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**MONSTER
SNUBBIE!**

S&W SURVIVAL KIT
.460 & .500

**VARMINTS
BEWARE!**
 RIP VAN
 VENTURINO
 AWAKES

**SUPER SCOUT!
RUGER FRONTIER
7MM-08**

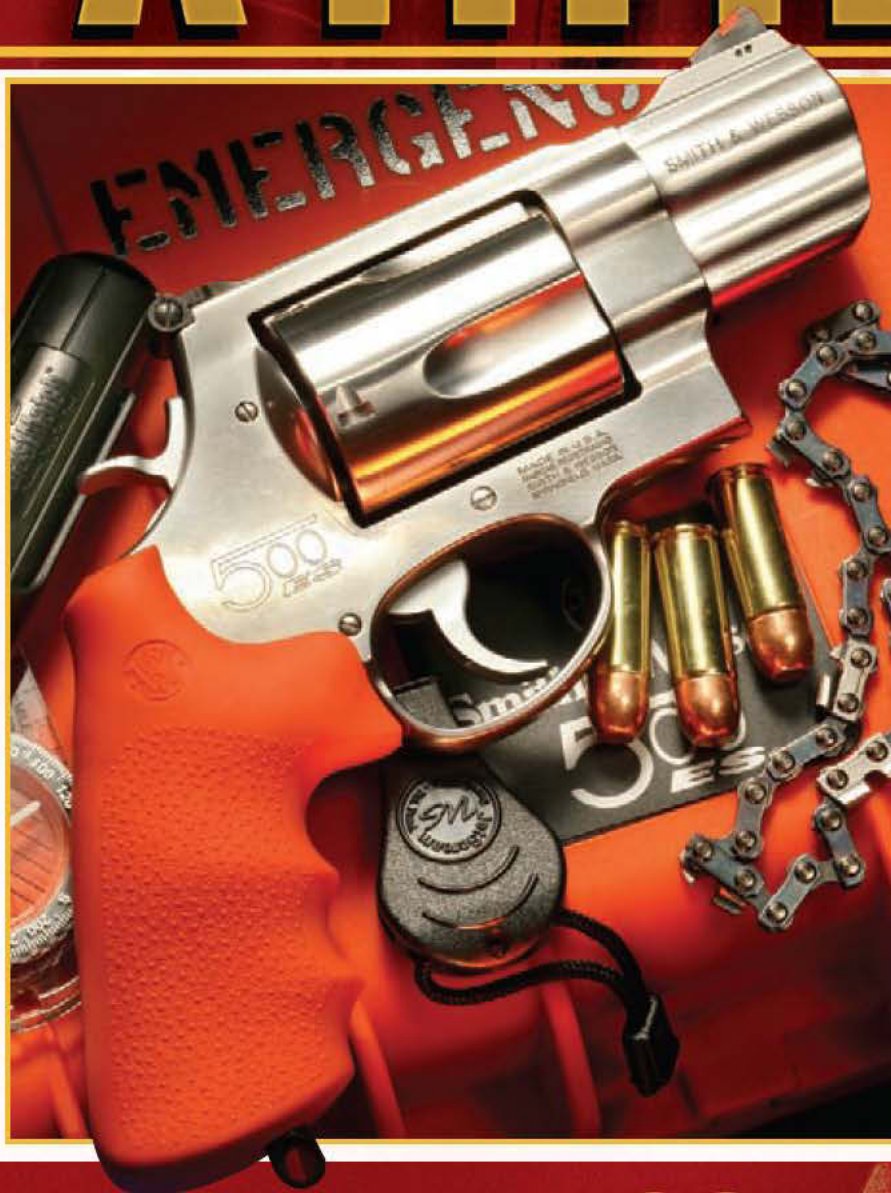
**SURPLUS LOCKER
SWEET SWEDEN
LJUNGMAN AG-42**

AFFORDABLE BIG BORES

- TAURUS 1911 .45 ACP
- CHARTER ARMS
BULLDOG .44 SPECIAL



X-FITTED FOR



The chill morning air gives you a bit of the shivers, but the walk to the stream a quarter mile away will warm you up. Fly rod and daypack in hand, you start blundering through the thick brush towards the sound of the murmuring water. Soon, you can see snippets of silver ahead and know you're there. You step out onto the gravel bar and look for a likely spot to set your lunch and other gear.

About 30 yards upstream, you see him poking around an old log. Cute little chap. Intent on rigging your rod, the light in your head comes on dimly and flickers a time or two before it brightens and you tell yourself "Hey, I sure hope he's an orphan." Vaguely uneasy, you look downstream and there she is, less than 50 yards away. Up on her hind legs glaring at you with those bleary, ursine eyes. Down she goes and here she comes. "Oh pooh," (or something) you yell to yourself.

