooting experience.

WITH ITS NEW V3X, Mathews Archery has built off 30 years of experience and its incredibly popular V3 platform to introduce a next-level hunting rig.

As bowhunters, we outfit our bows with accessories to help us find success in the field. Rather than concentrate on the bare bow only, Mathews has created harmony across the entire bow set-up to develop functionality as a single unit. This focus on the integration of various components brings cohesion and elevates the shooting experience to new heights. The company's Bridge-Lock Sight Technology, LowPro Quivers and new Stay Afield System (S.A.S.) lead a great cast of technologies and features, so let's dive in to see how this bow stands out.

Systems Integration

Mathews has designed and built some of the most efficient, high performance and popular bows on the planet. While it continues to advance basic bow technology, the company has now invested its considerable capabilities into systems integration by focusing on the entire package, bringing balance and cohesion to all compo-

Mathews brings new meaning to the words "integrated system" with its 2022 V3X, featuring new Bridge-Lock Sight Technology and dovetail mount machined into the riser to accommodate Integrate Rest Technology.

THE SPECS

Manufacturer: Mathews Archery, 608-269-2728; mathewsinc.com

Model: V3X 29

Riser: Machined aluminum, reflex

Grip: Engage, molded composite

Limbs: Past Parallel, split

Draw Weights: 60, 65, 70 and 75 pounds peak

Draw Lengths: 25.5-30 inches, in half-inch increments; modular

Cam System: Crosscentric with SwitchWeight Technology

Letoff: 80 or 85 percent (advertised); 82.3 percent (as tested)

String: Zebra, BCY 452X, 62.625 inches

Cables (x2): Zebra, BCY 452X, 30.0625 inches

Brace Height: 6 inches

Axle-to-Axle Length: 29 inches

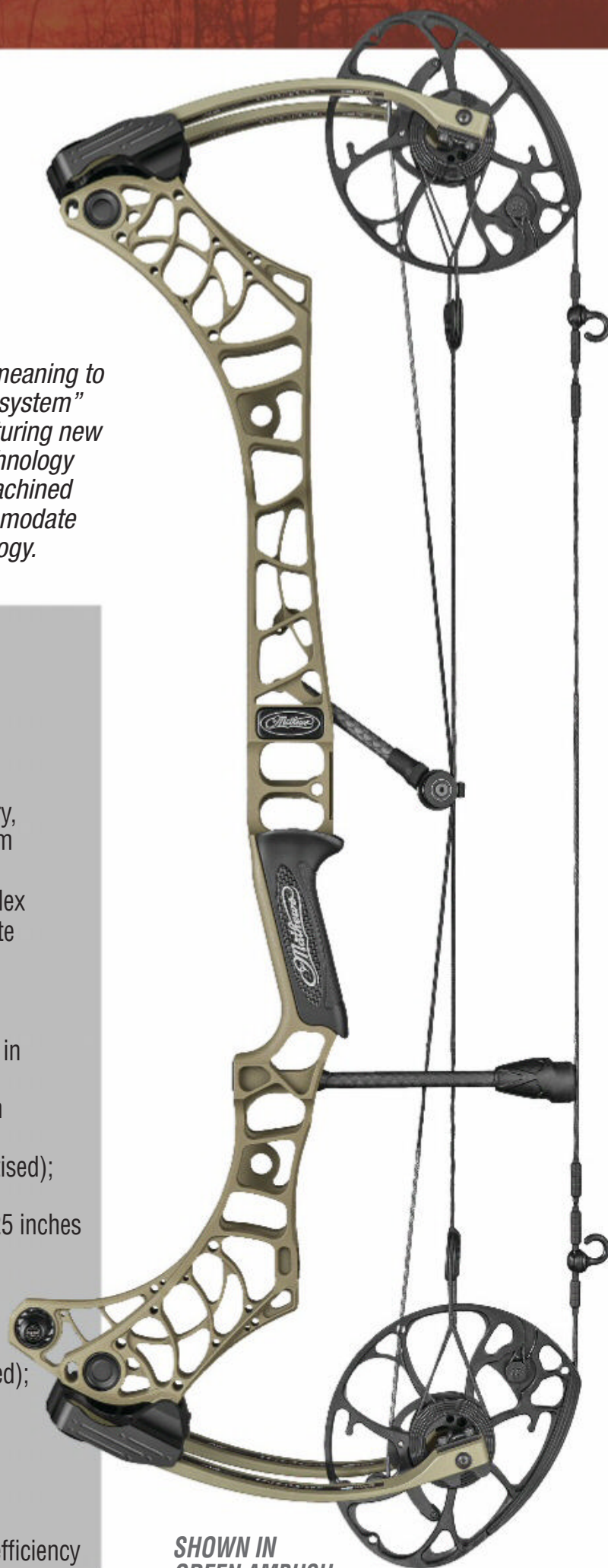
Weight: 4.47 pounds (advertised); 4.4 pounds (as tested)

Finish: Eight camouflage and solid color options.

Advertised IBO Speed: 340 fps

MSRP: \$1,199

Comments: High quality, high efficiency and high performance.



**SHOWN IN
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nents, as well as the resulting package. The V3X, which is available in 29- and 33-inch axle-to-axle models, is the culmination of this focus, incorporating three decades of bow-building experience, expertise and innovation.

The magic happens when coupling the V3X with Mathews' purpose-built line of new accessories (sold separately). At its heart lies the new Bridge-Lock Sight Technology. Mathews designed a mounting system that allows sights

(including its new Bridge-Lock sights) with a dovetail bar to mount directly through the center of the riser structure. This eliminates the need for an external mounted sight bracket, creating a more streamlined, centered and aligned attachment that improves balance and reduces vibration.

With the external sight-mounting bracket eliminated, the company was able to draw the quiver in as tight as possible and the design team went to work. The result is Mathews' line of LowPro Fixed (6-arrow) and LowPro Detachable (5-arrow) Quivers engineered around the geometry of the V3X, with arrows reportedly 56 percent closer to the riser.

When a bowhunter finally gets time to hit the woods, especially deep in the backcountry, the last thing he or she wants is a mechanical issue ruining the hunt. Mathews designed the S.A.S. to make sure that doesn't happen. Two posts on each cam — one set closest to the string and the other closest to the cables — work with the S.A.S. "flo-orage" servicing cable to allow you to reduce the bow tension enough to do string and cable work, if needed.

Bridging

Mathews' Bridged Riser design is central to the V3X system. Six front-to-back cutouts create the bridging, which is advertised to improve strength while reducing mass weight. Also structurally notable is the riser length relative to the axle-to-axle length.

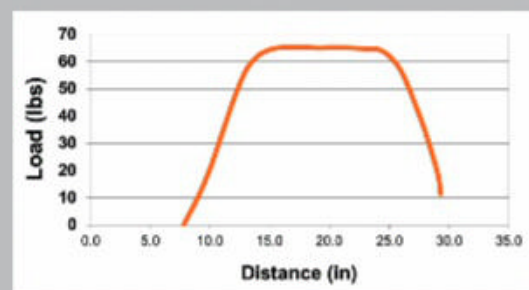
Mathews' testing points to the riser length — not axle-to-axle length — as the most critical to creating stability and better aiming. Further promoting alignment and balance is a dovetail mount machined directly into the riser behind the shelf area to accommodate Integrate Rest Technology.

Mathews' Centerguard Cable Containment System angles down from above the rest mount and places the rollers directly in line with the rest-mounting hole in the center of the bow. This positioning equalizes the cable angle coming off the top and bottom

SPEED & ENERGY

	375-GRAIN ARROW	425-GRAIN ARROW
ARROW SPEED	305 fps	287 fps
KINETIC ENERGY	77.48 ft./lbs.	77.75 ft./lbs.
DYNAMIC EFFICIENCY	85.2%	85.5%
SHOT NOISE	91.4 dBA	90.7 dBA

DRAW-FORCE CURVE



EDITOR'S NOTE:

All of our Bow Tests are conducted using the same standardized procedures and professionally calibrated testing equipment. Bows are tested with a draw length of 29 inches and a draw weight of 65 pounds, unless otherwise noted.

cams and causes the cam mods to hit the cables at the same time for perfect timing and added vane clearance.

3D Damping Technology is designed to reduce vibration in three axes from the point of the grip. Mathews' testing showed that maximizing the distance of its Harmonic Stabilizer from the grip in all three axes produces the best results. The Nano 740 Harmonic Damper is specifically designed to quell post-shot vibration and noise; the extended position of the damper also adds balance at full draw.

Mathews' Engage Grip is designed to produce a neutral wrist position, while the three-quarter molded composite material promotes warmth and comfort. The Engage angle, size and

contour encourage consistent positioning and pressure without torque.

Power

Mathews powers the V3X with its Crosscentric Cam that essentially has two personalities — the more rounded, circular side creates a smooth draw and easy tuning, while the aggressive side generates speed. Advanced Vectoring System (AVS) Technology increases efficiency as it stores energy on the front end and increases letoff on the back end. A set of heavily pre-loaded split limbs, made with Gordon Composites materials, is selected by base draw weight and can be adjusted with the limb bolts. However, Mathews' unique SwitchWeight Technology allows the shooter to select peak draw weight in 5-pound increments through the module. Not only the draw weight, but letoffs of 80 or 85 percent and draw lengths from 25.5-30 inches, in half-inch increments, are all mod-specific.

The V3X 29 has an advertised IBO speed rating of 340 fps on a 6-inch brace height. Tophat shims working with Zero-T (zero tolerance) axles allow for custom tuning, and the Silent Connect System (SCS) is attached directly to the pockets and provides a unique and silent attachment fixture for the company's new bow rope and bow sling.

Impressions

Outside the typical performance assessments, I would be remiss if I did not mention the "X Factor" the V3X brings, thanks to the integrated platform. I'm not sure how to explain it other than to say it feels as though you are shooting a bare bow even though it is loaded with accessories. The additional components just feel like a part of the bow itself and function as a single unit.

There is nearly zero hand shock or vibration, the shot is notably quiet and the draw is without aggressive changes from start to the solid back wall. Balance is excellent, and follow-through is slow and easy. **B**

ONCE IN A



IT WAS A LONG STALK — more than two miles — and had it not been for some landmarks I'd photographed with my smartphone, the entire operation would have been a bust.

The trunk of the weathered pine was easily distinguishable — the bark was peeled, and the needles were gone. Years of gusty winds had taken their toll, and the battered tree leaned hard to the right, making it easy to pick out against the rocky landscape. The band of nine rams would be on the craggy shelf below. I wasn't sure how far, exactly, but I'd put myself in a good spot. My radio hadn't crackled during my approach, which meant my buddies glued to their spotting scopes didn't have any news to report.

Cautiously, I crawled out onto the ledge and let my Leupolds dissect the terrain below. I caught a glimpse of a horn behind a tall patch of yellow grass and then heard the unmistakable sound of hooves on rock. One of the smaller rams had walked up a shale-covered chute on the mountain slope, leaped upon a large boulder and bedded. It was a breathtaking sight.

It was a long wait. Several times, over an hour, I caught glimpses of horn and hide, but aside from the boulder napper, I couldn't make out much. Then, the young ram stood, glanced below and gracefully made his way off the big rock. When he did, other band members started to appear like ghosts. I could feel my heart thunder in my chest, and my hand tightened on my bow's grip.

The rangefinder read a tick over 64 yards, but it looked farther. The angle was steep, and the ledge I was balancing on was thin. I knew four of my friends — guys who had taken time out of their lives to help me achieve a life goal — could see me through their glass, and I didn't want to let them down.

The biggest ram in the bunch, "my" ram, led the group across the mountainside. When he stopped, I drew my bow, bent at the waist and prepared to take the shot of a lifetime.

A Little History

Prior to May 2021, I figured sheep tags didn't exist. I'd been faithful. Every April for 19 years, I'd paid my fees to Colorado Parks and Wildlife, and every year was the same. When the state's Rocky Mountain Bighorn draw was completed, the dice always gave me snake eyes.

MAKE

RIGHT: The ram author Jace Bauserman would ultimately shoot was photographed from more than half a mile away by using a Swarovski spotting scope and a Phone Skope attachment.

BELOW: The Colorado unit Bauserman hunted is known for rams with great mass. His trophy was 8.5 years old and sported bases that measured more than 16 inches in circumference.



**AFTER 19 YEARS OF WAITING,
A BOWHUNTER'S BIGHORN
DREAM COMES TRUE**

By **JACE BAUSERMAN**



ONCE IN A LIFETIME



Bighorn sheep are among the most majestic animals in all of nature, and the author felt privileged to watch and photograph rams such as these in the Colorado high country.

I remember laughing to myself when my 2021 sheep draw results came to my email. I'd just read my "we thank you for participating in the annual mountain goat draw. However, you were unsuccessful" letter. I expected my sheep result to be the same, but it wasn't.

After opening the email, confetti jumped on my Macbook's screen, which I took as a good thing. After reading the letter three times to ensure I wasn't dreaming, I let out a schoolgirl scream and dashed out of my office. My wife was thrilled, and she said, "I guess we won't make any plans for August." Dang, I love that woman! Next, I called anyone who would listen, and even if they wouldn't, I still called.

The Hunt Begins

When you draw a coveted tag, I believe the hunt starts the day you find out you were successful. There is no shortage of planning, physical preparation and scrutinizing your gear. Fortunately for me, my good friend and wild sheep guru, Graften Singer, knew the unit like the back of his hand. Graften also knew Connor Clark, who had the late-season archery tag in the unit the year before, and after some phone time, Connor agreed to lend a hand.

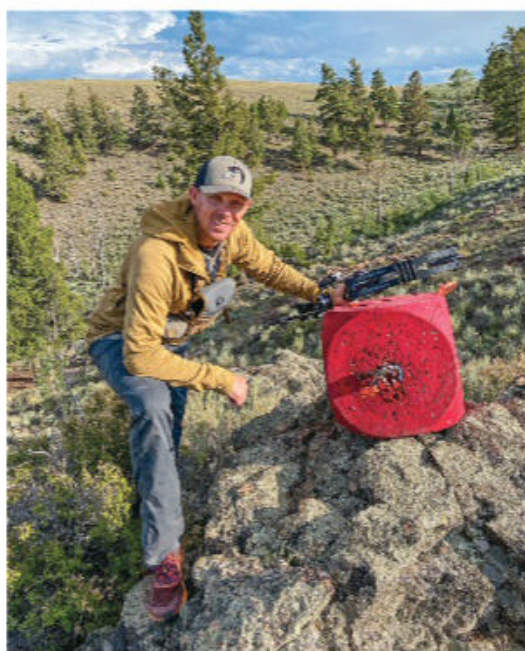
My first scouting trip was in late June. Graften couldn't join me, as summertime at his auto repair shop is super busy. I spent the first evening glassing from a location he'd marked on a map for me. No sheep were spotted. The

following day was the same; beautiful country but no sheep. I started to panic.

I drove into town to meet with Connor during midday, and he was eager to help. That evening, we split up. It didn't seem real when I first saw them. Their horns glowed in the afternoon sun, and their gray hides popped against the green backdrop. There were 21 rams in total, and I scrambled to snap photos of the band with my Phone Skope and pin their locale on my HuntStand app.

After an hour, the group disappeared over a ridge. I was repositioning my spotter to scan a different mountain slope when I heard it — the sound of a revving engine coming up the less-than-friendly two-track. It was Connor, and he was flying. I'm positive the front wheels of his gold Tacoma came off the ground more than once. The guy is a nut, and we became instant friends.

Like me, Connor is super intense, and when he pulled up next to my glassing spot, he smiled and asked, "Do you have sheep?" His stare was direct, and I could tell he wanted an immediate answer. I explained I'd glassed a good band of rams and showed him where the group had gone on my map. Then he said, "Super, we got to go; I got five good rams I want to show you." I've never driven down a mountain so quickly, and I'm confident the Jeep Graften had loaned me will never be the same. Thank goodness he's a solid mechanic!



Looking back, those were my favorite times of the hunt — the days spent on the mountain with my friends, wife and kids. It was boiling water in the MSR WindBurner, and nights spent on the ground and in the camper. It was learning the landscape and living with the sheep — being privileged to watch one of the most magnificent animals created for 19 days. It was a blessing, and I can testify there's nothing quite like sheep hunting.

Go Time!

We'd named the spot Home Tree. It was the location we scouted from the most, and from the top of this locale, we could see multiple sheep haunts. Oddly enough, on opening morning, I wasn't there. My dad, buddy Jason, another friend named Lane and Connor were, but Graften and I were in a mobile position, waiting for the radio to crackle.

It's a weird feeling — a sheep tag in your pocket, twiddling your thumbs, waiting for someone to tell you to make a move. However, it was the most intelligent way to hunt the area. Around 9 a.m., the radio buzzed. Lane had glassed up some sheep — at least one shooter — further down the canyon. The wind was right, and he had eyes on them. It was time to make a move.

The single shooter and eight smaller rams were in a great spot. The band was napping in a gnarled draw high in the rocks. The climb would be steep, and the approach needed to be perfect, but we had a good shot with Lane giving hand signals.

After a challenging ascent, I was 20 yards from a large ram. This was the closest I'd ever been to a live bighorn, and the butterflies were fluttering in my stomach. I had trouble

pulling the arrow from my quiver. I had the shakes, and I had them bad. The ram was bedded, facing dead away, and Graften and I were sizing him up, making sure he was one I wanted to take. Then, the rocks exploded. Sheep were scrambling this way and that. A young ram bedded below and to our right had stood, picked us off and the game was over. One sheep stopped at 37 yards, but he wasn't what I'd waited 19 years for, and I quickly let the bow down.

We were all smiles. Sure, we got busted, but we made a perfect stalk and got within easy bow range. Lane radioed that the sheep had gone up an adjacent canyon as we were coming down, so we put rubber to the rocks and quickly descended.

Graften had them in his glass right away. The sky was milky gray, and rain dotted his lenses, but the group was in a good position for another approach. The sheep were feeding toward an isolated patch of timber. If I could loop around and get there first, I felt confident an Easton would get cut loose.

I got to the timber quickly, but hand signals from Graften told me to press forward. The sheep had bedded in a small drainage just shy of the timber. I wasn't sure exactly where they were, and by the time I was in position, rain was falling so hard I couldn't make out Graften's hand signals. I ended up spooking the herd. They were only 30 yards below me, but I couldn't pinpoint them without standing, and when I did, they blew out. However, making two stalks on day one was considered a win by the entire group.

The following morning, one of my best friends and one of the best hunters I know, Jason Weaver, along with Connor, glassed up a band of 23 rams. The boys were making

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When it came to crunch time, the author's physical and mental preparation took over, and he was able to put an Easton 4mm Axis arrow straight through the lungs of a 170-plus-inch ram. Bauserman's support crew (below, right) deserves much of the credit for this successful hunt. Pictured here, from left, are Bridger Singer, Connor Clark, Bauserman, Grafton Singer and Jason Weaver.

their way up a broad canyon just below Home Tree. With the wind and morning thermals moving down the canyon, I had to make my approach from below. It was tricky, but after an hour of slipping along the rocks and one false summit, I was right on top of them.

Two of the 23 rams were in range — broadside and up feeding. They were half curls, but I could see the horns of the big boys inching over patches of the silver-tipped sage only 50 yards away. It was a magnificent sight, but that's all it was.

