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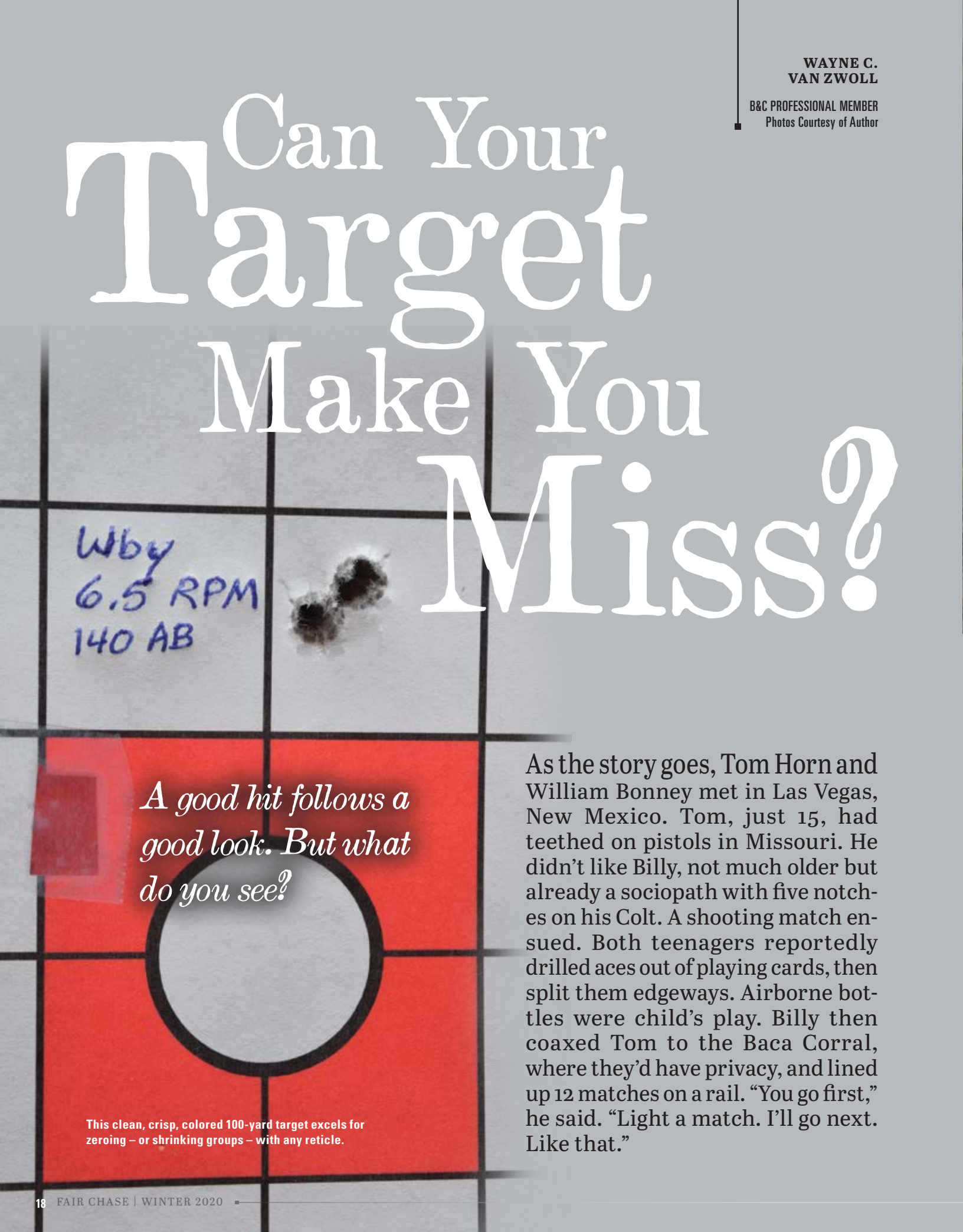
Can Your Target Make You Miss?

A good hit follows a good look. But what do you see?



This clean, crisp, colored 100-yard target excels for zeroing – or shrinking groups – with any reticle.

As the story goes, Tom Horn and William Bonney met in Las Vegas, New Mexico. Tom, just 15, had teethed on pistols in Missouri. He didn't like Billy, not much older but already a sociopath with five notches on his Colt. A shooting match ensued. Both teenagers reportedly drilled aces out of playing cards, then split them edgeways. Airborne bottles were child's play. Billy then coaxed Tom to the Baca Corral, where they'd have privacy, and lined up 12 matches on a rail. "You go first," he said. "Light a match. I'll go next. Like that."