Now what? You're on her turf. It's a long way back to the truck. You can run as fast as you want which is about half as fast as she can. Aren't many

These two S&W revolvers ultimate big-bore

SURVIVAL



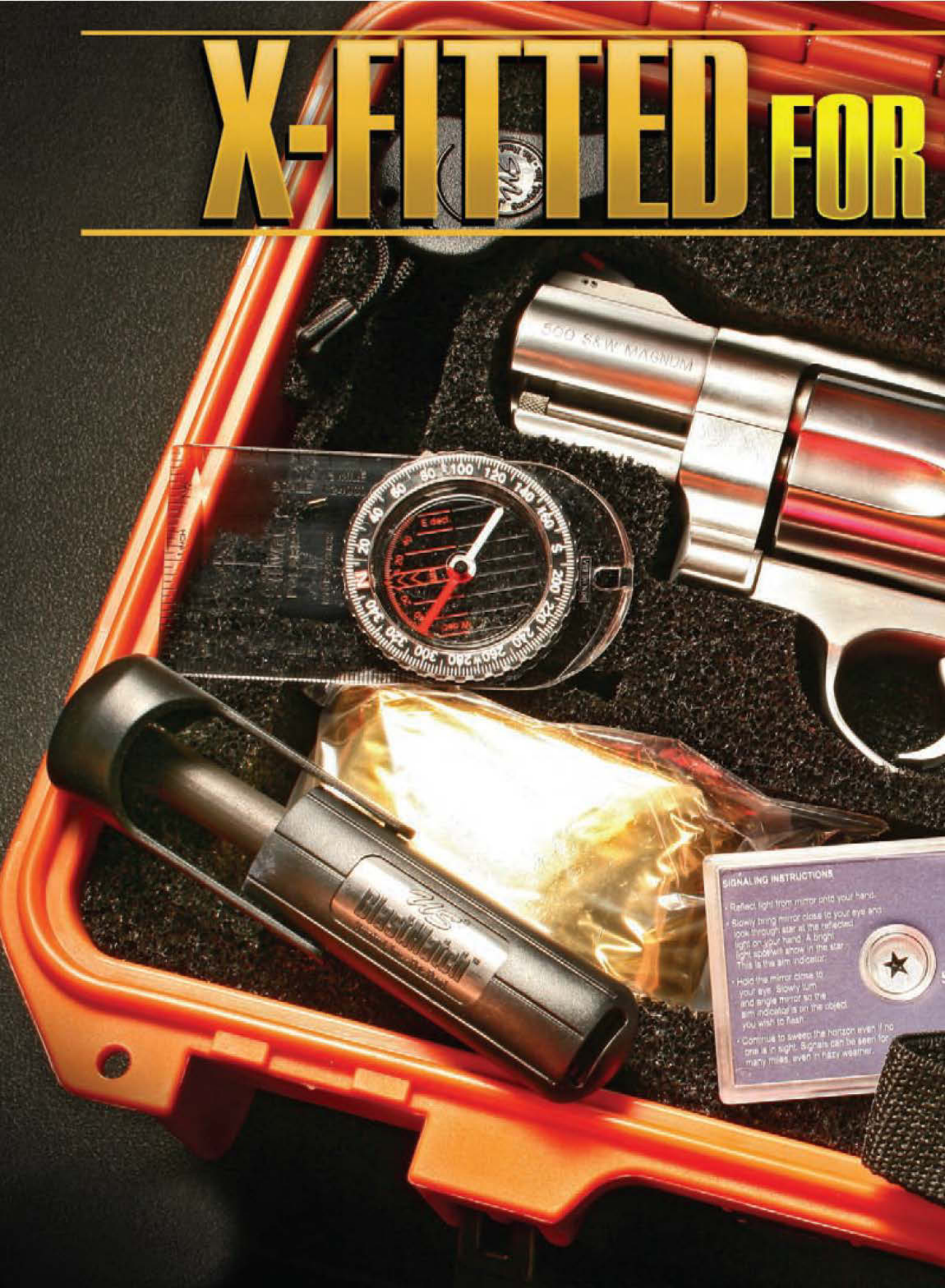
460 S&W MAGNUM

TRADE MARK
PERMANENT LIFE

Smith & Wesson

are the snubbies.