Over 30 minutes, I came to full draw twice. Once on a mature ram with gagger bases but not much length. The other was on a giant that stepped behind a lesser ram as I settled my pin on his side. The wind shifted while I was at full draw, and once again, dirt and rocks flew as the herd scrambled up the hillside.

I spent that night replaying that stalk. I'd done everything right. My only question was whether I should have cut carbon loose on the mature ram. Hindsight is always 20/20, and the more I replayed the situation, the worse I felt. I had friends helping me — friends who took time off work and away from their families — and I was passing rams. The "what-if" thoughts haunted me that night.

The morning of day three was uneventful. We found sheep, but the deck was stacked against us. Mother Nature



was in a foul mood from the get-go. We spent the morning and early afternoon glassing, eating Mountain House meals and watching gnarly thunderstorms roll over the mountains.

Around 1 p.m., Weaver went to town to grab food and gas, and Grafton and his brother, Bridger, who had joined the hunting party, followed. As for Connor and I, we did what any exhausted sheep hunters would do during a lightning storm. We laid down, said a prayer and hoped for the best.

Grafton and Bridger weren't gone long, but we couldn't raise Jason on his cell phone or the radio. We figured he was in town having a burger or grabbing a nap. We were wrong. He'd taken a drive up the canyon before returning to Home Tree, and he found sheep. His radio message was

scrambled, but we got its gist, and we were off again with renewed hope.

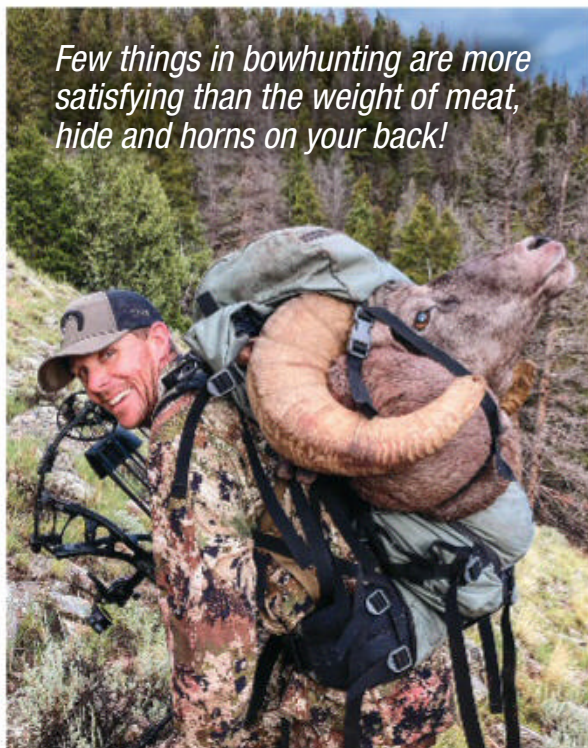
It turned out to be nine rams, and they were not the rams from day one. This band had three shooters — a legend Connor had named Jack the year before and two other studs. They were bedded at the top of a rocky canyon, under a big overhang. I would have to make a two-mile trek to loop around them, but they were in a good spot, and with the guys glued to their spotters and radios in their hands, I knew they'd tell me if something went awry.

So, here we are, back where the story started. I was seconds away from pulling back the string on my Hoyt Carbon RX-4, settling my pin and executing a shot I'd dreamt about for 19 years. I'm not much for heights, and when I peered over the ledge, my stomach got queasy. One wrong move would be a terrible fall to the rocky chutes below.

Some bowhunters seem to black out during the moment of truth — not remembering much — and I've had it happen. Not this time. I remember closing my eyes, saying a prayer and thinking about all the time and effort so many had put into this hunt. When my hinge release broke and the bowstring leapt forward, I knew the pin was floating on the ram's side. The hit sounded solid.

Instantly, I jumped back from the ledge and grabbed

Few things in bowhunting are more satisfying than the weight of meat, hide and horns on your back!



my binos. At that moment, the entire group of rams huddled together and ran 50 yards down the mountain into a field of shale rock. Then, eight of the sheep continued on their way. My ram stood still for a moment, and then his hind end buckled. He stumbled backwards a few steps and flipped over.

Adrenaline mixed with emotion I couldn't suppress shot through my body. Tears filled my eyes, and I was shaking uncontrollably. The whoops and hoorahs from across the canyon floated over, making the moment sweeter. All the hard work and sacrifice came down to one moment, and by the grace of God, I was able to keep it together and execute.

I spent more than 30 minutes with my ram before the crew could cross the creek and make the steep climb. It was time well spent. I held his heavy horns in my hands, stroked his sleek, gray coat and thanked the Creator for the moment. A lifetime dream had been achieved, and it will be forever burned into my brain.

That night was unforgettable — hugs and high fives, tears and laughter. We took our time, each one of us savoring the moment in our own way. I couldn't have asked for a better crew, a better adventure or a better ending to this story.

My advice to all of you is this: keep filling out those applications. Dreams do in fact come true! **B**

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A BUCK FOR PAPA DAVE

BY CLINT CASPER | FOREWARD BY CURT GEIER

GRIEF, JOY & CLOSURE IN THE WYOMING HIGH COUNTRY

Losing my father David Geier on April 11, 2021, turned my life upside down. Growing up, he was my best friend and hunting partner. Every hunting season of my life involved Dad in many ways, whether he was along with me or the first person I called after every hunt to share stories or discuss game plans. I knew heading into the fall 2021 seasons that it was going to be a very emotional time for me, but I found comfort in knowing that every time I went into the outdoors, Dad would be with me and help me through the tough times I knew I'd encounter.

My Wyoming mule deer hunt was a particular challenge, both physically due to the tough terrain and mentally because the hunt dates fell right over Dad's birthday on Sept. 3 and my birthday on Sept. 6. I dedicated this hunt to Dad, and that weighed very heavily upon me going into the already difficult hunt. I carried some of his ashes in my pack to spread on the mountain. Dad lived and breathed everything outdoors, and I know he would have loved the thought of being with me in the backcountry and honoring him in this way.

On this hunt, I was also fortunate to have the companionship and assistance of two great friends who share my passion for bowhunting — Clint Casper and Devin Leonard. They were by my side every step of the way. They pushed me to overcome all the obstacles, physically and mentally, and I know they could see me processing certain thoughts and emotions during this hunt. We formed hunting strategies, talked about life and family, discussed the future and shared our hopes of punching my tag "for Papa Dave."

— Curt Geier



Illinois bowhunter Curt Geier glasses for mule deer during his September 2021 hunt in the Wyoming high country.

A BUCK FOR PAPA DAVE



After packing into their hunting area the day before the season opened, Geier, Clint Casper and Devin Leonard set up camp and began the search for mature mule deer bucks.

A Plan Is Born

When I saw Curt Geier's name pop up on my phone, I had no idea of the significance this call would hold. Curt and I talk almost daily, so to me it was just another call from a best friend, but that couldn't have been further from the truth. As I answered, I could hear the excitement in Curt's voice, and before I ever got the chance to say anything, Curt shouted, "Clint, I drew the tag! We are going to Wyoming for Papa Dave."

Of course, I was elated my buddy had drawn this tag, but I was a bit confused when he said "we" were doing the hunt. Before I could ask about that, Curt said, "Clint, this is a hunt for Papa Dave over his birthday and mine. I want you to be there with me!"

Flabbergasted and speechless, I just stood there in shock! Knowing what this hunt would mean to Curt, I just couldn't believe he wanted *me* to be by his side for the journey! What an honor. "Yes buddy, I wouldn't miss it for the world!" I told him. Curt also invited another of our mutual best friends, Devin Leonard, who is a mule-deer bowhunting legend. With the three of us committed to the trip, I couldn't think of a better way to celebrate the life of Papa Dave.

Tough Times & Tough People

Curt is an Illinois whitetail guy, and prior to this hunt, he had never hunted the high country. Needless to say, he was in for a challenge when it came to the physical demands of this trip! There is nothing easy, or given, to a bowhunter when chasing high-country muleys. Everything you do, from the time you get up in the morning until the time you collapse in your tent at night, is a physically demanding task. High elevations, thin air, intense hiking and climbing and a lot of glassing for animals can be physically and mentally draining, especially for those not accustomed to this type of hunt.

I knew Curt would be as prepared as he could be, but I also knew this would be the hardest hunt he'd ever been on. However, with some extra motivation from Papa Dave, I knew Curt would be up to the task! From the start of this hunt to the finish, I watched Curt ride the struggle bus but never give up. That is something I will forever be proud of him for, because the struggles led Curt to success!

Our hunt plan was to pack ourselves and all our gear to the top of the mountain the day before the season opener. From there, the three of us would set up camp together and start glassing for deer in hopes of locating a good buck for the next morning. If we didn't find a buck we wanted to hunt in a day or so, then we would move to a new location and start over.

Right off the bat, I could tell the elevation and steep terrain would be a tough test for Curt. The altitude was definitely affecting his ability to hike, and that was hard for Curt to accept. Bowhunting at 10,000-11,000 feet is no walk in the park, and Curt was quickly learning just how difficult life up here would be for the next week. Despite the challenge, Devin and I had no doubt Curt would eventually get his opportunity.

The first night we located a group of bucks not far from camp, and within that group were two really good velvet bucks! Curt was extremely excited, not only because of the bucks but because we wouldn't have to hike extremely far to get to these deer the next day. Our plan was to ease Curt into a few stalks and really let him get acquainted with the high elevation and steepness of the area.

The next morning found the three of us on the glassing knob, looking for the two bucks, but neither of them could be found. As the morning progressed, we decided to split up and look at a few other areas. I was going to head east, while Devin and Curt headed west. Not long after I got to my vantage point to glass, I received a text saying they'd found a great buck in a good spot! Quickly, I headed toward Curt and Devin. Devin and I drew up a solid game plan and sent Curt in on the stalk, as the buck was bedded down with another, smaller buck. This would be Curt's first stalk on the trip.

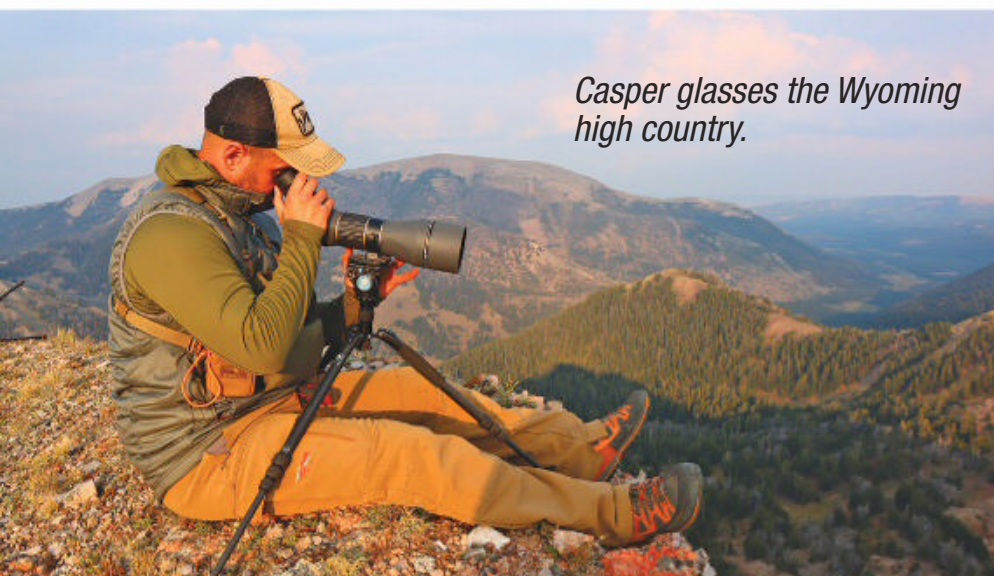
Step by step, we watched Curt work his way down a rock chute and slither into the timber, dropping in on this buck from above. Like a ninja, Curt found himself within 75 yards of the buck and was now in position to shoot once the buck stood up! Unfortunately, this buck ended up getting a drift of thermals and winding Curt; so close, but no cigar! Watching Curt slowly climb back up out of that canyon and seeing the exhaustion and fatigue set in, Devin and I knew the altitude was really taking a toll, as it usually does on most who haven't hunted high-country bucks before.



Devin Leonard glasses the Wyoming high country for muley bucks. Leonard and author Clint Casper hiked up a steep ridge and located several mature bucks in a remote basin where Geier was able to make a successful stalk the following day.

The Stalk of Ten Lifetimes

After meeting back up with Curt, Devin and I decided it would be best if Curt glassed from camp that afternoon and evening to rest up a bit. On a hunt such as this, pushing too hard right off the bat can be extremely dangerous and really sets you up for failure. Devin and I were going to hike up to the top of a huge ridgeline due east of camp and glass a hidden basin on the back side. Knowing this was a huge climb, we wanted to make sure it would be worth Curt's going up there the next day. So, we opted to check it out first, and were we ever glad we did — what a beautiful basin, with a great group of bucks living in it! The stage was now set, and as Devin and I hiked back to camp that night, we knew this huge climb would pay off in a big way for Curt, if he could make it to the top.



Casper glasses the Wyoming high country.

Once at camp, we told Curt what we had found and showed him some videos of the bucks. Before we could even suggest anything to him, he looked us both in the eyes and said, "I know that's a huge climb and will dang near kill me, but I'm going up there and killing a buck for Dad tomorrow afternoon."

We agreed this would be Curt's best bet to kill a good buck. So, we decided Curt and I would go up the next evening, while Devin would watch the other side of the ridge due west.

The next morning, we again found a few bucks from camp and Curt actually had a close call with a freshly rubbed buck just out of velvet. We ate a late breakfast and decided we would start our climb up the ridge in the middle of the afternoon so Curt would have plenty of time to get there before evening came and the bucks started feeding out into the open. Slowly but surely, I watched as Curt made his way up the huge face, headed towards the top. I could see his grit and determination with every step, as Curt knew he had to dig deep and make it up! Finally, we reached the top, and I got Curt into position for our evening sit.

My plan was to have Curt down in the basin where the bucks had fed the night before. I would watch from above with my spotting scope. If need be, I could use hand signals to direct Curt toward a buck he may not be able to see. I felt our plan was really good, based off the weather and wind conditions and from the knowledge I'd gained the night before. Like clockwork, about an hour before dark, I spotted the group of bucks right below me, heading toward Curt! Curt was able to see the bucks too, and I saw him slide his

A large advertisement for Tinck's 50th Anniversary. The background is a solid red color. In the upper right, a bottle of beer is shown pouring a golden liquid. A circular seal on the bottle reads "CELEBRATING Tinck's 50th ANNIVERSARY". In the lower right, a deer with large antlers is shown. In the lower left, a hunter in camouflage gear is shown. The text "America's LIQUID LOVE FOR 50 YEARS" is prominently displayed in the center. The Tinck's logo and website "TINCK.COM" are at the bottom.

A BUCK FOR PAPA DAVE

boots off, preparing for the stalk. The moment filled me with excitement, because I knew this might really happen!

I watched anxiously through my spotter as the stalk went down and Curt made his way toward the bucks. He was angling steeply downhill as the bucks were feeding below him, left to right, but at a fast pace. Truthfully, I didn't know whether Curt would get there before the bucks passed by, but lo and behold, a few minutes later I watched as Curt prepared for a shot. I'll never forget the hair standing up on my arms and the nervousness in my body as Curt drew his bow and settled in at anchor. I knew the struggles he had faced and the pressure he felt, wanting to kill a buck so bad for his dad.

Now, it all came down to this! As if in slow motion, I watched Curt's shot break and his lighted nock take flight. The arrow sailed through the air and hit the buck hard. Immediately the buck hit the ground and rolled, and my emotions flowed. I couldn't stop screaming and yelling as tears of joy rolled from my eyes.

Moments later, I received a message on my Garmin InReach; it was Devin. He'd heard me shouting for joy from over a mile away! Quickly, I messaged him to meet up so we could head down to Curt and his buck.

Packing Out with Papa Dave

Devin and I will never forget meeting up and making our way down the canyon to Curt and his deer. The raw emotion was like nothing else I've ever experienced. Devin



Geier's success on this trip would have been impossible without the assistance of good friends Devin Leonard, middle, and Clint Casper, right.

and I were speechless; we'd just watched one of our best friends conquer the mountain and complete a mission in memory of his dad, the evening before his dad's birthday!

With light fading fast, we quickly took pictures and started quartering the buck to prepare for the pack out. Working into the night, we could tell a storm was rolling in. A sky that was once full of stars was now black and filled with bolts of lightning. We needed to take cover quickly! Suddenly, hail started falling as the three of us ducked into some nearby pines and used our packs to shield us from the hail. Only minutes later, the storm stopped and the

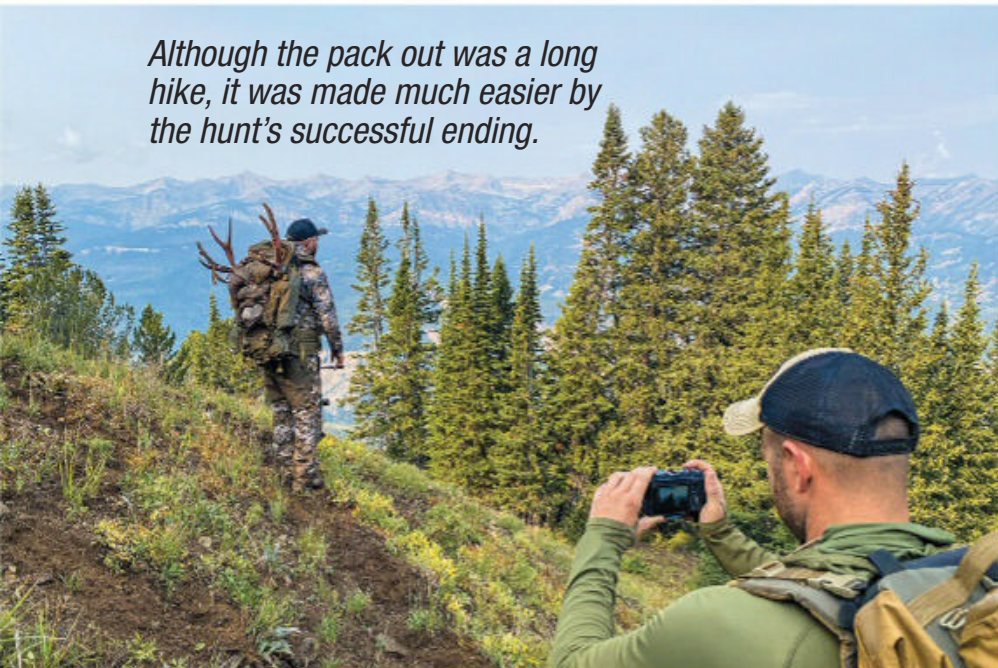


After a grueling climb to a ridgetop deep in the Wyoming wilderness, Geier made a successful stalk on a group of muley bucks and tagged this trophy in memory of his father, David Geier.

stars reappeared in the sky. Shocked at our good fortune, we all were speechless until Devin said, "Look at the time!" It was just after midnight; Papa Dave's birthday was upon us. Papa Dave was letting us know he was right there with us in that very moment!