Elk are big. Still, hunters muff easy shots at elk. Keeping your eyes on ribs, not antlers, helps you hit.

Wayne thinks light blue is a good target color. The lines here are of little use but too fine to distract.

Perceptive beyond his years, Tom removed two matches. "We'll shoot five," he said. "When I'm done, we'll each have a bullet left." From 30 feet, Tom lit two matches. Billy ignited one and clipped two.

Better documented are the results of gunplay October 26, 1881, when the Earp brothers and Doc Holliday met the Clanton gang at Tombstone's OK Corral. Animosity was high, so all combatants should have brought their best game. But after some 30 shots, at ranges averaging less than 10 feet, only three of the eight men died!

More recently, at a sight-in day on a shooting range, I asked 40 hunters who had just zeroed their rifles to take one offhand shot each at a 6-inch circle at 100 yards. Five hits resulted. By extension, one in eight of these shooters, eager to hunt, could lung-shoot a deer offhand at 150 yards! (The backing paper, 22 inches square, had just 30 holes; 10 hunters had missed that!)

So how did exhibition shooters hit smaller targets unerringly in the air? Dismiss as legend, if you will, claims that Ad Topperwein perforated postage stamps on tossed washers, and could nip the bullet of a lofted .32-20 cartridge without tearing the brass. Decades later, with video as proof, Tom Knapp heaved a stack of nine clay targets and shotgunned each before any struck earth. "But a shot pattern is forgiving!" you cry. Not the patterns Knapp used! "Targets in a hand-thrown stack fall fast and near each other," he told me. "Hitting two with one shot doesn't count. At exhibition distance, a shot cloud is little bigger than the target. I've had to hold for the bottom half of one bird to miss another." At jack-hammer pace! Knapp once used a .22 rifle to hit 13 hand-tossed aspirins consecutively.

Credit rare natural talent and long, disciplined practice for exceptional shooting. Blame nerves or excitement for muffed shots by amateurs.

Then there's the target. "Aim small, miss small" merits a magnet on your refrigerator. A narrow focus brings hits. But the target must suit the sight. Even up close, Tom and Billy must have had to peek around their revolver sights to see match heads...

Chest freezers don't come much bigger than the plate propped against the hill —the steel slab I'd missed a dozen times with loads tailored for the Long Journey. More bullets would nose into sand before, at last, the plate shivered. "Hit," grunted my spotter, wearily. "Can we go home now?"

Anyone who can miss a deer at 14 feet is ill-equipped to guide bullets through a mile of writhing Wyoming wind. Both failures left psychological scars. I sought professional help. "Maybe your target is too small," said the shrink,

after a pause. "How do you wish to be invoiced?"

Given the pulse bump and muscle twitch of pre-cadaver humans, blaming targets might seem a dodge. But without aim, pulse and twitch don't matter. And to aim, you must have a target.

"Center shots are made before they're fired," said Earl Wickman, who must have wondered, long ago, if I'd ever make a center shot. "Beyond the mechanics of position, you must center the target with, or in, the sight." He tapped ashes from a cigar thick enough to stopper a milk jug. "And keep it there."

Bullseye competition has deep roots. Evidently, English folk honed archery skills on the bleached skulls of cattle, a perfect shaft being one through the eye socket. A more uniform disk appeared on paper much later. By 1833 "bullseye" or "bulls-eye" had come to mean the center of a target. Soon the term also applied to a center shot.

A nascent National Rifle Association used bullseye targets in 1874 in a famous long-range match pitting the Irish champions against "any American team." Each squad would comprise six men, shooting at 800, 900 and 1,000 yards. With the cities of New York and Brooklyn, the NRA put up $5,000 to build a range for the September event on Creed's Farm, Long Island property offered by the State of New York. The Irish lost narrowly to Americans firing Sharps breechloaders and Remington Rolling Block .44-90s.

Iron sights sufficed even at those extended ranges. Palma matches with modern bolt rifles are still fired with irons. "The black" on targets for 800- to 1,000-yard stages comprises scoring rings from 8 up and measures 44 inches across. You can't distinguish the 10-inch X-ring without optics. But if your rifle is precisely zeroed and well-aimed, your bullet will find it. The black is proportionately smaller for closer shooting—1 ½ inches on targets for 50-foot indoor targets, with a 1/8-inch 10-ring. International targets are tougher. To score a 10 in the English Match with iron sights at 50 feet, we Olympic aspirants had to smack a dot the diameter of pencil lead. The 9-ring was slimmer than a .22 bullet.