Just before we left the site of Curt's kill and started our long journey up the steep mountain, Curt gathered us together and we stuck his arrow with the lighted nock into the ground. He then opened up a small container with some of Papa Dave's ashes, and we took turns spreading them where Curt's buck had fallen. This is a moment I will never forget — three friends shared one goal to honor a great man, and we accomplished it all together. We got a buck for Papa Dave. **B**

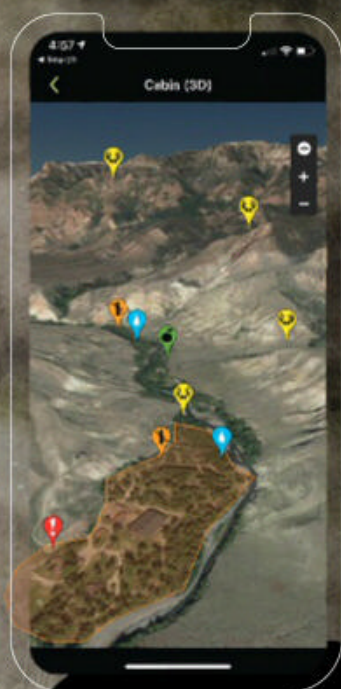
Although the pack out was a long hike, it was made much easier by the hunt's successful ending.



DAVID "PAPA DAVE" GEIER: 9/3/1959-4/11/2021

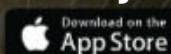
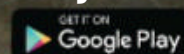
David Geier, widely known as "Papa Dave" to Working Class Bowhunter podcast listeners, shot this giant, main-frame 8-pointer in 2004 in Central Illinois. The buck gained popularity through the podcast and eventually became known as the "Papa Dave Buck." Old Barn Taxidermy has since made two replicas of the rack that tour around the country to events where the Working Class Bowhunter crew appears. The amazing, heavy framed buck netted 183 1/8 inches.

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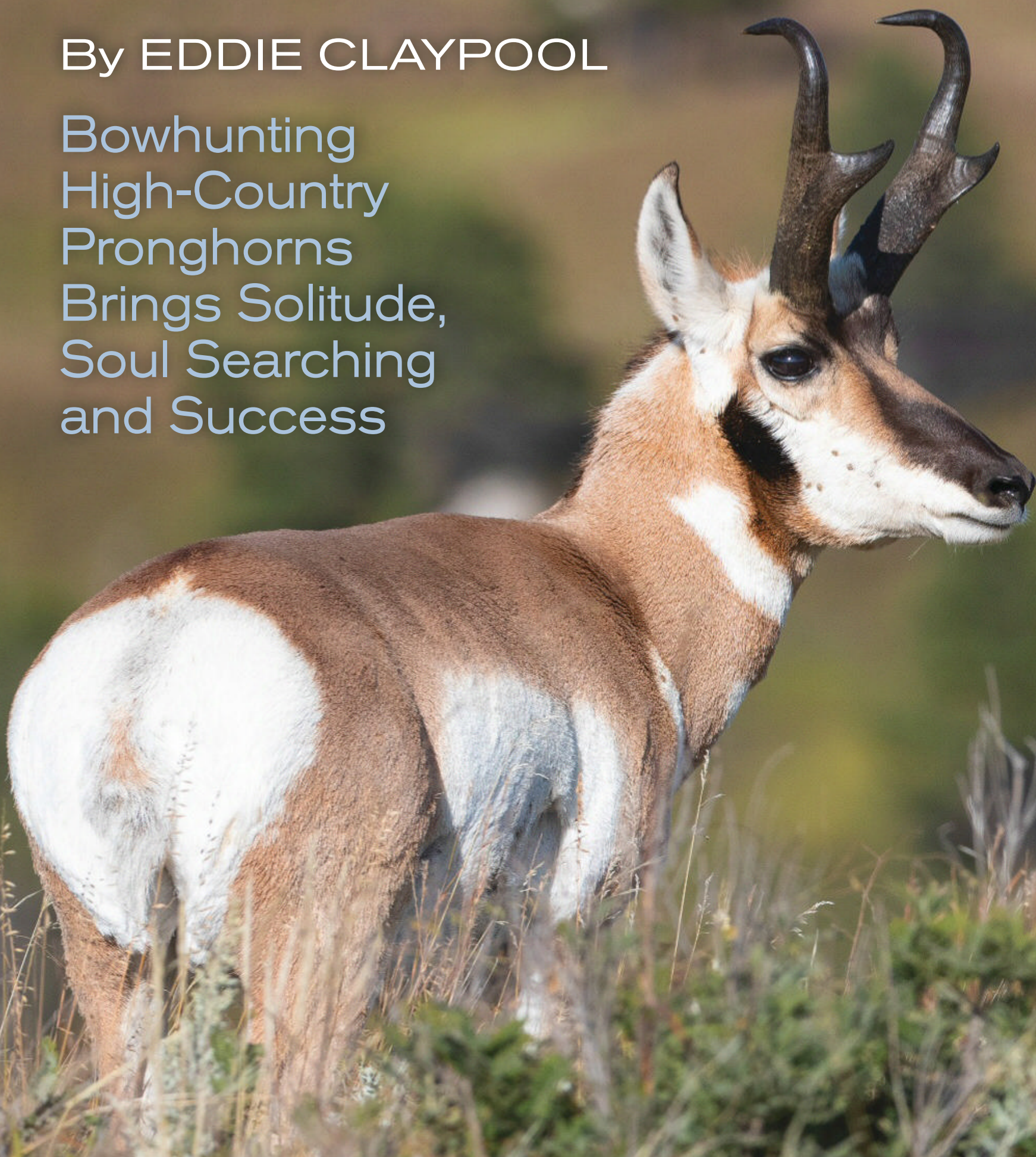
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HUNTING

By EDDIE CLAYPOOL

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T THE HIGH LONESOME I I N G

AS WE BUMPED slowly down the rugged, two-track road, the Claypools seemed to share different outlooks. Peg and our dog, Lulu, clearly weren't very happy about their leader's choice of routes, while I simply smiled and enjoyed the ever-changing views of new, exciting country. The road that I'd chosen to get to our old campsite this year was one of my famous "shortcuts" that usually ended in some pain and suffering. But since I have always pursued a life that willingly embraces physical sacrifice, I welcomed the rough drive. The reward — pristine habitat, great views and no people — was well worth the jostling.

For almost 10 years, this outing to Idaho had been dear to my heart. Originally, it had been an elk-hunting trip, and it had rewarded us with lots of red meat and some nice racks. Slowly, however, the focus of the outing had shifted from elk to pronghorns. There were a couple of

reasons for this. First, I was getting older and the blood, sweat and tears involved in bowhunting backcountry elk — after 40 years of doing so — had slowly started to lose its luster. Second, a new and intriguing resource had reared its beautiful head: high-country pronghorns.

PHOTO: DONALD M. JONES.COM

HUNTING THE HIGH LONESOME

For most of my bowhunting life, I'd roamed the wildest, roughest country the West had to offer, always pursuing mule deer and elk (elk were my passion). In all of my western ramblings, I'd never really been interested in pronghorns, owing that mainly to the barren, hot country they inhabited. But, here in Idaho, I'd discovered "goats" that roamed up to 9,000 feet in elevation. They ran the same high, lonesome ridges that mule deer and elk ran. It was cool up there, and the views were breathtaking. Plus, other pronghorn hunters rarely ventured into this habitat, because the numbers were scarce — exactly my kind of game. So, as we cut a few miles off our normal approach route, the family did its best to endure another of ole Ed's shortcuts, most likely a one-time experiment.

When the dust, ruts and whining and complaining finally ended, we pulled onto a familiar spit of grass and sagebrush that instantly brought a homey feeling. We'd camped on this exact spot for many years, and we were very comfortable with the area. This



would be our home for the next week or two, depending on the fate of the hunt. I'd have a week to scout and prepare before the season opened and, if things went well, there might be only a day or two of actual hunting involved. If that were the case, there'd also be time for some fishing and sightseeing.

If the pronghorns got the best of me, like they had numerous times before, then I'd pursue filling my tag for up to a week. If my paper remained unpunched much longer than that, I

knew I'd find myself losing interest in the long hours spent waiting in ambush. The desire to roam and explore would get the best of me and I'd come out of hiding, opting instead for broad views and physical activity. Whatever fate lay ahead, it was simply good to be away from civilization for a few weeks. We were definitely blessed!

SOAKING IT ALL IN

As the evening of our first day in-country settled over our camp, the

Idaho's high country offers a challenging yet exhilarating pronghorn-hunting experience for bowhunters willing to put in the work. The sagebrush basins and ridges — also home to deer and elk — are among Field Editor Eddie Claypool's favorite places to hunt.



STOPPING TO SMELL THE ROSES

Between scouting for my hunt, and occasionally taking Peg and Lulu to the creek for a little fishing, we were living life to its fullest. Peace and quiet, with peace of mind, were what we were all about nowadays. For far too long, my hunting trips had been about filled tags and big antlers. That stage of my life had lasted for more than four decades and I was secretly glad I was finally putting it behind me. The ego was satisfied, gone; the thrill of big antlers fading. Horizons were now broader and my heart fuller.

chill of the nearby high country spilled into the high desert. When the sun set behind the western peaks, I grabbed some firewood and soon a calming fire crackled before us. A few wieners were roasted (Lulu's favorite part of every trip) and Peg and I soon stuffed our pieholes with Coneys and cold sodas.

A small stream trickled nearby, pleasantly interrupting the overpowering quietness of the setting. We had conversation, interspersed with long periods of quiet reflection, and as we viewed each other in the flickering light, our hearts were filled with love and appreciation.

Hitting the ground running the next morning, I headed for some of my high-country haunts. Though fairly devoid of pronghorns, these remote basins always held a few old males. Throw in some adolescents and a couple of groups of 3 or 4 does here and there and you had the sum total of the pronghorn resource these high basins held. Actually, I often saw more elk or deer than pronghorns, and that was completely OK with me — I simply loved being in this pristine habitat just below the timberline.

With days spent afield, and early mornings and late evenings spent with my girls, time flew quickly. Peg was immensely happy to have me out of her hair for most of the day, while Lulu seemed to be content in her camp life. My heart went out to my dog — and me — because of her inability to follow me around all day anymore. She was 14 now, and her days were winding down; I simply couldn't bring myself to dwell on the matter. But, as of now, it was great to have my mate, and my best friend, meet me at my truck door every evening as I returned from a hard day of scouting. This was, and is, what makes life worthwhile.

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HUNTING THE HIGH LONESOME



After several days of scouting, Claypool took this pronghorn buck on his first day of hunting, creating memories and a supply of palate-pleasing meat.

The golden years had come early for me. Then again, as I realized that I'd spent a disproportionate amount of time chasing trophies, it didn't surprise me that my focus had started changing drastically by my mid-50s. Now, at 63, I was firmly entrenched in the stop-and-smell-the-roses stage of my outdoor life. It was a bittersweet time; I was stuck between the bow-hunting fanatic I had been and the take-it-as-it-comes individual I was becoming. And though I found myself occasionally flipping between both lifestyles, I was running headlong into a much softer, gentler side of life. I didn't know whether to laugh or cry.

THE BADGER & THE BUCK

Opening morning of the pronghorn archery season found me tucked into a natural brush blind I'd erected near a small seep in a huge sagebrush basin. I already knew a few pronghorns occasionally visited this little wet spot for a drink, and I hoped to be at the right spot at the right time. As the morning progressed, a group of 10 cow and calf elk made their way to the spring. And, as I reveled in this close encounter with one of nature's most awesome animals, a badger sent the elk scattering. The de-

fiant cuss seemed to direct his ire at one of the much larger elk, and I smiled as I thought about an old adage: It's not the size of the dog in the fight; it's the size of the fight in the dog!

Clearly, this stocky, furry little bundle of bad attitude ruled this lofty realm; even the adult cows cowered from him. The dust soon cleared and all involved were gone. Settling back into the high lonesome, only the sound of the wind remained testament to this beautiful, mountain wilderness.

Grabbing my sandwich around midday, I was quietly munching away as a nice pronghorn buck cleared the horizon about 100 yards away. Instantly on full alert, I stuffed the sandwich aside, grabbed my bow and assumed the position. On first glance, I knew the buck would suit me, so I prepared to harvest meat.

After surveying the area for a long while, the goat finally decided to get a drink and approached in a hurry. As he walked up to the seep, I came to full draw and waited for him to lower his head to drink. But, just as he started to drink — and just as I settled my sight pin on my spot — the pronghorn blasted out of the area.

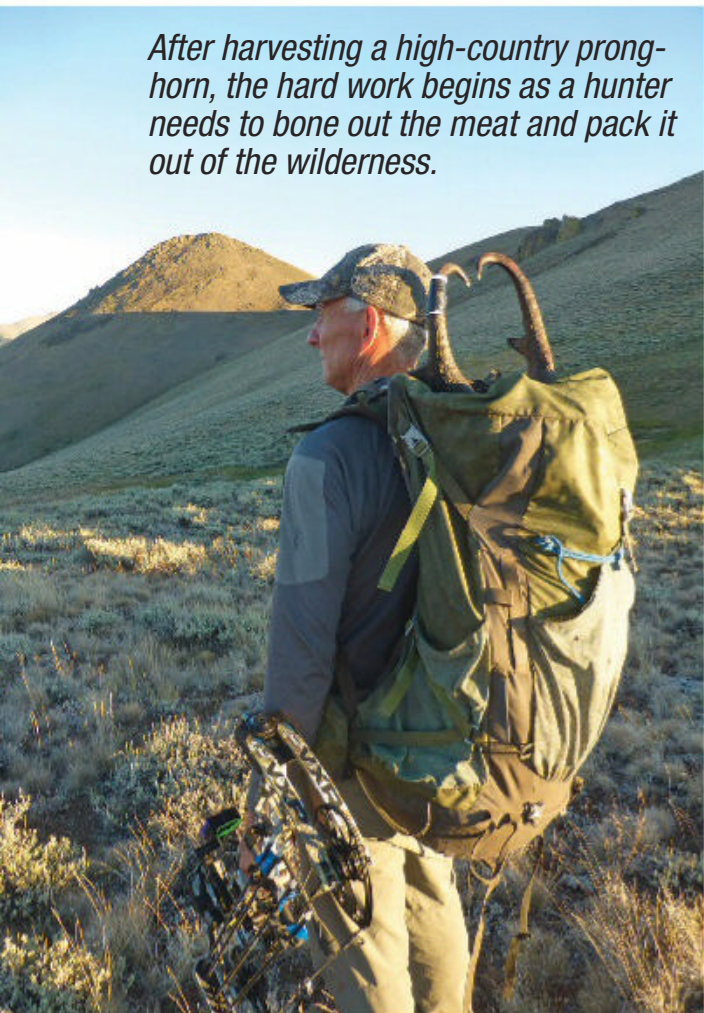
What had happened?

Coming down from full draw, I removed the arrow and lay my bow aside. Moving toward the front of the blind, I cautiously peered out the window, slowly surveying an increasingly larger amount of the surrounding area. The buck that had been right in front of me only seconds earlier was now standing about 100 yards away staring intently at something.

As I shifted my gaze in the direction he was looking, I could hardly believe what I saw — that danged badger was coming back again! What was the deal with this guy? Was the badger *guarding* this water source? Was every animal in the area afraid of him? Was this scenario going to be repeated every time an animal came in for a drink? I started to wonder what I'd gotten myself into and settled back to watch the proceedings.

The badger made his way to the water hole, took a quick drink and departed. OK, so what next? Peering out a crack in a side window of my blind, I awaited the response of the pronghorn. Soon, the buck began to make his way back down in my direction, moving very slowly. Within 10 minutes, he was standing 30 yards from the seep, clearly desiring a drink. By this time, I was back on full alert, bow in hand. Not sure what was going to happen, I vowed to take a shot just as soon as one presented itself — no more waiting for the pronghorn to drink.

After harvesting a high-country pronghorn, the hard work begins as a hunter needs to bone out the meat and pack it out of the wilderness.



The buck soon inched closer and offered a broadside view at 25 yards. A few seconds later, I watched as the pronghorn sprinted out of sight, soon to expire. I'd made a perfect shot, and the rest was old hat. This high, lonesome place now seemed a little bit lonelier.

REFLECTING ON IT ALL

As I sat inside my hide, I wondered whether the carnage would ever end. Would I ever quit killing? I didn't think so; I ate meat, and I wasn't interested in letting someone else do my killing.

Exiting the blind, I made my way down the trail to my reward: a memory, a trophy and sustenance. Sitting beside the beautiful animal, I thanked my Creator for His creation. Then, following an old tradition, I snapped a few "hero" pictures — such seemed almost to cheapen the moment.

My ego was dead, and I was glad. Going forward, I'd still harvest animals, but it would be much less often. It was looking like I'd better learn to love salads — I wondered if those roses I'd been smelling would taste better with French or Italian. **B**

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BOWHUNTING NORTH AMERICA'S

IF YOU'VE ALWAYS FELT A COUES DEER HUNT IS OUT OF REACH, THINK AGAIN!

My hunting partner, Darren, scurried up a steep hill just above the highway, then settled in on the opposite side behind his spotting scope and binoculars, both of which were fixed to quality, highly adjustable tripods. My wife and I assumed positions on either side of Darren. Less than a minute later he said, "There's a deer. And another, and another." And his words repeated several times after that.

Despite my greatest efforts, I couldn't spot a single deer on the very distant hillside we were optically dissecting, nor the dozen or more Darren had already called out over the last 45 minutes. My wife finally caught one in her optics, and I scuttled over and looked through her spotting scope. In it, an ant-sized tan shape meandered about. It was the first Coues deer I'd ever seen.

I instantly realized my struggles were twofold. First, my optics were insufficient, plus I'd given my wife my tripod. Second, because of the Coues' diminutive size in relation to the big country they roam, I needed to spot that first deer in

order to scale its size relative to our magnification and the distance separating us.

The morning concluded without any confirmed buck sightings. We glassed with Darren for a few more outings, and although I improved at spotting Coues deer, nothing was easy about it. Picking apart a faraway hillside for hours is mentally taxing, especially when you're looking for a puny tan speck against a mostly tan canvas laced with brush. We did see two nice ones chasing a doe one morning, but then a distant mountain swallowed them whole.

After Darren went home, we decided to just go hunting and dismiss the long-range glassing part. Doing so, we encountered several deer, but all were does. Then, my desire to roam took us to the foothills where we chased muleys — my over-the-counter (OTC) Arizona tag was good for either Coues or mule deer — for the remainder of the hunt.

Since I didn't arrow a Coues deer on my hunt, this article's purpose is to help you understand how easy it is to go

BY DARRON MCDUGAL

PHOTO COURTESY OF REBECCA MCDUGAL



TOUGHEST DIY DEER

on a DIY Coues hunt. I'll also share some things I learned as a first-timer. Then, I'll finish with some valuable input from seasoned Coues deer-hunting expert Jason Amaro of New Mexico. So, follow along.

Planning a Coues Deer Hunt

The prospect of hunting Coues deer had always seemed uninviting to me. First, the area they roam is more than 1,000 miles from my home. Further, I'd always reasoned that shooting a whitetail with tiny antlers was uninteresting. Plus, I'd heard success rates have lottery odds. So, why go up against the impossible?

My many excuses, however, didn't hold a candle to my overwhelming interest and curiosity when Darren Choate, an experienced Coues hunter from Arizona, invited me to come try my hand at his home state's little deer. He advised that it was as

easy as driving down, buying a tag at Walmart and hunting on national forest.

Before I knew it, an Arizona border sign whizzed by as my wife and I neared the end of our long drive. Choate was right — we swung into Walmart, bought a 300-and-something-dollar OTC tag and then crashed at a cheap motel just minutes from a national forest. Driving was the difficult logistical part due to the distance, but one could also consider flying.

Anyway, I've found that when my curiosity outweighs my excuses not to do a hunt, it's time to just go for it. If Coues hunting has been on your radar, but you've made excuses like I always had, perhaps it's time to start planning. Hunting these deer literally is as simple as traveling to Arizona, getting a motel, buying a tag and



BOWHUNTING NORTH AMERICA'S TOUGHEST DIY DEER

hitting the public lands. Logistically, it's as easy as any out-of-state whitetail hunt; the catch is that success odds are in the single digits.

Tools and Techniques

The good thing about Arizona is that most units have tons of public land. A DIY hunter can substantially strengthen his or her approach by purchasing the full-featured onX Hunt app, and much scouting can be conducted prior to the hunt itself. At a minimum, you can drop waypoints on all areas of interest, plus you can identify access points so that you can optimize your time when you arrive to hunt. Look for areas with lots of cover and ample water sources.

Using cheap or unsteady optics will waste your time if you're going the spot-and-stalk route. Even expensive glass without a sturdy tripod is asking for frustration. Remember my "ant" reference? Well, in many cases, you're glassing from so far away that deer literally are smaller than ants in your glass. You need ultra-clear, ultra-steady glass to uncover these elusive little deer.

For glassing techniques, I suggest treating your subject (the mountainside) like a math paper. Work from left to right, top to bottom. While it's possible to pick up deer by glassing randomly, you'll be more thorough by using a method that covers the entire hillside in an organized manner. Choate suggests starting with high-power binoculars to spot deer, then switching to a spotting scope to identify if the deer is a buck that you want to stalk. He's patient behind glass for hours, but when it's go-time, he vanishes in a dust cloud. And that's how you must be when you see an opportunity to stalk a rutting Coues buck.

Great boots are key, as Coues inhabit tricky, often vertical terrain. Experienced hunters call it the "poor man's sheep hunt" for a reason. Support and traction are ideal qualities, as you'll likely encounter lots of rocks and steep

inclines and declines. Also, with cactus scattered everywhere, you don't want to fall into a prickly patch. I narrowly circumvented one such situation when I briefly lost my footing. Had I fallen, I'd have incurred dozens of excruciating punctures, not to mention many more while trying to maneuver out of the thorny abyss and back onto my feet. God was definitely watching out for me!

For archery gear, any setup you've used on whitetails, pronghorns or elk will work. If you want flatter trajectory and decreased pin gap, a lighter arrow can deliver while still generating enough energy to penetrate the light-framed Coues. As with any western big game, try to maximize your effective range with longer practice distances prior to your hunt. Shots, on average, will be longer than those on eastern whitetails, and your target is substantially smaller.



Spot-and-stalk hunters must invest in good optics and be prepared to spend hours looking for a public-land buck.



PHOTOS COURTESY OF REBECCA MCDUGAL

When hunting the rugged terrain where Coues deer live, it's important to wear boots with great traction and ample ankle support. During his hunt, McDougal found rocks were involved in almost every step he took.





Amaro uses trail cameras to find bucks using travel corridors near his setups.



Jason Amaro of New Mexico arrows his bucks from stands and blinds placed in travel corridors such as funnels and saddles.

Arrow placement is the key. If you make a marginal hit, prepare for the most difficult tracking ordeal of your life. There are thousands of nooks and crannies, and finding blood specks in the desert will require hours of hands-and-knees operations.

I know a couple Coues hunters who've had success with grunting and rattling during the rut. The Coues rut runs throughout the month of January, and when an approach isn't realistic, setting up and rattling can be effective. Smaller whitetail antlers and virtually any grunt call designed for whitetails will suffice.

Using Eastern Whitetail Tactics

Choate also connected me with Coues deer fanatic Jason Amaro, and we discussed his highly proven strategies at length. I soon learned Amaro hunts very differently from Choate.

"I hunt Coues deer in the pines," Amaro explained. "I don't even take optics other than my rangefinder. I've killed all of my bucks from treestands and ground blinds. There are a lot more big bucks in the pines than we see or realize. I focus on funnels and saddles."

"When I find a big Coues deer, I know he's not going to move very far from the area where he is scraping and rubbing."

Amaro shared how nonresident hunters can increase their odds using the treestand and/or ground blind strategy during a weeklong hunt.

"Focus on funnels and saddles," he suggested. "Look for scrapes and rubs. Unlike eastern whitetails, Coues don't beat down prominent trails because they're so lightweight. You can identify potential buck hideouts virtually before your hunt, too. Try to identify country you feel comfortable hunting in. Finally, if you're not seeing any buck sign while scouting on foot, get out of there and don't waste your time."

"Also, try to get away from the road. If you've found an area on the map that looks good, 20 other dudes have probably done likewise. Try to get in deep, but don't overlook areas that are too obvious right by the road that dozens of hunters drive right by. Try to think differently than everyone else — some hunters pass up a lot of really good Coues deer country."

Amaro says terrain changes are very important when hunting Coues deer from a stationary ambush location.

"Transitions from oaks and mahogany to pines can be great hunting locations," he said. "For that matter, food sources are important, too. Coues feed a lot on acorns. During the early season, there's a lot of green vegetation for them to forage on. Later in the season, the greenery turns brown and resources become limited. They just survive on whatever they can find at that time of the year."

When hunting from treestands or ground blinds, Amaro says, being on stand at the right time is the key. He also relies on trail cameras to identify peak movement times to optimize his stand time, although he believes just about anything can happen during the rut.

"During early-season hunts, I focus on the same locations that I hunt later in the season, but I'm usually done hunting by 11 a.m.," he said. "During the late season when the rut is happening, the 10 a.m. to 2 p.m. timeframe is really productive. Lots of hunters go back to camp, but that's when you have to be on the mountain. January bucks are on the move throughout the day just like November eastern whitetails."

Amaro says calling is also very effective.

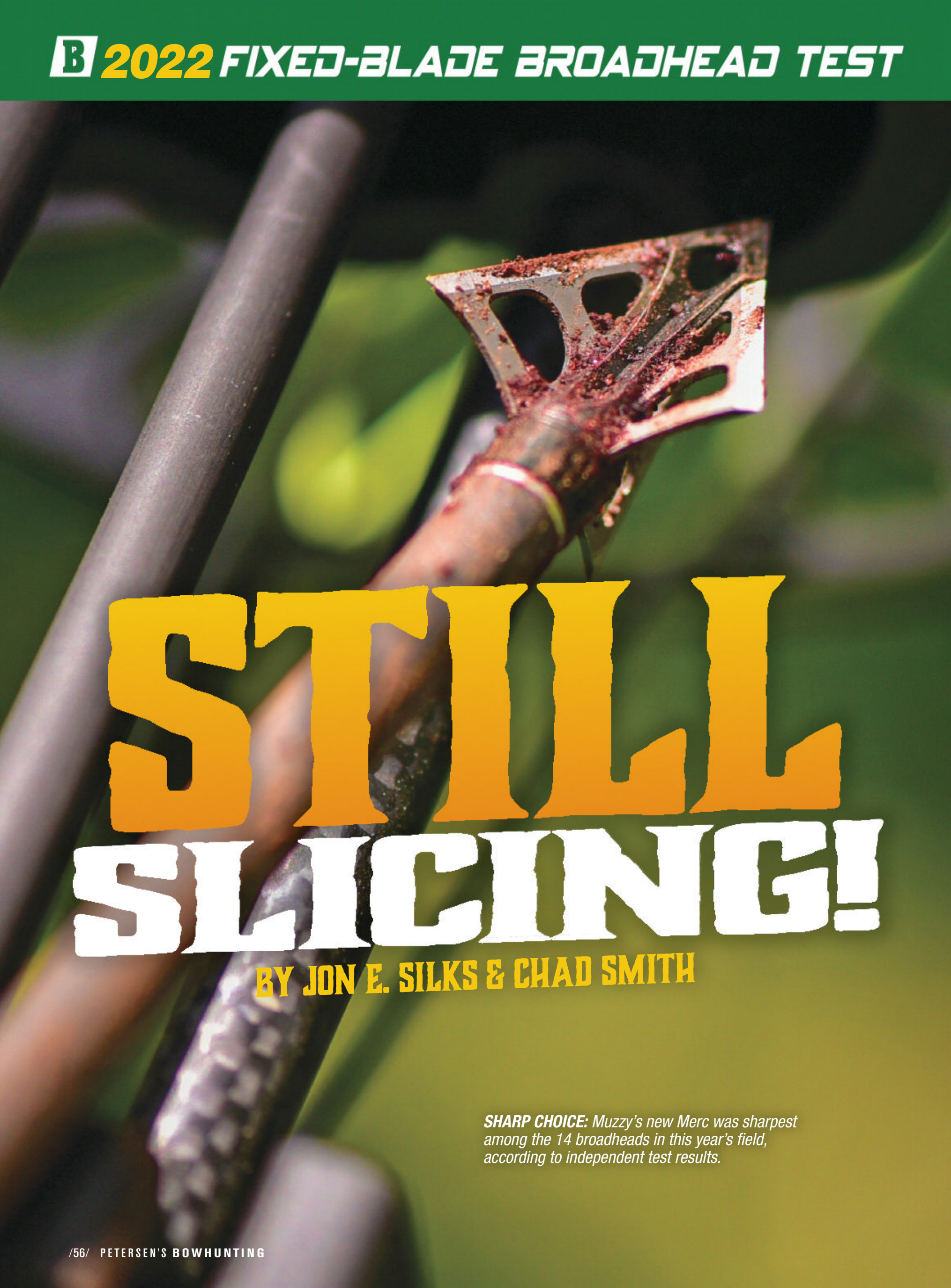
"You can grunt and bleat them in big time," he said. "I've killed more deer by grunting and bleating than just about any other tactic. I also rattled in one of my biggest bucks."

"Coues deer are small, but when they're ready to roll, they get very aggressive. Before calling, be ready to shoot, and make sure you set up correctly. I usually call every 30 minutes in January. If I see a doe skirt my setup, I try to call her in with some bleats. I want to keep her around so that she attracts a buck."

Go Couesin'

During January, many eastern and midwestern whitetail seasons are closed. This means that an Arizona OTC Coues deer hunt on public land is a great way to extend your season and, in some cases, spend a week or so in a warmer climate. While higher elevations can be subject to snow and frigid temperatures, the more desert-like regions are liable to provide balmy weather. During my hunt, it was sunny nearly every day, and the daytime temperatures ranged from 60-80 degrees. That beats sub-zero Wisconsin weather, if you ask me!

If you've been putting off a Coues deer hunt as I had for years, don't overcomplicate it. Really, the only negative parts are travel (for those who live hundreds or more miles away) and low success rates. But, if you thrive on DIY hunting and the challenges involved, why not test your wits against North America's toughest DIY deer? **B**



STILL SLICING!

BY JON E. SILKS & CHAD SMITH

***SHARP CHOICE:** Muzzy's new Merc was sharpest among the 14 broadheads in this year's field, according to independent test results.*

OUR 10TH ANNIVERSARY EDITION EVALUATES 14 TOP MODELS

This year marks a major milestone here at *Petersen's BOWHUNTING* — our 10th Anniversary Broadhead Test. Oh, what a journey it has been. When I consider the time (weeks) and energy it takes to do our annual broadhead test, it amazes me we ever made it to year two!

Back when we first began in 2013, we unknowingly set ourselves up for a testing marathon by tackling 25 broadheads — 13 fixed-blade models and 12 mechanicals — at once. None of our tests were proven, forcing to us to run back and forth to the hardware store for additional supplies as we adjusted on the fly. We were also forced to acquire additional test heads from the stock inventory at Lancaster Archery Supply, because we were running out as we forged ahead like madmen through an extended period of trial and error.

They say experience is a great teacher, and that's certainly true in our case. I'm pleased to report we've become not just older but wiser over the past decade, alternating our annual test between fixed-blade heads and mechanicals to keep our workload manageable and give manufacturers additional time to release new models in each category.

But while we've changed some things and have continually refined our testing procedures, one big thing that has *not* changed — and *never* will — is our commitment to doing whatever it takes to make this the most consistent, credible and unbiased broadhead test available to bowhunters anywhere. The cornerstone of our testing is a desire to create a level playing field for all, and over the years we've eliminated some tests that did not meet this high standard and modified others to ensure they do.

Perhaps the biggest single testing improvement we've made over the years came in 2014, when we upgraded the shooting platform to our custom-built, one-of-a-kind X-Ring Machine that is far superior to any commercially

available shooting machine. Weighing more than 200 pounds, the X-Ring Machine offers rock-solid stability along with micro-adjustable windage and elevation and a laser sighting system! Driven by a servo motor, the draw sled that pulls the bowstring back rides on linear slides and is controlled by draw-position sensors. The X-Ring Machine is also controlled via proprietary software that takes precise measurements during the draw cycle and automatically calculates data for things such as kinetic energy and dynamic efficiency. Another milestone that came in 2014 was the decision to outsource broadhead sharpness testing to CATRA (Cutlery & Allied Trades Research Association) in the United Kingdom. That's right; we ship broadhead blades all the way across the Atlantic Ocean to give you the most accurate and reliable sharpness comparison available!

During our 10-year broadhead testing journey, we have been invited to use some great facilities near our Pennsylvania headquarters, including ranges at Black Eagle Bowmen, Lancaster Archery Supply, Weaver's Archery and Drop Tine Archery. As for the testing itself, we're pleased to report that more than 40 manufacturers have submitted broadheads for evaluation, not to mention additional manufacturers such as Mathews, PSE, Bowtech, Last Chance Archery and Rinehart Targets have donated bows, targets and other equipment to assist in our testing.

In summary, the past decade has allowed us to build a significant depth of experience and expertise in broadhead testing and demonstrated that we'll go to great lengths to bring you only the most technically sound and relevant data possible — no bias and no BS! This year, we dive deep into 14 of the hottest fixed-blade broadhead options with tests that measure penetration, durability, blade sharpness, flight precision and more. It's our hope that you enjoy reading the results as much as we enjoy bringing them to you.

ONLINE VIDEO EXCLUSIVE!

In addition to the test results in this article, we used high-speed video equipment to capture slow-motion footage of the broadheads in action in our Hard-Impact (sheet metal) and Crash (field stone) tests. We also captured video of the Hemorrhage Test (simulated blood drainage).

You can view these action-packed videos on our YouTube channel at:

youtube.com/petersensbowhunting

B 2022 FIXED-BLADE BROADHEAD TEST THE COMPETITORS



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through wound channels that won't close up and induce pressure changes inside the animal's body. The 100 XL has proven effective with all bow styles and a wide range of arrow/bolt speeds. Sporting a 1.0625-inch cutting diameter, these heads are made in the USA and guaranteed to weigh within ± 2 -grain of one another.

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Top Test Finishes: 1st in Double Combo Penetration and Hemorrhage



COBRA BARBARIAN

Cobra jumps into the broadhead market with the Barbarian line that includes both fixed and mechanical heads. Cobra's FXT (Fixed Crossbow Titanium) heads were originally intended exclusively for the crossbow market, but the company wanted compound users to have the opportunity to shoot them as well. So, Cobra came up with a two-collar system. The straight collars match up with bolt diameters, and the tapered collars are more in line with standard arrow diameters. Cobra's solid, one-piece ferrule is made of titani-

um to take advantage of its high strength-to-weight ratio and overall durability. Blades are replaceable and made of 420 stainless steel that is .033-inch thick. The Barbarian's cutting diameter is a generous 1.25 inches and its trocar tip is designed to take on the harshest of shots. Heads are spin-tested at the factory.

\$54.99 per 3 | cobraarchery.com

Top Test Finish: 4th in Total Cutting Potential



FIRENOCK DAGGER

Firenock is known for engineering products and components that work well together. In fact, their Traumahawk broadhead was designed specifically to work with the company's airfoil-based Aerovane; however, it required too much speed and power for some applications. Enter the Dagger, which has fewer use restrictions for a wider range of applications. This head is made from 420 stainless steel and uses compound single bevels providing rotation

to, and through, the animal. The rotation inside the animal is advertised to cause cavitation resulting in faster death. Metal Injection Molding (MIM) during the manufacturing process makes the Dagger even more effective. The two-blade head has a 1.01-inch cutting diameter and a cut-on-contact design for maximum penetration.

\$69.95 per 3 | firenock.com

Top Test Finish: 10th in Hemorrhage



G5 STRIKER X

G5 continues to bring top-notch heads to market with the new Striker X fixed-blade broadhead. The Striker X features four replaceable Lutz blades that have a reputation for being super sharp and a track record to back it up. The four blades, each measuring approximately 1 inch long, create a 1.25-inch cutting diameter. G5 broadheads are spin-tested at the factory and advertised to have improved flight char-

acteristics versus the competition. The all-steel Striker X is also available in a crossbow model and comes in your choice of 100 or 125 grains. A BMP practice head and blade-replacement kits are also available.

\$46.95 per 3 | g5outdoors.com

Top Test Finishes: 1st in Total Cutting Potential, 4th in Hemorrhage and 5th in Sharpness



GRIM REAPER MICRO HADES

Grim Reaper, known for creating devastating broadheads, designed the new, 3-blade Micro Hades to maintain excellent flight performance at any speed produced by today's compounds and crossbows. The Pro Tip is hand sharpened and built to bust through bone. With its 100-percent stainless steel construction, the Micro Hades is made to withstand anything you can throw at it. The .035-inch thick, 440 stainless blades, which reach to a 1.0625-inch cutting

diameter, are anchored to the ferrule with Grim Reaper's four-point blade locking system. Made in Provo, Utah, the Micro Hades is all about inspiring confidence through durability, lethality and overall performance.

\$39.99 per 3 | grimreaperbroadheads.com

Top Test Finishes: 2nd in Sharpness and 3rd in Double Combo Penetration



INNERLOC AMERICAN EAGLE

Innerloc's Patriot Package — including three American Eagle broadheads, six eagle-inspired, patriotic arrow wraps and a Deadly by Design Innerloc Country can cooler — was put together as a tribute to all American patriots. The American Eagle broadhead features a red, white and blue anodized aluminum ferrule that sports an eagle stamp at its base along with eagle-shaped blade cutouts. The 3-blade head weighs 100 grains and produces a 1-inch cutting diameter. Innerloc's proven Center Locking System uses

matching bevels on the ferrule and stud to create a self-aligning, clamping action for the .027-inch thick, L-shape blades with bases that match the inner-diameter of the ferrule. The company's Endur-Edge is built through specialized manufacturing and tempering processes to create a durable edge that will hold its form and sharpness.

\$35.99 per 3 | innerloc.com

Top Test Finishes: 3rd in Triple Combo Penetration and 4th in Sharpness



MUZZY **MERC**

Muzzy, one of the most trusted broadhead manufacturers, builds its new, 3-blade Merc with a one-piece, solid stainless steel ferrule to ensure toughness. The ferrule shape and venting, along with the Hybrid Cut-on-Contact Tip, promote quiet flight and increased penetration. The .030-inch thick blades transition smoothly into the correlating edges of the ferrule for a continuous cut from tip to the blades' base.

Blades are generously vented, have a 1.0625-inch cutting diameter and are locked in place by an aluminum blade-retention collar. Muzzy says the Merc's unique geometry and venting deliver stable flight and extreme bloodletting.