Now, black bullseyes are intuitive marks. They're densest in the middle; you need only center the black to win. Animals are neither round nor sharply defined on manila paper. Their vitals are sequestered off-center in an irregular form, perhaps dappled by shade or partly obscured.

Instead of corralling a target with a ring, hunters superimpose a blade, bead, reticle or lighted dot. Faster and more versatile than a front aperture, these also hide part of the target. How much is obscured depends on the sight, target and distance.

The unaided human eye can distinguish about a minute of angle (an inch at 100 yards). That's if light is favorable, the image distinct. Any front sight covers a bigger area. Small sights afford precise aim but are hard to find fast in mottled cover or dim light. Barrel length affects apparent size. A 1/16-inch (.06) bead on a 22-inch-barrel appears about as broad as a deer's chest at 100 yards. That's big enough to grab your eye, small enough for accurate aim at open-sight ranges. Double rifles built for royalty during colonial days commonly had a small fixed silver bead, plus a big flip-up ivory bead for night shooting.

A blade front sight, cut with a reverse angle to nix glare and used with a 6-o'clock hold, excels in bullseye competition. For hunting, a flat-faced bead slanted to catch skylight, or one with a concave face is best. A convex bead reflects light in the direction of the sun; so you see a false center, then miss to the off side. "Gold," silver or brass trumps fluorescent beads, whose brilliance makes the sight appear larger than it is, and fuzzy. Fluorescence can also burn a sight picture into your eye; if the rifle moves, you can miss the shift. "Ivory" beads (now white polymer) stand out against all but snowy backdrops. When beads were real ivory, riflemen removed discoloration by washing them with grain alcohol, then placing them in the sun. I'm sweet on the Sourdough front sight, with a square, white or red inset at a 45-degree slant.

When your target is indistinct, partly hidden or

The 1/8-inch 10-ring of this 50-foot target is invisible in iron sights, "the black" appearing as a dot.

A perfect zero for big game hunting! But that colored bullseye is too small for scopes under 6x.

moving, a bold, crisp front sight can be priceless.

Reticles in hunting scopes must be easy to see too. In my youth a post-and-crosswire was popular—partly because it resembled the blade sight on infantry rifles, also because it came to eye instantly, even in forest at dusk. Thick enough to obliterate a bird bath, it covered little of the target because point of aim was at the post's tip, just above the horizontal wire. A 3- or 4-minute dot or heavy crosswire in the low-power scopes of the day hid vitals at distance. Both were effective because they were bold.

Firing at big game, you don't need a bullet-size point of aim. Like a bullseye competitor blind to the X-ring in yonder black dot, you can indeed hit what you don't see. A sight or reticle big enough for use in dim light or thick places will block your bullet's point of impact, and perhaps a dinner plate around it. That's okay, so long as there's enough animal around that to assure you the sight is where you want it.

The lack of a visible mark on game causes many misses. The animal isn't the target. Its vitals are; and they're hidden behind hair, hide, muscle and bone that may offer little help in finding them.

Recently a friend wounded a gemsbok, a tough creature. Trailing, we bumped it. It ran through a big opening, quartering off on a flat run at 50 yards. An easy poke. I knew and had often reminded others that "life lies between the shoulders." Still, I missed this bull cleanly, once ahead, once behind. The gray-dun beast galloping through gray-dun grass offered no distinct target. Black horns and face up front, black tail behind bracketed a void between.

Once in awhile the animal is charitable and provides a bullseye. A leopard crouched in tall grass gave me a spot, fortuitously on the shoulder. A blacktail buck showed me an eye and an antler base. Atop a zebra's foreleg, stripes form a triangle that frame the vitals. Many elephants have fallen to a bullet to the ear-hole. Such marks are uncommon; their utility depends on the animal's body angle.

A shot "between the eyes" has ended crises in crime novels as well in alder jungles, acacia thorn and long grass. It's an insightful bromide. Why not say "in the brain?" After all, where a bullet goes after passing the bridge of the nose is what matters. Still, we're hard-wired to mind visual cues. Intellectually, we know where a shot really takes effect; excitement simply buries logic. Witness the number of antlers struck by bullets!

When there's no external mark, the entire beast can become a net to catch the missile.