\$44.95 per 3 | feradyne.com/muzzy

Top Test Finishes: 1st in Sharpness and 2nd in Triple Combo Penetration



NAP **ENDGAME**

NAP machines its 2-blade Endgame from a single piece of Grade 5 titanium to achieve precision while taking advantage of the material's impressive strength-to-weight ratio, tensile strength, ruggedness and corrosion resistance. The oversized Bone Breaker Tip, machined directly into the titanium structure, is designed to cut on contact for greater penetration. An X-Lock blade-retention system secures the

.031-inch, replaceable, stainless steel blades to the ferrule. Cutting diameter is 1.1875 inches. All heads are spin tested at the factory to ensure optimum performance, and a set of replacement blades and practice blades are included.

\$54.99 per 3 | newarchery.com

Top Test Finish: 3rd in Hemorrhage, 4th in Double Combo Penetration and 5th in Triple Combo Penetration



QAD **EXODUS**

QAD broadheads are unique in their design, as they employ Blade Over Shaft technology that anchors the blades to a very short ferrule while allowing the length of the blades to reach back over the shaft. The ferrule length and hardened stainless steel tip equal that of a fieldpoint, which reportedly improves flight characteristics and accuracy. This compactness also increases penetration and pass-throughs. The

three, .040-inch thick stainless steel blades are set at a steep angle to reach a 1.25-inch cutting diameter in a short distance. Blades are replaceable; the head comes in 85, 100 and 125 grains in swept-back and full-blade models.

\$42.99 per 3 | qadinc.com

Top Test Finish: 1st in Triple Combo Penetration, 2nd in Double Combo Penetration, 5th in Total Cutting Potential



SLICK TRICK **SS3**

Slick Trick's new-for-2022 SS3 is a single-piece head machined from a solid block of 416 stainless steel and finished with a black-oxide coating. There are no blade vents or separate pieces — this is a solid unit from top to bottom, which is advertised to reduce flight noise, increase strength and maximize durability. The three, built-in blades produce a cutting diameter of 1.125 inches. A proven mix of overall

geometry and weight distribution are said to create laser-like flight from any bow. Slick Trick designed the blades to stabilize the head quickly and leave a slug-like hole in whatever you put it through. The chisel tip is built to be aerodynamic and begin cutting on impact for increased penetration.

\$47.99 per 3 | slicktrick.net

Top Test Finish: 5th in Double Combo Penetration



SWHACKER **LEVI MORGAN #262**

Known for its popular mechanical heads, Swhacker also has a substantial fixed-blade offering. Swhacker founder Rick Forrest teamed up with one of the planet's best archers in multi-time world champion Levi Morgan to design the new #262 fixed-blade broadhead. The 3-blade, 100-grain head features a black-anodized, aircraft-grade aluminum ferrule and a hardened, high-carbon steel chisel tip that is adver-

tised as cut-on-contact. Blades are made of stainless steel, have a .032-inch thickness and produce a 1.25-inch cutting diameter. The swept back, independent blades rotate when pulled back so they are not considered barbed.

\$54.95 per 3 | swhacker.com

Top Test Finish: 3rd in Total Cutting Potential and 5th in Hemorrhage



SYKD HUNT **ENDURANCE**

SYKD Hunt enters the fixed-blade broadhead arena with the 3-blade Endurance, featuring a 1-inch cutting diameter. SYKD says the optimized design allows the Endurance to be used with both compounds and crossbows. Blades are made of stainless steel, measure approximately .028-inch thick and are individually hand-sharpened. A front-end,

blade-locking system is designed to secure the blades during flight and penetration. The aggressive chisel tip is built to bust through bone, causing maximum damage and increasing penetration.

\$32.99 per 3 | sykdhunt.com

Top Test Finish: 6th in Triple Combo Penetration



TOOTH OF THE ARROW **S-SERIES XL**

The 4-blade S-Series XL has a 1.1875-inch cutting diameter, and it's machined from one piece of high-carbon steel, heat-treated for strength and durability. Blade edges are sharpened at 45-degree angles and designed to create large entry and exit wounds. The compact ferrule puts 70 percent of the head's weight in line with the arrow shaft and, when coupled with the low-profile design,

enhances aerodynamics and optimizes flight characteristics. A chisel point offers maximum impact on bone, and black-oxide plating protects the head, which comes in 100, 125 and 175 grains.

\$49.99 per 3 | toothofthearrowbroadheads.com

Top Test Finish: 2nd in Total Cutting Potential and Hemorrhage



WASP **MORTEM**

Wasp demonstrates its dedication to producing some of the most durable heads available by outfitting the new Mortem with a one-piece, stainless steel ferrule. Sitting atop the ferrule is a solid, one-piece stainless steel trocar tip that is hardened for strength and durability, precision-machined and perfectly aligned with the blades to increase penetration

from any shot angle. Three stainless steel blades, sharpened to a surgical edge, reach out to produce a 1.125-inch cutting diameter. Blades are easily replaced.

\$33.99 per 3 | wasparchery.com

Top Test Finish: 3rd in Sharpness and 4th in Triple Combo Penetration

Test Philosophy

Our goal is to objectively test a series of characteristics critical to the successful completion of a broadhead's mission — killing game quickly. Tests are conducted with materials and processes that result in accurate, unbiased results. Since conducting our first broadhead test in 2013, we have built on our experiences year after year and continuously made enhancements and modifications where they will benefit the test and, in turn, the reader. We use technology such as the *Petersen's BOWHUNTING* X-Ring Machine that is advanced far beyond any commercially available shooting machine and an IDT Motion Xtra N4 high-speed video camera. Where we do not have the resources to conduct our own testing, we source it from outside. For example, we ship broadhead blades all the way across the Atlantic to have sharpness measured

by the Cutlery & Allied Trades Research Association in Sheffield, England.

Test Setup

A Mathews V3X was set up with a 29-inch draw length and 65-pound draw weight. It was equipped with a NAP QuikTune 3000 arrow rest and D-loop. Three dozen factory fletched Easton FMJ 340 arrows were cut to 29.375 inches long and weighed at 376 grains (not including point weight). Completed arrows weighed 476 grains (with 100-grain broadhead or fieldpoint) and flew at 272 fps as measured by our chronograph. The Mathews V3X bow was mounted to the X-Ring Machine and tuned with the Easton arrows to achieve a perfect bullet hole at various distances. This setup was used for all test shots except the Hemorrhage Test, which was conducted as noted below.

BROADHEAD PHYSICAL DIMENSIONS

MANUFACTURER	MODEL	# OF BLADES	ADVERTISED CUTTING DIA. (IN.)	TESTED CUTTING DIA. (IN.)	TESTED BLADE LENGTH (IN.)	TESTED BLADE THICKNESS (IN.)	AVG. TESTED WEIGHT. (GR.)
Annihilator	100 XL	3	1.06	1.04	0.75	0.040	100.0
Cobra	Barbarian	3	1.25	1.25	0.98	0.031	100.3
Firenock	Dagger	2	1.01	0.91	1.08	0.134	101.0
G5	Striker X	4	1.25	1.22	0.86	0.032	101.6
Grim Reaper	Micro Hades	3	1.06	1.04	0.80	0.035	102.4
Innerloc	American Eagle	3	1.00	0.99	0.71	0.028	100.2
Muzzy	Merc	3	1.13	1.10	0.74	0.030	101.2
NAP	Endgame	2	1.19	1.19	0.84	0.031	99.6
QAD	Exodus	3	1.25	1.21	0.69	0.040	102.4
Slick Trick	SS3	3	1.13	1.13	0.96	0.042	100.2
Sw Hacker	Levi Morgan #262	3	1.25	1.33	0.82	0.030	104.3
SYKD Hunt	Endurance	3	1.00	1.11	0.80	0.028	98.6
Tooth of the Arrow	S-Series XL	4	1.19	1.16	0.77	0.040	100.0
Wasp	Mortem	3	1.13	1.16	0.72	0.032	100.8

PHYSICAL DIMENSIONS: A Mitutoyo 8-inch dial caliper was used to determine the size of each broadhead's cutting diameter, blade length, blade thickness and the length of the head beyond the end of the arrow. Cutting diameter on 3-blade heads was calculated by laying two of the blade tips along one jaw of the caliper and the third on the opposite jaw. That number was divided by 1.5 and then multiplied by 2. Example: Greatest distance is .75/1.5 = .5 x 2 = 1-inch cutting diameter.

An Easton Digital Grain Scale, calibrated according to manufacturer instructions, was used to determine the mass weight of each individual broadhead. Three separate heads were measured and averaged for a final result.

TOTAL CUTTING POTENTIAL

MANUFACTURER	MODEL	# OF BLADES	TOTAL CUTTING POTENTIAL (IN.)
Annihilator	100 XL	3	1.56
Cobra	Barbarian	3	1.88
Firenock	Dagger	2	0.91
G5	Striker X	4	2.44
Grim Reaper	Micro Hades	3	1.56
Innerloc	American Eagle	3	1.49
Muzzy	Merc	3	1.65
NAP	EndGame	2	1.19
QAD	Exodus	3	1.82
Slick Trick	SS3	3	1.70
Sw Hacker	Levi Morgan #262	3	2.00
SYKD Hunt	Endurance	3	1.67
Tooth of the Arrow	S-Series XL	4	2.32
Wasp	Mortem	3	1.74

TOTAL CUTTING POTENTIAL: The ability of a head to cut, and the amount of cutting that takes place, is a factor of sharpness, cutting diameter and the number of blades. With this in mind, we calculate the Total Cutting Potential (TCP) of a head by multiplying the radius by the number of blades. We consider it "potential," because a lost blade in bone or otherwise means you have that much less to do the cutting once the head breaks through into the body cavity. Blade angle is not considered in determining TCP, since angle does not change the amount of flesh that is cut as long as penetration is equal.

Here are two examples of TCP calculations: A 2-blade, 2-inch cutting diameter head has a radius of 1 inch. To get the TCP, you multiply the radius by the number of blades, which gives you a TCP of 2 inches. Now, consider a 3-blade head with a cutting diameter of 1.375 inches. The radius is .6875-inch, so you would multiply .6875 by the number of blades, 3. Your TCP would be 2.0625 inches, which means you will cut slightly more than the 2-blade head with a 2-inch cutting diameter.



This year, we used a Mathews V3X bow to conduct all test shots except for the Hemorrhage Test.

HEMORRHAGE TEST TOP 10 PERFORMERS

RANK	MANUFACTURER	MODEL	ELAPSED TIME (SECONDS)
1	Annihilator	100 XL	2.08
2	Tooth of the Arrow	S-Series XL	4.83
3	NAP	Endgame	5.23
4	G5	Striker X	6.19
5	Swhacker	Levi Morgan #262	6.55
6	QAD	Exodus	6.99
7	Muzzy	Merc	7.22
8	Cobra	Barbarian	7.47
8	Slick Trick	SS3	7.47
10	Firenock	Dagger	7.97

HEMORRHAGE TEST: Behind the scenes, this is known as the “blood bag” test! It was designed to take a relative measure of how much bleeding each broadhead will cause. For each head, a thick plastic bag containing exactly two gallons of red (for effect) colored water was sealed, suspended from a fixture and marked with a reference line. Using a Wicked Ridge Raider 400 cross-bow, each head was fired low through the bag. We used frame-by-frame time stamps from a Nikon D5600 camera to measure elapsed time from impact until the water level matched the reference line.



The Hemorrhage Test helps measure a broadhead's relative ability to cause bleeding after passing through an animal.



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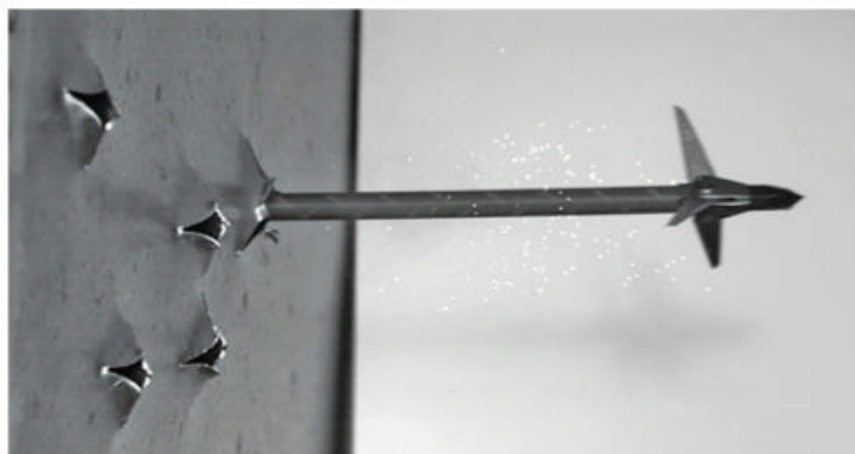
SHARPNESS TEST TOP 10 PERFORMERS

RANK	MANUFACTURER	MODEL	NEWTONS
1	Muzzy	<i>Merc</i>	1.05
2	Grim Reaper	<i>Micro Hades</i>	1.20
3	Wasp	<i>Mortem</i>	1.36
4	Innerloc	<i>American Eagle</i>	1.41
5	G5	<i>Striker X</i>	1.42
6	QAD	<i>Exodus</i>	1.48
7	NAP	<i>Endgame</i>	1.73
7	SYKD Hunt	<i>Endurance</i>	1.73
9	Tooth of the Arrow	<i>S-Series XL</i>	1.95
10	Swhacker	<i>Levi Morgan #262</i>	2.40

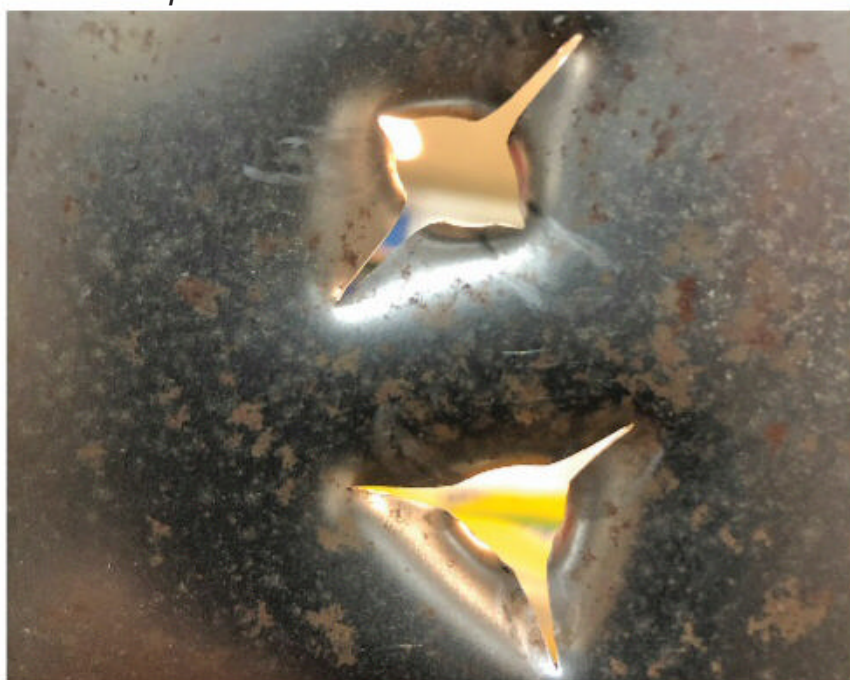
SHARPNESS: Three blades (one blade from three different heads) from each broadhead model were sent to CATRA in the United Kingdom to measure blade sharpness with the association's Razor Edge Sharpness Test (REST) machine. The machine measures the force required, in Newtons, to cut through a rubber test medium. The less force required to cut the rubber, the sharper the blade. As a reference point, a shaving razor blade will typically result in a reading near .3 Newtons. Additional information about the REST machine can be found online at catra.org.



These photos show the various shapes and sizes of holes our test broadheads left in the .03-inch thick sheet metal used in our Hard-Impact Test.



The Hard-Impact Test is designed to test a broadhead's ability to remain intact after passing through a hard object such as bone. In the image above, a frame from our high-speed video camera shows the Swhacker Levi Morgan #262 just after passing through .03-inch thick sheet metal.



HARD-IMPACT TEST RESULTS

MANUFACTURER	MODEL	FULL PENETRATION	BROKEN BLADES	BENT BLADES	BLADE EDGES MARRED	MISSING BLADES	DULLED TIP	DAMAGED FERRULE
Annihilator	<i>100 XL</i>	X			X			
Cobra	<i>Barbarian</i>	X			X		X	
Firenock	<i>Dagger</i>	X			X		X	
G5	<i>Striker X</i>	X			X		X	
Grim Reaper	<i>Micro Hades</i>	X			X			
Innerloc	<i>American Eagle</i>	X			X			
Muzzy	<i>Merc</i>	X			X		X	
NAP	<i>EndGame</i>	X			X			
QAD	<i>Exodus</i>	X			X			
Slick Trick	<i>SS3</i>	X			X		X	
Swhacker	<i>Levi Morgan #262</i>	X			X			
SYKD Hunt	<i>Endurance</i>	X		X	X	X		
Tooth of the Arrow	<i>S-Series XL</i>	X			X		X	
Wasp	<i>Mortem</i>	X			X			

HARD-IMPACT TEST: The hard-impact test is designed to simulate the performance of a head after it encounters and passes through a hard material such as bone. We all want to know our broadhead will still do its job and keep cutting even after hitting a rib or shoulder. This test was performed at 20 yards, using .03-inch thick sheet metal as the impact material. General results can be found in the accompanying chart, with high-speed video footage on our YouTube channel showing each head's performance in great detail.

DOUBLE COMBO PENETRATION TOP 10 PERFORMERS

RANK	MANUFACTURER	MODEL	PENETRATION DEPTH (IN.)
1	Annihilator	100 XL	15.466
2	QAD	Exodus	14.586
3	Grim Reaper	Micro Hades	14.545
4	NAP	Endgame	14.504
5	Slick Trick	SS3	14.486
6	Innerloc	American Eagle	14.353
7	Muzzy	Merc	14.195
8	Cobra	Barbarian	13.983
9	SYKD Hunt	Endurance	13.945
10	Swhacker	Levi Morgan #262	13.835

PENETRATION TESTS: This year, we eliminated one of the penetration tests we've been doing for years and replaced it with a new test we started last year. The pure foam test was scrapped, as it did not correlate to any situation one would encounter in the field; we hunt animals with a hide or other tough outer layer, such as thick feathers on a turkey. So, as we started last year, we added rubber-backed carpet on the outside of the foam. This "Double Combo" penetration test is designed to simulate a hide/body hit during which no bone is encountered. Our second penetration test, or "Triple Combo" test, consisted of rubber-backed carpet, .03-inch thick sheet metal and foam, to simulate a hide/body hit during which bone is encountered. Targets for our penetration tests are made by stacking the carpet, metal and foam plates and wrapping them with stretch-wrap film.

Over the years, many people have asked why we don't use actual animal carcasses, or even a side of beef, to conduct our penetration tests. Our answer is simply that using such methods would not provide consistent, repeatable results from shot to shot. Instead, we use manmade materials to simulate basic properties (soft, hard, firm) while maintaining the consistency required for valid test results.

To conduct our penetration tests, three brand new heads from each broadhead model were fired into both types of block. The section of arrow protruding from the target was then measured for each shot, with a final average being calculated. That number was then reconciled with the arrow length for each test broadhead (different models have different overall lengths) to determine the actual depth of penetration.

TRIPLE COMBO PENETRATION TOP 10 PERFORMERS

RANK	MANUFACTURER	MODEL	PENETRATION DEPTH (IN.)
1	QAD	Exodus	9.919
2	Muzzy	Merc	9.653
3	Innerloc	American Eagle	9.395
4	Wasp	Mortem	9.231
5	NAP	Endgame	9.088
6	SYKD Hunt	Endurance	8.914
7	Annihilator	100 XL	8.528
8	Slick Trick	SS3	8.444
9	Tooth of the Arrow	S-Series XL	8.438
10	Grim Reaper	Micro Hades	8.128



Our penetration tests involved shooting the test heads through custom-made targets consisting of rubber-backed carpet, sheet metal and foam. The depth of penetration was carefully recorded after each shot, and the results for each broadhead were averaged for a final result.



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MODERN ARCHERY

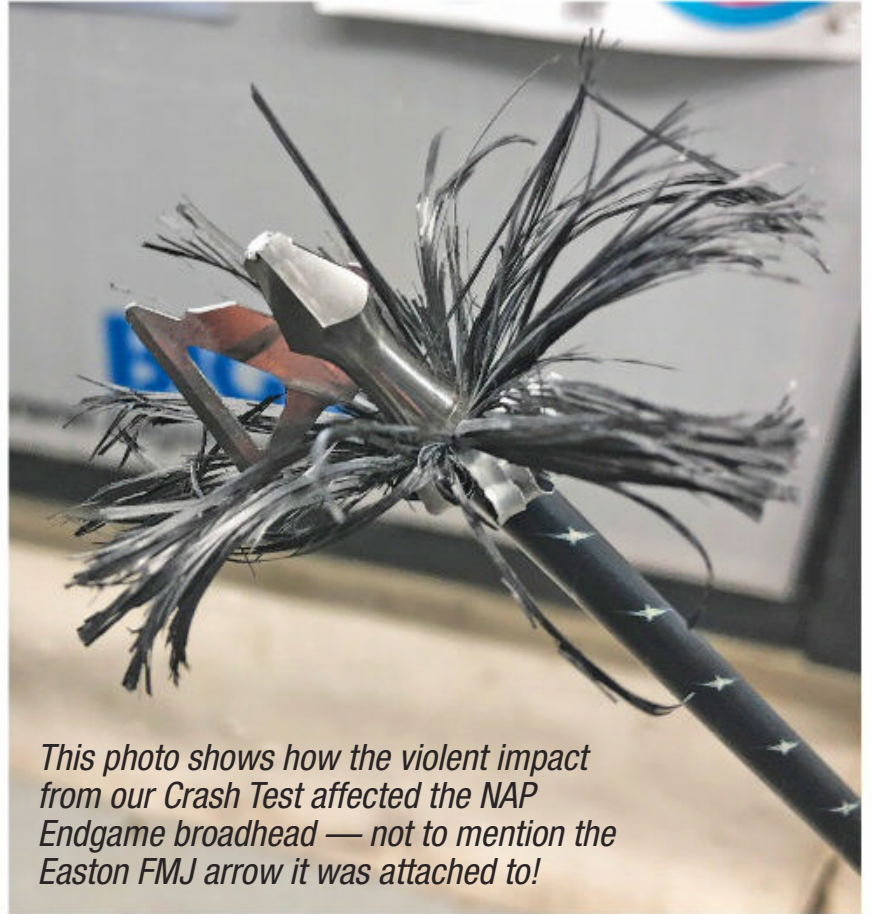
PRO TOOLS

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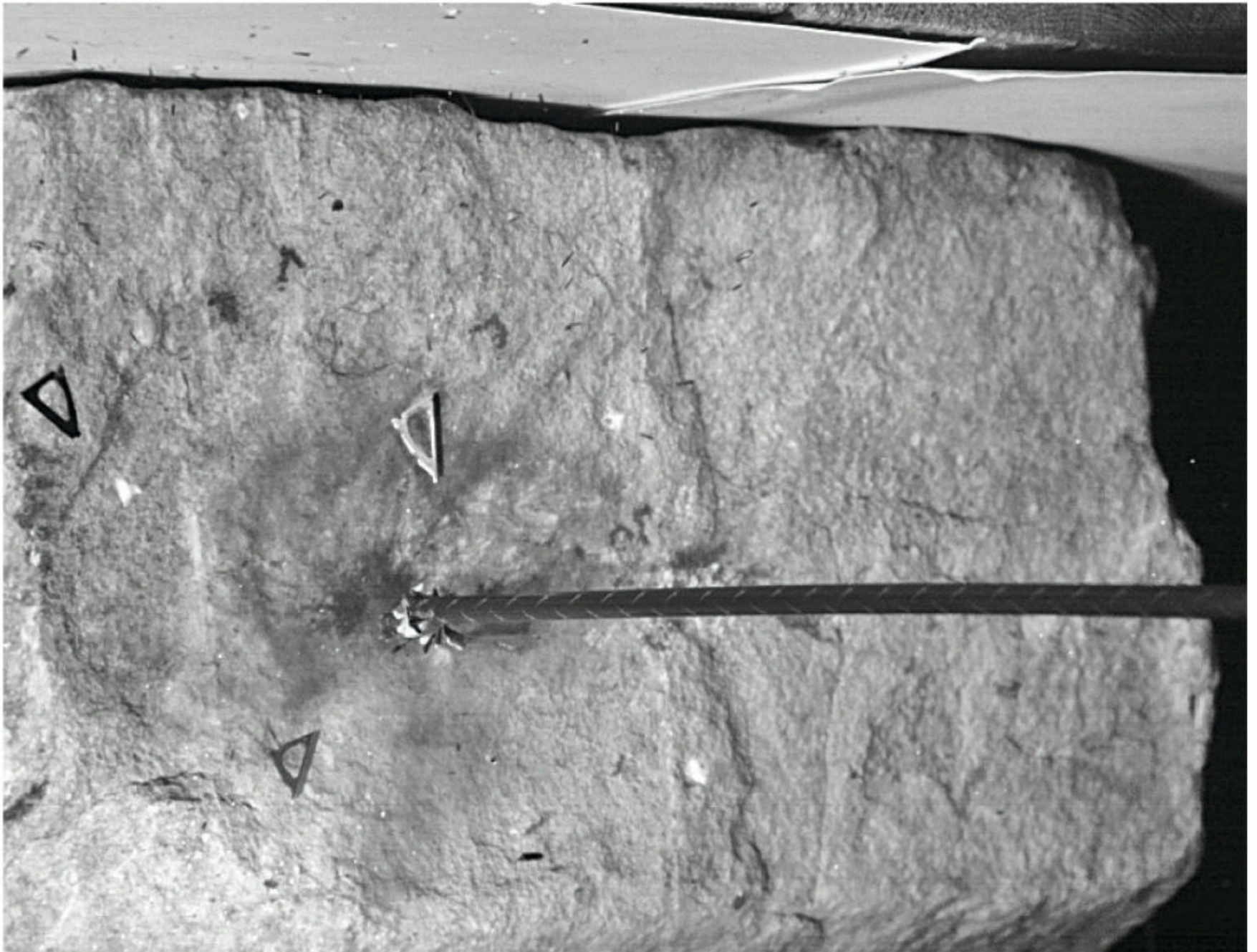
OctoberMountainProducts.com

CRASH TEST		
MANUFACTURER	MODEL	DAMAGE
Annihilator	100 XL	Slight
Cobra	Barbarian	Significant
Firenock	Dagger	Severe
G5	Striker X	Significant
Grim Reaper	Micro Hades	Severe
Innerloc	American Eagle	Significant
Muzzy	Merc	Moderate to Significant
NAP	Endgame	Moderate
QAD	Exodus	Slight
Slick Trick	SS3	Moderate
Swhacker	Levi Morgan #262	Moderate
SYKD Hunt	Endurance	Severe
Tooth of the Arrow	S-Series XL	Slight
Wasp	Mortem	Moderate

CRASH TEST: The Crash Test is a violent test of a broadhead's overall integrity. It was conducted by shooting each model into a fieldstone at 20 yards and evaluating the overall condition of the head after impact. Not surprisingly, most heads in the test sustained considerable damage as a result of impact. General results can be seen in the accompanying chart, with high-speed video footage on our YouTube channel showing each head's performance in great detail.

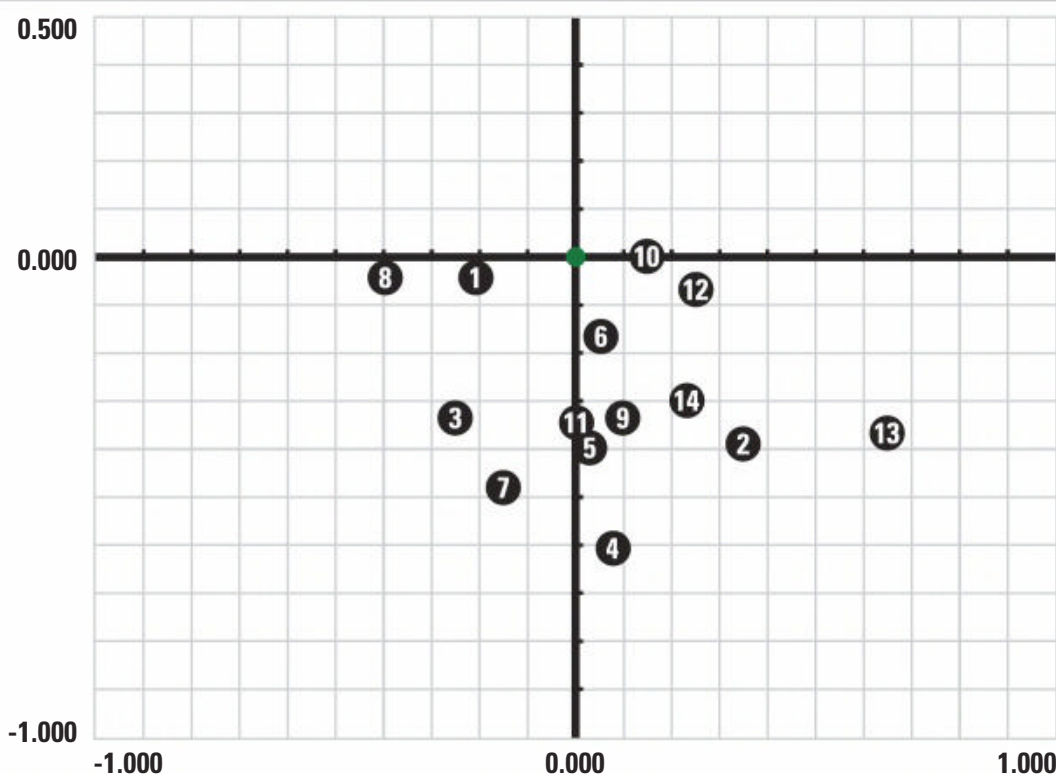


This photo shows how the violent impact from our Crash Test affected the NAP Endgame broadhead — not to mention the Easton FMJ arrow it was attached to!



Our Crash Test involves shooting each test head directly into a large slab of fieldstone from 20 yards away. As seen in this frame grab from our high-speed camera equipment, flying blades and assorted shrapnel resulted from many of the impacts!

FIELDPOINT COMPARISON TEST



1 Annihilator 100 XL

2 Cobra Barbarian

3 Firenock Dagger

4 G5 Striker X

5 Grim Reaper Micro Hades

6 Innerloc American Eagle

7 Muzzy Merc

8 NAP EndGame

9 QAD Exodus

10 Slick Trick SS3

11 Sw Hacker #262

12 SYKD Hunt Endurance

13 TOA S-Series XL

14 Wasp Mortem

● Fieldpoint-Tipped Arrow

FIELDPOINT COMPARISON TEST: A fieldpoint was shot from the X-Ring Machine at 25 yards to give us a reference point for measuring the broadhead impact locations on the target. We performed the test and found our groups relative to the fieldpoint were not in line with previous years. So, we tweaked the arrow rest and assured all test arrows were straight, properly aligned and spun true on a Last Chance Archery Revolution Arrow Tuner (engineered by Travis "T-Bone" Turner). We then repeated the test with much better results!

Three shots were fired with each test model, and the impact points were averaged to plot the data in the accompanying chart. As has been common in recent years, all the test heads flew well, with none varying more .7-inch in windage or elevation from the fieldpoint, and we had to enlarge the scale of the results chart just so you can identify each head's point of impact. This is a testament to how much broadhead manufacturing has improved over the past 20 years and offers proof that — with a properly tuned bow and arrows — you can get your hunting broadheads to fly quite similarly to your practice points.

SPECIAL THANKS!

BOWHUNTING thanks the following companies, organizations and individuals for providing products and/or services that aided in the completion of this year's broadhead test:

MATHEWS ARCHERY | mathewsinc.com

EASTON ARCHERY | eastonarchery.com

LAST CHANCE ARCHERY | lastchancearchery.com

BAKER ARCHERY PRODUCTS | bakerarcheryproducts.com

BLACK EAGLE BOWMEN | Lamar, Pa.

PETER SCHMITZ with Quantum Technologies LLC | qtechimaging.com

53% MORE ACCURATE

An Independent Scientific Review was conducted testing the top broadheads in the market — directly out of the pack.

3 identical arrows were fired 50 yards via an unbiased shooting machine.

The SlickTrick Assailant proved to be **53% more accurate**—grouping just over an inch while the rest averaged nearly a 2 1/2" group.

...Not only the **most accurate**, but testing confirmed that the SlickTrick penetrated deeper, had the most accurate weights and the **surgical blades deflected much less** than competitors.

LEARN MORE ABOUT THIS TEST & THE WORLD'S DEADLIEST BROADHEAD



SLICKTRICK.NET

SLICK TRICK

THE AVERAGE GROUP SIZE FOR THE TEST WAS 2.39"
THE SLICK TRICK ASSAILANT DELIVERED
A THREE-SHOT GROUP OF JUST 1 1/8"



TAGGING TOWNIES

HUNTING BUCKS IN URBAN AND SUBURBAN AREAS IS NO EASY FEAT. HERE'S YOUR 6-STEP PLAN FOR SUCCESS.

By **JOSH HONEYCUTT**



LAUNCHING AN ARROW at a whitetail with a 1,000-foot skyscraper in the background isn't what most bowhunters picture. But, man, urban and suburban deer hunting can be much better than people realize. Bucks get old in the small, overlooked pockets of cover common in cities and towns.

This type of habitat is also becoming more common. Each day in America, approximately 7,000 acres of habitat are lost to urban sprawl and development. At that rate, with 2.4 billion acres of land mass to its name, the United States theoretically would be virtually devoid of wildlife habitat in less than 900 years, and likely much sooner than that. Obviously, this reduces available food and cover for whitetails, causing significant dispersion. Still, remnant populations thrive in these urban strongholds. After all, deer are edge animals, and they adapt.

LANCE KRUEGER PHOTO

A New England Way of Life

Those who have never been to New England — Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont — often label it with the rampant anti-hunting stereotype. While that's partially true, a lot of people still hunt there. These places have a rich hunting heritage, and it's better than most people realize. That said, while it was once completely overlooked, Massachusetts bowhunter Jacob Bennett says it isn't as much of a secret anymore.

"I think it is not overlooked nearly as much as it was five or 10 years ago," Bennett said. "Truth is, where I hunt, you can't find a piece of woods — no matter how small — without someone else hunting.

"It doesn't mean you can't hunt. It just means you need to adjust your strategy to be successful. Suburban hunting is no longer a secret. The truth is that many who hunt reside in the suburbs and have learned that they don't have to travel nearly as far as they have in the past to fill their tags."

With pockets of habitat, lots of whitetails and plenty of big deer, there are more than enough reasons to give it a go. Not to mention the plethora of expanded seasons, increased tag numbers and other urban-only perks. Bennett will tell you all about it, but he won't tell you it's easy.

"One common misconception is that suburban hunting is easily done, and the animals are trained to human activity," Bennett said. "This is not so. It obviously does not have the challenges of mountain hunting but presents challenges of its own."

While he hunts primarily in the urban Northeast, he says this style of hunting works for virtually any town or city, no matter the region or location. Of course, those who are willing to put in the work will be much better off than those who slack.

STEP 1: Know the Rules

First, no matter where you hunt, there are always applicable laws.

"The most important thing [bowhunters] need to know and do is to familiarize themselves with the bylaws of the state or even town to ensure that they are hunting legally," Bennett said. "I don't know about other states, but in Massachusetts, many towns have bylaws that can state there is no hunting, no discharge of firearms or hunting on private property with written permission only. This would be a 'must' for a starting point. Know your laws, regulations and discharge distances."

Second, no matter where they are, deer are still deer. They do the things they do regardless of where they live. And one constant always remains — they're comfortable

with and accepting of the things that are normal for their environment, including a limited amount of human intrusion. But once something out of the norm occurs, it trips every red flag and circuit breaker in their brain.

Knowing where that line is, and not crossing it, is the name of the game. Deer are used to scent coming from certain directions. But if something is out of the norm, they pick up on it rather quickly and they may not tolerate it well.

As for the hunting, there are some major differences inside city limits. Other than large inholdings of ag ground, crops and farmers generally aren't a factor. Instead, homeowners, joggers, cyclists, dog walkers, mowers and their activities take center stage as things to maneuver around.

Hunting pressure might or might not be present, but oftentimes there's limited hunting in town. Because of this, calling, rattling, mock scrapes and scent lures (where legal) seem to be more potent than in areas with higher hunter numbers.

Other things to consider are the entry and exit routes. These are just as important as in rural areas, and are technically more challenging to maneuver due to the relatively confined nature of urban bowhunting.

"In rural areas, you usually have room to move, and can have multiple entry points depending on wind direction, travel routes and weather," Bennett said. "Many times, when hunting the 'burbs, this is not an option, either due to distance restraints or hunting permission. You usually do not have a long walk to set up."

Still, despite having short walks, it's important to streamline your gear. Invest in the best you can afford and get well-acquainted with it long before it's time to hunt.

"I use a lightweight stand method, either a climber or hang-and-hunt," Bennett said. "I think it's paramount to stay mobile and to be willing to adjust for wind or most recent intel."

STEP 2: Deploy Initial Scouting Techniques

In some ways, urban hunting is no different than in rural areas. It starts with scouting. E-scout with a proven app such as HuntStand to find good areas. Use aerial, topo, hydro and other beneficial map layers to find potential treestand locations.

Also, ask around and determine what people are seeing. Talk to UPS, FedEx, USPS and other delivery drivers. These people drive a lot of roads, and they know where the largest deer densities are located. They also might know where a big buck hangs out. If something is of interest, dig deeper and get as much information as possible.

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Furthermore, law enforcement can help you learn where the most deer-vehicle collision accidents take place, which is good to know for two reasons. First, it lets you know where the deer are. Second, you have some leveraging power and a card to play when asking permission in those neighborhoods.

"Familiarize [yourself] with the properties and the local herds," Bennett said. "Learn what quality bucks reside there, how balanced the herd is and what their travel route on a typical day is. Obviously, this takes time, can vary quite a bit and will become useful down the line."

Once potential properties are identified, or if you have no intel to go on and need to verify if deer are in the area, it's time to scout. In most cases, you'll glass from a vehicle, bike or other common item to the area. Glass from driveways and parking lots, too. Just remember, the goal is to blend in. You don't want to draw the attention of deer or other people.

STEP 3: Gain Access

Those who want to chase townie

whitetails will have to learn to gain permission or seek out public lands. Use your hunting app to help identify potential hotspots, and take advantage of public lands layers to locate open hunting access. Oftentimes, county and city lands have programs available to bowhunters, so use these to your advantage.