Targets for better shooting

"Aim small" doesn't mean your target must be tiny. You must see enough to align the sight. If a bullseye is too small, or there's no animal visible around your sight, you must move the rifle to check the sight picture. The 1-inch orange sticky-dot some hunters post optimistically can hide behind a crosswire. Instead of cranking up scope magnification, you're smart to use the power setting you would on a hunt, and a bigger target. Your eye is remarkably adept at quartering a disk. Once, a 3x scope and a bullseye the diameter of a football blessed me with a group miking .17 inch. That's unlikely to repeat anytime soon; but over the years, I've found sub-minute accuracy easier to tap with big bullseyes than with those barely able to peek from behind the reticle.

A 100-yard target 20 inches across isn't too big for iron sights. Gunmaker D'Arcy Echols, who equips many of his exquisite rifles with open sights, sells his inverted, "T" target, 15x22 ½ with bars 7 ½ inches wide. I find manila or light brown backing cuts glare and the "edge vibration" of black-on-white. A big white square on brown paper works nicely with iron sights or scope; bullet holes are easy to see.

Targets with layered faces that rim bullet holes with fluorescent color made for quick spotting, if not precise group measures. Some, though, are quite glossy. Non-reflective paper is easier on your eyes and may afford more accurate aim.

LEFT: At 200 yards a target like this requires a scope too powerful, a reticle too fine for most hunting.

Wayne favors a white square on brown or manila backing, sizing it to distance, scope magnification.

Archers who use traditional tackle must remind themselves to "pick a spot"—force the eye onto an unmarked landing zone for the arrow. Riflemen get an assist. There's no need to envision a spot; bead or reticle clearly indicates where the bullet will go. But even when beasts obligingly stand side-to in the open, many bullets land too far back. Reason: Game appears biggest near mid-rib. Aiming for an easy hit is as natural as aiming at a prominent mark. To kill, you must strike a smallish target you can't see.

Rules of thumb help you hit vitals when shot angles put them deep. "Shoot for the off shoulder" in elk quartering off. "Break the broomstick between the ears" on a facing elephant.

Sometimes what you see isn't what's there. A deer watching you from behind a screen of brush may be looking over its rump or standing side-to, torso left or right of center. The odds its body is lined up behind its neck might be relatively slim. On a slope, quartering game can add a vertical angle.

Once, stalking a bedded elk in a thicket, I had to stop when I spied a patch of nose. Another step would expose me. Mere feet away, I had no shot—and just seconds before my pooling scent detonated the bull. Leaning forward until his eye was almost visible, I spied just enough hair to locate the shoulder. The elk died instantly. Without that hint of hair, I'd have had no chance.

Then again, a bull in full view and just 80 yards below me in a steep draw stood untouched at my shot. Astonished, I fired again. Another miss! The animal had no idea where the noise was coming from. So I proceeded to miss again. Part of my problem was the presentation. Unaccustomed to making a spine shot from above while holding low to offset the angle, I misread the target. Unusual shots can also tempt us to break shooting routine, especially to horse the trigger and lift our head off the comb for a peek.

"Most missed shots are high," Jack Atcheson told me. No doubt. I've overshot more often than I've missed low, and have seen many high shots from other hunters. Game brought to bag in front of me has commonly been spined, rarely struck low through the lungs. An obvious fault is over-estimating range or bullet drop. Another, though, is seeing only the top of the torso. When grass or brush obscure the lower part, we tend to shift aim off the body's vertical center to the center of what we see. Sent to the middle of a beast's top half, your bullet barely catches the spine. If it goes high, it goes too high.

The biggest whitetail on my wall was bedded as I bellied through prairie cover, watching antler tips. At 70 yards, in thinning grass, I lay prone, crosswire bobbing gently on the heads of bluestem. The wind swung. The deer vaulted up, sun-fishing away. My natural reaction was to lift the rifle as the buck rose. But this shot was planned; my discipline held. The .25-06 fired as a blur of shoulder winked in the scope. Had I raised the rifle to center what I saw above grass, I'd have lost the moment or missed high.

Such planning is a luxury often denied. On my first safari to Zimbabwe, a huge eland burst from a thicket up close. The 3-minute dot in my 2½x Lyman Alaskan found the bull instantly, a 180-grain Speer from my .300 H&H on its heels. The beast crashed to earth. A drama just a few heartbeats, start to finish.

A handful of deer, an impala, a buffalo have met similar ends. Urgency can sharpen focus.

Choosing a bullseye to suit your sight at the range, and chanting "life lies between the shoulders" on the trail won't guarantee tight groups or killing hits. But behind every successful sight picture there's a proper target. ■

LEFT: Credit orange paint (and a GreyBull/Leupold scope) for five consecutive, 500-yard hits from prone. BELOW: Animal targets, with and without vitals drawn in, help you find point of aim where there's no mark.