For private properties, use the app for the provided property lines and landowner information to get in contact with them. If you ask for hunting permission, they might or might not grant it. If it looks like a good spot, it's likely worth the time and effort to try and gain access, though.

Just remember, in urban and suburban settings, each property is relatively small. And while whitetail home ranges and core areas are generally smaller than in rural settings, they still move around, which means hunters need access to a lot of tracts to increase their chances of success.

When targeting certain areas or neighborhoods, ask surefire "yes" landowners first. That way, when you move on down the road, you can let others know that some people in the area have already given permission. This will help put them at ease and might just give them enough confidence and trust to grant you access to their land.

Some people may require more convincing, though. Point out the overbrowsing of flowers and shrubs, explain how hunters drive conservation efforts and convey how responsible hunting reduces vehicle collisions. Describe the woes of overpopulation and talk about undesirable outcomes, such as sharpshooting. Then, once you start gaining access, try to secure beyond what you plan to hunt. This is especially important for entry routes, exit routes and even blood trailing. Sometimes, wounded deer travel great distances, and if you don't have permission to access a property, it can ruin your recovery efforts, effectively spoiling the hunt.

All in all, it's important to know how to get a "yes," but it's just as crucial to learn how to hear "no." You'll likely hear the latter way more often than the former.

Regardless of the outcome, give the landowners a small gift or token of appreciation for their time and leave with a smile. Just because they initially said "no" doesn't mean it won't turn into a "yes" in the future. It's all about

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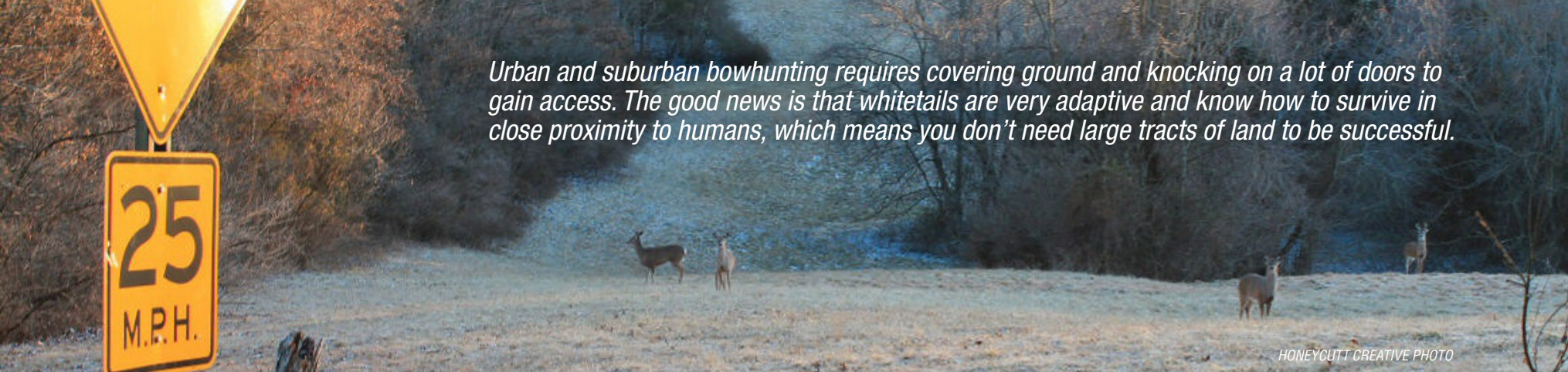
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Urban and suburban bowhunting requires covering ground and knocking on a lot of doors to gain access. The good news is that whitetails are very adaptive and know how to survive in close proximity to humans, which means you don't need large tracts of land to be successful.

HONEYCUTT CREATIVE PHOTO

trust, and if you can gain it over time, you just might get the hunting access of your dreams. Lay the groundwork now, reap the rewards later.

STEP 4: Dial It In

Scored some supreme urban hunting grounds? Perfect, now it's time to drill down, locate some deer and pattern some bucks.

"I utilize basic whitetail knowledge from rural areas to be successful in suburban areas — just think of it on a smaller scale," Bennett said. "Deer are perimeter creatures. You don't always have to travel farther and deeper than others to be successful. You need to be able to read the sign and interpret appropriately.

"I utilize trail cameras to help determine deer movement and herd

quality. Whether in the suburbs or rural areas, a scrape is a scrape, a rub is a rub, a bedding area is a bedding area, and a mature buck is a mature buck. Location and geography do not change those facts."

Every great urban or suburban hunting spot looks slightly different, but there are some places to begin the search. Good bedding areas might consist of really grassy locations, brushy areas along creeks, creek- and riverbanks, parks without walking trails, swampy lowland areas and other small pockets of cover. Quality food sources might be bird feeders, gardens, nurseries, oak trees, orchards, yards, etc. Even non-traditional food sources such as table scraps, yard clippings and other weird things hunters normally wouldn't think about are in play.

Just like with larger tracts of land, every urban area has a sweet spot. It's all about finding the X, so to speak. Once that area is discovered, perhaps consider hanging stands along good ambush points. Then, if and where possible, mow lanes as pinch points and travel routes that funnel deer past these locations.

"The quality of the bowhunting can differ depending on pressure, food sources and herd balance," Bennett said. "I have learned with the use of trail cameras, knowing how to read sign and travel patterns can produce not only filled tags but the opportunity for mature bucks."

Don't mess up, though. Hunting on small properties leaves little room for error. One misstep and the deer might uproot and move 10, 20 or 100 properties



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over. Or, they might be right back the next day. That's the spectrum to be found on the urban landscape.

STEP 5: Take Clean Shots

Once in position, and an opportunity presents itself, make sure you take good, clean shots. The last thing you want is a wounded animal, or a lethally hit deer that takes hours to expire; better to have a quick death and a short blood trail.

When you don't have that outcome,

deer commonly run across multiple properties. And if you don't already have permission to trail across those tracts, that becomes a major problem. Not to mention the locals witnessing the negative nature of poor shot placement and an animal suffering.

As such, it's best to not aim for the shoulder. More often than not, this leads to an entry hole but no exit, which results in slower blood loss and a prolonged death. Instead, put an arrow right behind the shoulder through both lungs. This way, the deer is losing blood continuously (rather than the

wound being plugged with an arrow), so the blood trail is bigger and likely much shorter.

Those who aren't proficient with a compound bow might consider a crossbow, where legal. It's easier to shoot, and there's less chance of an arrow not passing through. Regardless of what bow you use, find a system that works for you and also maximizes damage upon impact.

"I am a big proponent of large, cut-on-contact broadheads," Bennett said. "One, for penetration and quick exsanguination of the animal. A short track job is very helpful in urban settings. I personally practice realistic shot opportunities and shoot with broadheads year-round. A screw-up in shot placement in the 'burbs can be much more noticeable to the non-hunting public than in rural areas."

Temperatures permitting, giving deer an excess amount of time to succumb to wounds is almost always advisable. It's slightly different in urban settings, though.

People seeing a bloody, dead deer oftentimes doesn't bode well. So, you want to follow up quickly but not too soon. Stay in tune with your shot placement and know proper wait times. Then, when you take up the track, be very careful. Have someone look ahead while you stay laser-focused on blood. If you suspect the deer is still alive, back out. But if you think it's dead, keep moving, and be aware of property lines and your surroundings.

Once the deer is recovered, get it back to the vehicle via a cart with tall sides. This prevents nearby residents from seeing a bloody image they don't want to see. Don't use a tarp, though, as it might look suspicious dragging a carcass wrapped in one. That'll just lead to unnecessary questioning and diminished trust. And, as always, dress the deer carefully. Dispose of guts and carcasses properly, and follow all state and local laws for completing this process. Remember, be discreet. Don't brandish knives and bloody body parts, and be respectful of others.

STEP 6: Exercise Extreme Caution

Safety is of the utmost concern, regardless of where the hunt takes you. Always follow best (and safe) practices, and make sure to positively identify your target. Mistaking someone for game can happen, especially in more populated areas. As such, it's

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best to refrain from shooting during low light, even if it's still legal light.

Also, keep shot distances to a minimum. Taking longer shot opportunities increases the risk of a bad hit, which paints hunting in a bad light. Know your capabilities, and don't overdo it.

Third, look beyond the target and know what's in the background. Don't take the shot if something is beyond the deer, such as houses, playgrounds, people, etc.

All things considered, bowhunting whitetails in the suburbs is a tried-and-true tradition by many. It continues to gain popularity, and people such as Bennett will keep slaying big bucks that call populated areas home. Deer, even big deer, live in the suburbs. For locals who can't travel elsewhere, or for those looking for new opportunities, urban and suburban lands fit the bill.

"I prefer rural hunting, but I live in the 'burbs with a family of five, a full-time job and other responsibilities," Bennett said. "Traveling to hunt isn't always an option. Suburban hunting isn't for everyone, but there is adventure out your back door if you are willing to put in the effort." **B**



Jacob Bennett, a diehard urban/suburban bowhunter, took this nice, mature buck while bowhunting near his home in Massachusetts.

JACOB BENNETT PHOTO

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By **JON E. SILKS**

BOW TEST

HOYT REDWRX CARBON RX-7

Lighter, quieter and built to impress!

HOYT ARCHERY'S FOCUS for its 2022 REDWRX Carbon RX-7, was developing a rig that is lighter, quieter and better aligned than ever.

The company brought a Zen-like focus to the RX-7, with an In-Line system that demonstrates a higher level of integration, options and small tweaks that bring great reward.

Hoyt's refined approach to carbon-riser technology, in both structure and content, plays well with the In-Line features to bring a significant reduction in overall weight, while a host of other technologies and accessories have calmed and quieted this rig by an impressive 24 percent. In addition, the HBX Pro Cam vibrates less, rotates faster and is positioned better to expand the sight window and tune easier.

Riser Revamp

It takes courage *not* to leave well enough alone when you have a good thing going, and Hoyt definitely had a good thing with its carbon-riser bows. Thus, it was not without risk when the company took a look at its flagship model with fresh eyes and ideas and decided it could do even better!

Most noticeable in the revamp is the use of two carbon tubes rather than

Hoyt's new REDWRX Carbon RX-7 changes the game with a lighter, two-tube, all-carbon riser. Smooth transitions and additional length open up the sight window, while the new HBX Pro Cam system optimizes performance.

THE SPECS

Manufacturer: Hoyt, 801-363-2990; hoyt.com

Model: REDWRX Carbon RX-7

Riser: Hand-Laid Hollow Carbon Tube, reflex

Grip: VitalPoint, molded elastomer

Limbs: Hybrid EXT, split

Draw Weights: 40, 50, 60, 65, 70 and 80 pounds peak

Draw Lengths: 25-30 inches, in half-inch increments; two base modules

Cam System: HBX Pro System

Letoff: 80-85 percent, adjustable; 84.77 percent (as tested)

String: Fuse Custom, BCY X99, 57.75 inches

Cables (x2): Fuse Custom, BCY X99, 33.85 inches

Brace Height: 6.25 inches

Axle-to-Axle Length: 30 inches

Weight: 3.9 pounds (advertised); 3.95 pounds (as tested)

Finish: Nine camouflage and solid color options.

Advertised IBO Speed: 342 fps

MSRP: \$1,849

Comments: High marks in every category!



SHOWN IN
REALTREE EDGE

three to make up the riser, resulting in reduced material and weight. Another visually evident change is in the sight window, which is nearly an inch longer than the company's RX-5 and transitions much less abruptly back to the centerline. Perhaps not as apparent on first glance is the change Hoyt made from a carbon/metal hybrid construction to an all-carbon unit — another move with significant weight-reduction benefits. In earlier models, each end of the riser would transition into an aluminum cap that interfaced with, and supported, the limb pockets. At the base level, Hoyt employs its Hand-Laid Hollow Carbon Tube technology to create a reflex riser in its proven and popular Tec Riser design.

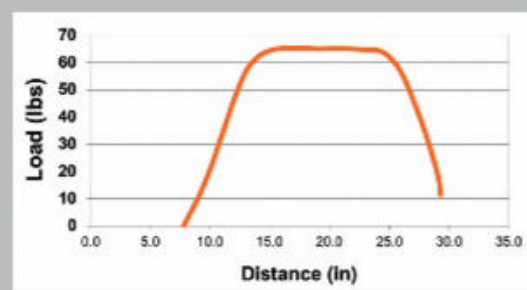
Hoyt goes all-in with its In-Line system on the RX-7. The company offers both standard and In-Line mounting options for both the sight and rest. The riser is shaped and formed around the In-Line Picatinny-style mount for the sight and the dovetail plate for the Integrate Rest, giving the rig a more finished look. The new VitalPoint Grip was set with a 4-degree angle reduction to focus hand pressure near the middle of the grip rather than at the heel, reducing negative palm pressure and, in turn, resulting in less hand torque and increased shooter performance. A majority of the grip is wrapped with molded Versaflex, an advanced, soft elastomer that adds comfort and has a non-slip surface.

Hoyt attacks vibration and noise with its In-Line Short Stop Stabilizer, which is 2.25 inches long and located low and forward on the riser to lower the center of gravity for better effectiveness and less vibration. Shock Pods, strategically placed in the upper and lower limb bolt dowels, are designed to destroy shock and vibration in the riser. A soft-rubber String Stop mounted just below the grip is adjustable for optimized performance.

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DYNAMIC EFFICIENCY	84%	84.72%
SHOT NOISE	91.4 dBA	90.6 dBA

DRAW-FORCE CURVE



EDITOR'S NOTE:

All of our Bow Tests are conducted using the same standardized procedures and professionally calibrated testing equipment. Bows are tested with a draw length of 29 inches and a draw weight of 65 pounds, unless otherwise noted.

A stainless steel stabilizer mount and side mount for a side rod offer multiple balancing options, while the short, low-profile roller guard manages the cables. The quiver-mounting fixture is designed to adjust in and out in relation to the riser so the archer can draw it as close to the bow as possible. Last but not least, the RX-7 is available in nine camo and solid hunting colors; see hoyt.com for the full list.

Pro-Level Power

Hoyt promoted its HBX Cam to the pro level with a few upgrades. The HBX Pro System reportedly of-

fers an improved vibration profile, has a smoother draw and is easier to tune, all while weighing less than its predecessor. It also positions the string to create a better center shot and enhanced sight picture.

The Hoyt Binary Cam anchors each cable to the opposite cam, forcing them to work together and auto-compensating for small system imbalances. Two rotating modules cover the full 25-30-inch draw-length range while maintaining optimum performance at every draw length. Letoff is adjustable from 80-85 percent, and Hoyt outfits the new cam system with Fuse X99 string and cables.

Tested and Proven

Hoyt employs the company's Split Limb Technology and Uniform Stress Distribution to produce its Hybrid EXT limb design that passed a brutal test of 1,000 full-on, dry-fire cycles at 80 pounds with a 30-inch draw. The multi-layered fiberglass/laminate limbs are available in peak draw weights of 40, 50, 60, 65, 70 and 80 pounds. Precision-machined limb pockets are given the critical assignment of perfectly aligning the limbs to the riser to ensure consistent down-range performance, while the installed Limb Shox reduce vibration and noise.

Impressions

The lower weight of the RX-7 was immediately evident and, when shot, the bow was exceptionally quiet, had zero detectable vibration and only a slight jump in the handle. When drawing the bow, it climbed steadily to peak before gently dropping into a firm — but not harsh — back wall where the shooter can relax into the shot. The grip is semi-soft and has a flat back for comfortable and functional performance.

Test Specialist Chad Smith and I both agreed on this one — this is Hoyt's best bow to date, aluminum or carbon. It's truly an impressive rig! **B**

KUIU PRO HUNTING PACK:

MADE FOR THE WILD

A COMPREHENSIVE PACK system built with western hunters in mind.

There are many differences between western bowhunting and eastern bowhunting, and I'd rank the importance of a quality backpack near the top of the list. Although the comfort and features of dedicated whitetail packs have improved dramatically in recent years, let's face it: your average deer hunter on the East Coast or in the Midwest can get away with pretty much any pack for a day-long outing. However, when embarking on a multi-day, backcountry hunt out west for elk, mule deer or even mountain sheep, pack selection is anything but an afterthought. In fact, it is one of the most critical pieces of gear you'll carry afield.

With that in mind, I really can't say enough about KUIU's Pro Pack System, a well-designed, high-performance lineup of pack bags and accessories that offers serious bowhunters all the functionality and customization they could want from a pack, whether making an afternoon hike from the trailhead or a two-week wilderness expedition.

The Pro Pack System consists of three main components, starting with KUIU's Carbon Fiber Frame. Constructed with Spread Tow carbon fiber, this pack frame weighs just 11 ounces yet is capable of supporting packs with loads up to 150 pounds. Available in three sizes to fit bowhunters of all statures, the frame also allows for four inches of shoulder strap height adjustment.

The second main component of the Pro Pack System is KUIU's redesigned Pro Suspension featuring added padding in the shoulder contact areas for increased comfort and adjustable shoulder take-off angles so you can achieve a perfect fit whether you are tall and slim or burly and broad-chested. Other highlights of the sus-



\$539-\$639 (kit price varies by bag size)
KUIU / 800-648-9717; kuiu.com

pension include excellent weight distribution capability and an adjustable, padded waistbelt with lumbar support that is also adjustable to sit in just the right position in the small of your back. Available in two sizes, the Pro Suspension merges with the Carbon Fiber Frame to form a backbone for everything else in the system.

The third main component of the Pro Pack System is the pack bag itself. Available in four sizes — 2,300, 3,600, 6,000 or 7,800 cubic inches — all are interchangeable on the Carbon Frame and Pro Suspension, and KUIU builds them all with durable, 500D Cordura ripstop fabric. Other highlights of the pack bags include side compression straps with reinforced Hypalon attachment yokes, YKK #10 load-bearing zippers, zippered hydration port, K-DWR fabric coating for water resistance and a center-divided rear cargo pocket that allows easy side access to optics, food and other gear without having to remove your bow from the pack. Finally, each pack can be easily transitioned to Load Sling Mode, allowing for an additional 2,500 cubic

inches of carrying capacity for packing out meat, hide and horns between the Carbon Frame and bag.

KUIU offers its Pro Hunting Pack System in a kit that comes with your choice of Carbon Frame, Pro Suspension, Pro Bag and set of two Pro Hip Belt Pouches. Components are available in your choice of Ash Phantom (solid green) or Valo, Vias or Verde (pictured) camouflage. It's all covered by a lifetime warranty, and if all that weren't enough, KUIU offers a host of pack accessories to round out your setup, from bow and rifle carriers to a rain cover, glassing pad, load hauler and more.

I have used the Pro Hunting Pack System with the 3,600 bag on some of my recent hunts and can vouch for its durability, extreme versatility and tremendous comfort. If you're looking for a proven pack system for your next western adventure, give KUIU a look. In addition to being top-quality gear, the Pro Hunting Pack System is a heck of a value considering what the kit includes for the price. **B**

— Editor Christian Berg



BUCKVENTURES

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THERE'S MAGIC IN THE FIELD

For hunting icon Jeff Danker, exploring the outdoors with family and friends is as good as it gets. Follow Jeff and co-hosts Daniel McVay and Jaylee Danker as they enjoy the camaraderie of the hunt — while chasing big bucks and other critters on *BuckVentures*.

WEDNESDAYS
9 PET

SPORTSMAN

SCHEDULE SUBJECT TO CHANGE

HUNTWORTH HUNTING APPAREL:

COMFORTABLE,
VERSATILE AND
EFFECTIVE

MOST OF MY bowhunting involves pursuing deer and turkeys near my home in eastern Pennsylvania, which makes realistic, woodland-style camouflage patterns the perfect choice for my hunting apparel.

Occasionally, however, I take road trips to locales where the habitat is much different than my local woodlots. Such was the case in June, when I headed north to Quebec for a black bear hunt.

For this trip, I was looking for camo that would work well with the landscape of the boreal forest, where spruce and fir, along with birch, aspen and balsam poplar, are common. Enter Huntworth, a Pennsylvania-based company that dedicates itself to creating quality technical hunting clothes at a great price point, with a focus on developing its own unique patterns. Among these are Disruption, an innovative digital pattern; Hidd'n, a more classic tree pattern; and Tarnen, which I chose for my hunt.

Launched in 2020, Tarnen is billed as Huntworth's most versatile camo, perfect for all seasons. A hybrid-style pattern, it takes images and shapes found in nature and distorts them to create a 'randomness' and visual depth that allow the wearer to blend into the environment. When you look at the pattern, it seems to meld bark, forest floor and the color of aspens and birch together. Hence, I thought it would be ideal for concealment among the evergreens, shadows and rays of sunlight typical of early evening in the Canadian forest.

During the hunt, I was wearing the Durham Lightweight Pants and Shelton mid-



\$99.99 (Shelton Midweight Hoodie) and \$119.99 (Durham Lightweight Pants)
Huntworth / 412-325-7875; huntworthgear.com

weight, half-zip, fleece hoodie, but I also had the Elkins midweight, windproof, soft-shell jacket along as temperatures could drop down into the 40s as darkness approached. The first thing that grabbed my attention about the apparel is how lightweight, comfortable, quiet and well-made it is. The hoodie, which is also obviously ideal for early- and mid-fall archery seasons, fit perfectly, with a four-way stretch design (95% polyester/5% Spandex) that doesn't hinder movement, no matter if climbing into the treestand, drawing back your bow or dragging out your harvest. A grid knit pattern on the inside of the hoodie is designed to assist with airflow, while the garment is treated with a Durable Water Repellent (DWR) and Microban antimicrobial to help with scent reduction. The Shelton comes with a built-in facemask that slides up easily to conceal your face if the hood is up, or it can be tucked behind your head if you don't want to wear it.

Sometimes it's the little things a manufacturer builds into apparel that make the biggest impression, and this is certainly the case with Huntworth. The kangaroo pocket on the hoodie's front is incredibly spacious — large enough not only to place both hands in it, but also to keep a compact rangefinder, smaller binos or other accessory you want at your fingertips. Plus, a small, zippered pocket layered atop the kangaroo pocket is perfect for holding your cell phone. The thumb straps on the sleeves are also greatly appreciated, as they prevent the sleeves from bunching up as you put on a coat or jacket.

As for the Elkins, archers who hunt the entire fall into early winter will appreciate the triple-layer, windproof shell. This fleece jacket also features a longer hem and a high collar, both of which add additional protection from the wind. Zippered exterior pockets, roomy interior pockets, safety harness port and underarm zips for venting, if needed, help round out this impressive jacket.

The Durham pants are also feature-rich, with a stretch design that, again, doesn't hinder movement in any way. Like Huntworth's jackets and hoodies, pants are treated with Microban and DWR. The knee and seat areas feature an abrasion resistant, waterproof material to handle wear and tear in the field and keep you dry if kneeling or sitting in damp conditions. In addition, deep front pockets and two side zippered pockets provide ample storage room. And, unlike some garments, the rear pockets are easy to access, a much appreciated design element that stood out.

Even after wearing Huntworth's camo for a few days, I continued to discover new things to love about it and can't wait to don it this fall. Overall, I found the clothes and pattern to be perfect for almost any early- and mid-season hunt, whether you're out West pursuing elk, or you're perched in a stand overlooking a Northeastern or Midwestern woodlot. If you're on the hunt for versatile, well-made yet reasonably priced apparel, check out Huntworth's functional and innovative lineup. **E**

— Associate Editor Mark Demko



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NEW GEAR

By **MARK DEMKO**



DO-IT-ALL FLETCHING JIG

\$153.44

Bohning Archery Company; bohning.com

For more than 75 years, Bohning has been an archery innovation leader, striving to bring the most creative solutions to archery enthusiasts across the globe. That's why bowhunters who work on their own arrows will appreciate the new Cauldron, the company's advanced, all-in-one, 3-vane fletching jig.

Capable of handling plastic vanes up to 5 inches long, the Cauldron is able to fletch all standard, micro- and large-diameter arrows with the nock on, with the ability to fine-tune vane indexing and location. The unit is simple to use, since the snap-in inserts don't require tools to change, allowing you to swap them out quickly and easily. Fletching options include straight, 1-degree right and left offset, and 3-degree right and left helical. The jig provides the proper amount of pressure for excellent adhesion, and you can fletch all three vanes at once, saving you valuable time so you can spend more of it on the range or in the woods.



NEVER MISS A SHOT

\$119.99

Stealth Cam; stealthcam.com

Quality and a super price point come together in Stealth Cam's CONNECT, a new cell cam that features 20MP photo resolution, four power LEDs for nighttime illumination and a .7-second trigger speed. The user can set the burst mode (1-3 photos), recovery time, custom operating hours and much more. The camera also has a DVR mode that allows it to continue taking images, even if the card is full. It operates on ATT or Verizon networks and comes in Mossy Oak Bottomland camo.



BETTER BOW BALANCE

\$249.99-\$284.99

Bee Stinger; beestinger.com

The MicroHex Xtreme System Stabilizer Kit combines front and back stabilizers with the Elite side arm to help bowhunters achieve better balance and shot control. Stabilizers are made of a proprietary carbon fiber to help dampen vibration, have a micro-diameter size for better performance in windy conditions and are lighter-weight and allow for better balance adjustment. The kit comes in three options: 6- and 8-inch stabilizers, 8- and 10-inch stabilizers or 10- and 12-inch ones.



HASSLE-FREE SCENT OPTION

\$9.99

Tink's; tinks.com

Tink's new Scent Pods are individually packaged and come pre-loaded with Tink's #69 Doe-In Rut Scent, so they're simple to activate, easy to use and you won't get scent on your hands or clothing. Just open the package, pull the pod tab out and hang it up on a branch or other location. The scent then disperses downwind for up to eight hours. Pods come as a 3-pack in both natural and synthetic options.



WEATHER THE STORM

\$170 EACH

NOMAD; nomadoutdoor.com

Nothing ruins a hunt quicker than being wet and cold, but the Hailstorm NXT collection can save the day. Made of quiet stretch fabric, the jacket and pants are 100-percent wind-proof and waterproof yet allow heat and condensation to escape, keeping you comfortable afield. The jacket has zippered hand and chest pockets and adjustable hood and underarm zip vents. Pants have an adjustable waist, plenty of pockets and zippered leg openings for easy removal of pants/boots.



PERFECT FOR BACKCOUNTRY HUNTS

\$499
KUIU; kuiu.com

Designed for backcountry hunters who need quality, lightweight gear, the Mountain Star 2 Person is a double-wall, three-season tent that weighs just over 3 pounds and features exterior poles for faster setup/takedown. The asymmetrical floor allows for comfortable shoulder-to-shoulder sleeping, while two large vestibules offer space for gear. The intersecting pole design, with horizontal roof truss, provides excellent stability, even in high wind. Tent is made of 15d Silicone/PU Coated Micro Ripstop Nylon.



LIGHT & RUGGED HIKERS

\$300
Kenetrek; kenetrek.com

Lightweight and comfortable, the 3.2-pound Corrie II hikers are perfect for both Back 40 hunts and long treks. The 7-inch-tall leather and nylon uppers have a K-strap design for excellent ankle support and thick padding for comfort, while 5mm, full-length nylon midsoles and light, grippy Kenetrek Grapon outsoles offer superior traction and support. A waterproof, breathable membrane; reinforced stitching in high-wear areas, and rubber heel and toe caps are other highlights.



PACKABLE RAIN PROTECTION

\$119.99
Drake; drakewaterfowl.com

The Non-Typical Ultralight Performance Waterproof Pack Shell Jacket features a three-layer stretch fabric with a high-performance 20K waterproof rating and a breathability rating of 12K. Available in the new Mossy Oak Country DNA and other Mossy Oak patterns, this jacket weighs less than a pound and packs down to the size of a soda can, so it's easy to carry in a pack or pocket. It also features Agion Active XL odor control to help conceal you from game animals' keen sense of smell.



TAKE CONTROL OF ODOR

\$14.99
*Dead Down Wind;
deaddownwind.com*

If you take scent control seriously, Dead Down Wind's laundry bombs (28 per bag) need to be in your arsenal. These water-soluble, multi-chamber packs feature a proven, enzyme-based detergent designed to remove all traces of human odor on hunting gear and accessories and are formulated to work with all garments, including carbon, technical, natural and synthetic materials. Simply drop in the washing machine before adding clothes and let Dead Down Wind do the rest.

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AT HOME & ON THE GO

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By **EDDIE CLAYPOOL**

THE DIY GUY

UNFORGETTABLE

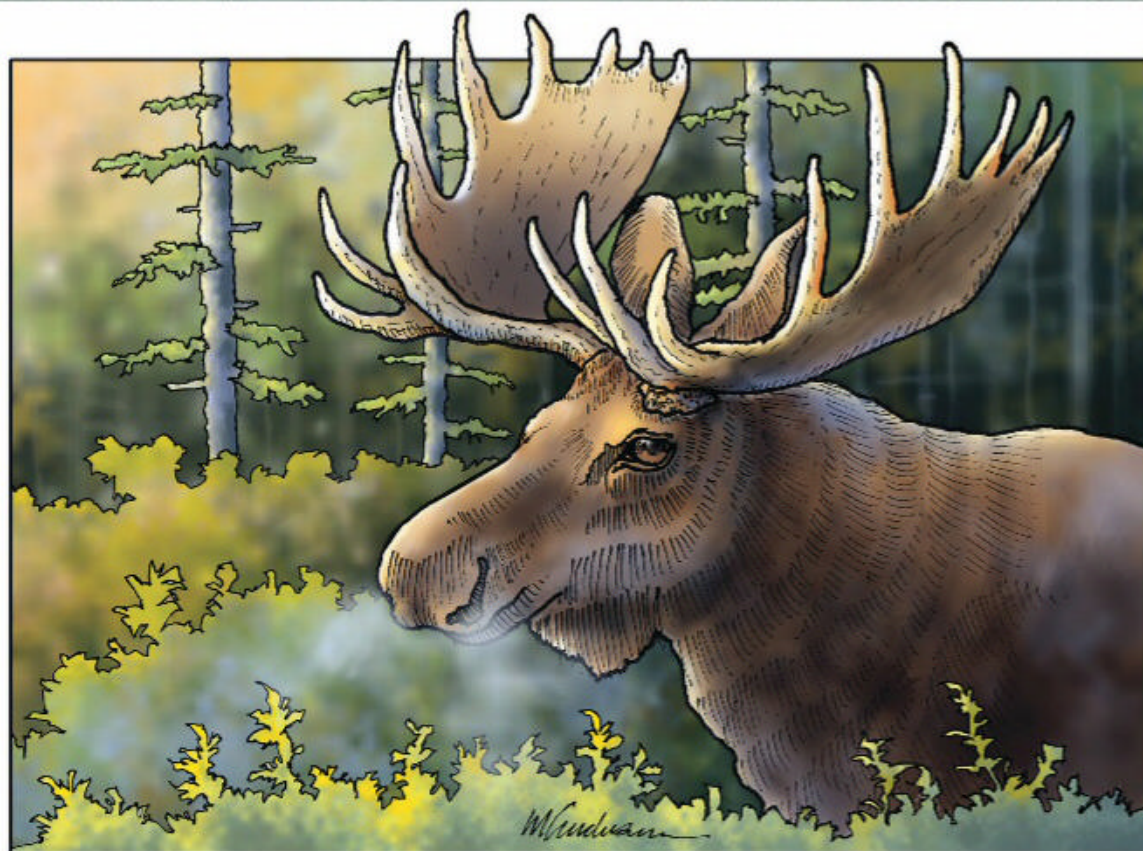
Going toe-to-toe with a once-in-a-lifetime bull!

IN THE SUMMER of 2006, my name was drawn by the Idaho Fish and Game department for the right to hunt Shiras moose.

As the reality of this opportunity sank in, I was excited and apprehensive. Though I was a hardcore do-it-yourselfer, with the know-how and gear to accomplish such a task, I had never pursued moose and never set foot in the country I'd be hunting. My head was spinning. Could I pull off this one-in-a-lifetime opportunity on my own? Or should I just hire an outfitter? The answer was simple, at least for me. I've often said, "I'd rather fail on my own than succeed with a babysitter." It was time to put up or shut up.

As summer progressed, a lot of time was spent organizing gear and researching my hunting area. I'd been a mule packer for nearly 20 years, and this outing was going to be one that certainly demanded their help. My hunting unit was near the upper Lochsa River in the panhandle of northeastern Idaho. The country was mainly roadless, extremely rugged and thickly timbered. Being a wilderness nut, I'd chosen the area with the intention of getting into very remote country and finding a mature bull. Yet I knew that deep down inside me was a bowhunter who would be happy to harvest a bull of any size. After all, this was a one-in-a-lifetime hunt and I wanted to make the best of it.

As September arrived, I began to get tack equipment, backpacking equipment and general camping gear



together. Mules were shod and inoculated, a truck and trailer were given the old once-over, and physical conditioning ramped up. Peg and I were mentally preparing ourselves for the unknown rigors to come. This was going to be a massive outing — 1,800 miles from home, towing mules and exploring some of the most difficult country we'd ever visited. Then there were the logistics of possibly removing a moose from the backcountry and getting all the meat home, butchered and into a freezer. This could be quite a handful for a couple flatlanders.

After a few days on the highway, we soon topped-out over Lolo pass and dropped into the Locsha River drainage. Huge canyons, soaring rocky peaks and crashing whitewater greeted us. This country was gorgeous, wild and intimidating; just the type of challenge I lived for. Pulling onto a primitive dead-end road, we wound slowly uphill, looking for a good camp site. Soon, we were situated in a grove of western red cedars, awed by their immense size. After supper, I made a short hike through the forest and quickly realized the vegetation was completely foreign to me. Jungle-like conditions pervaded the entire area, making hiking and navigation a daunting task. I now knew I was in for a wilderness experience the likes of which I'd never tackled before.

The next day, I loaded my two mules for a backcountry foray, and by noon, there were *three* jackasses headed down a trail. Picking our way through rock-slides, around downed timber and across formidable creek crossings, we slowly made our way into trackless country. By late evening, by my best estimation (my GPS wouldn't work here), we were seven miles from our starting point and one mile from a large meadow I had spotted on my topo maps months earlier. I knew I needed to see it, and I intended to at first light the next day. Picketing my mules, I crawled into my tent, thoroughly oblivious to the world-class event that was about to happen in less than 10 hours.

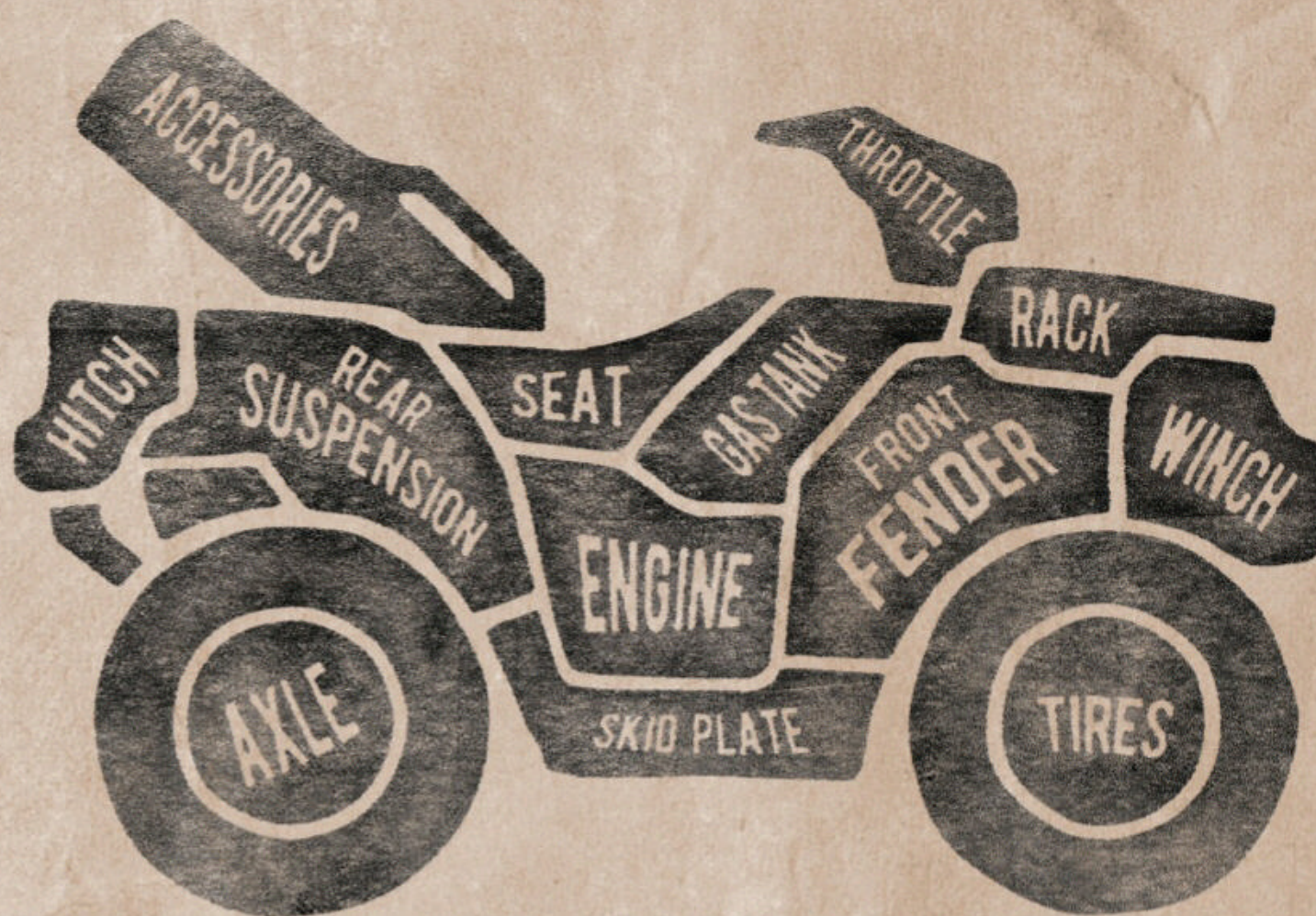
As light splashed onto the scene the next day, I slinked along, bow in hand. Breaking into the meadow just as the sun peeked over the mountains, a frosty scene greeted my eyes. Immediately spotting movement, I almost choked at the sight of a huge-antlered Shiras bull making his way across the opening. With every step, steam shot from his nostrils. His giant, white palms rocked from side to side as he swayed forward, directly toward where I was standing!

Stepping behind a tree, I prepared for a shot. As the animal swaggered in my direction, the image was forever burned into my mind. It was moments like these that I lived for! **B**

MARK ANDERSON ILLUSTRATION

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