X-FITTED FOR

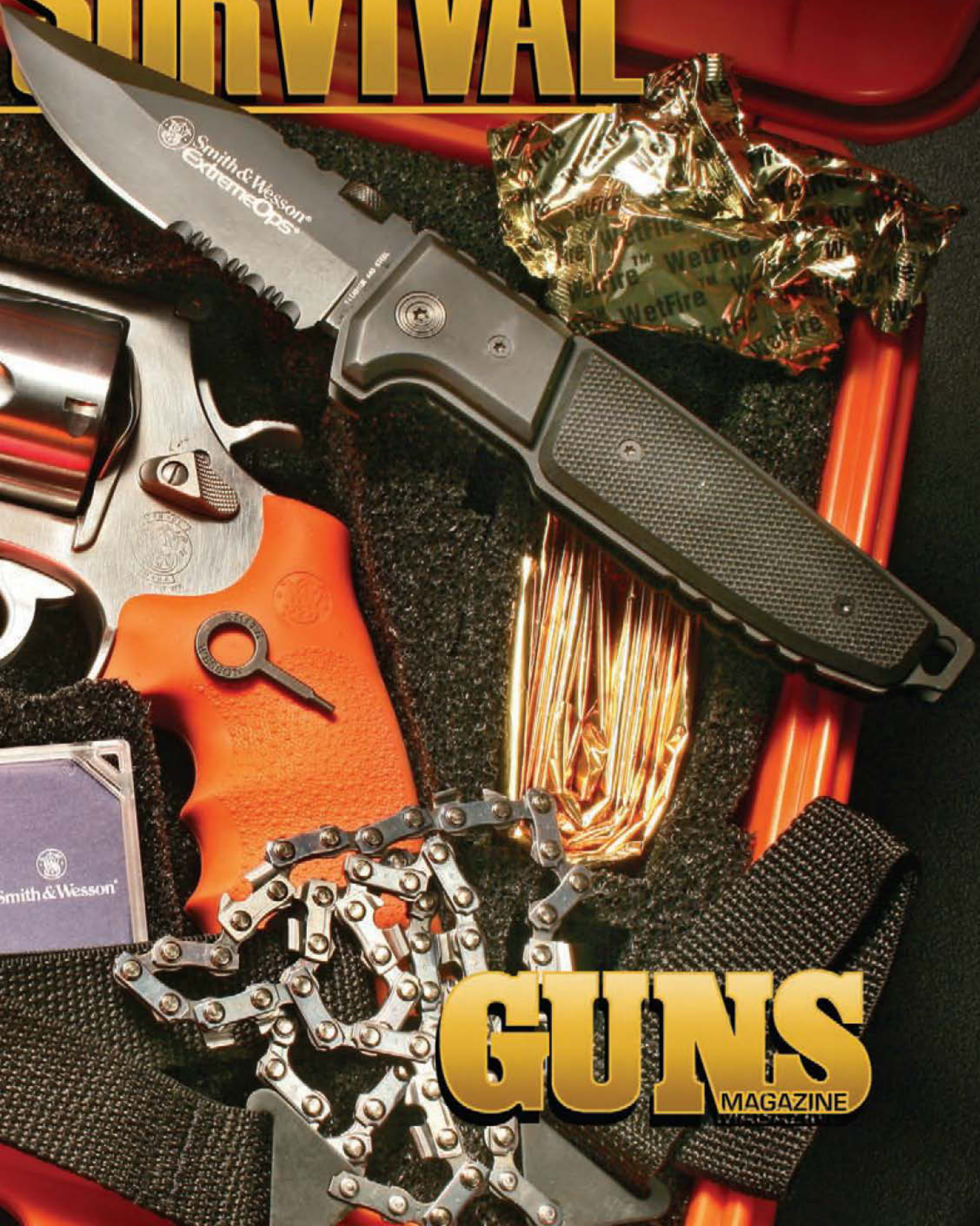


SIGNALING INSTRUCTIONS

- Reflected light from mirror onto your hand.
- Slowly bring mirror close to your eye and look through star at the reflected light on your hand. A bright light spot will show in the star. This is the aim indicator.
- Hold the mirror close to your eye. Slowly turn and angle mirror so the aim indicator is on the object you wish to flash.
- Continue to sweep the horizon even if no one is in sight. Signals can be seen for many miles, even in hazy weather.



SURVIVAL



Smith & Wesson

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The .500 Smith & Wesson in full song (above). Acclimating to the recoil is simply a matter of starting with low power loads and working up to the serious ones. Minute-of-bitter-bear accuracy shot at 30' (below) as fast as the gun would go. This is harder than it looks with the .500 Magnum in double-action mode.



The massive X-Frame cylinders hold five rounds of bear-stopping cartridges.



promising trees around. If you are in the Smokey Mountains and this critter is black and weighs 200 pounds and wants to make a big deal out of this, you can brain her with a rock, whip her with your fishing rod or simply beat the crap out of her and she'll probably clear off with Teddy in tow. If you are on a coastal stream in Alaska and she is brown and weighs 700 pounds, you're in trouble. You can stand your ground, point to your lunch, make some racket, wave your arms and otherwise make brave. Maybe you'll be lucky and she'll make a beeline for her cub and they'll beat it. Less lucky, you'll get knocked around some, gnawed on a bit, nothing a couple hundred stitches and rehab can't fix and then they'll beat it. God help you if she is hungry or has a real chip on her shoulder

A Better Ending

You let fly a couple of warning shots into the dirt in front of her and she gets the picture and leaves with Junior. Worst case, she charges for real, head out, ears back, thoroughly unrestrained by the Geneva Convention and you start shooting and kill this thing 20' away. It isn't like we don't know this can happen. The Lewis and Clark expedition recorded perhaps the first description of an encounter with a grizzly bear on this continent more than 200 years ago. Relations between the various members of the bear clan and human interlopers have been strained ever since. Every year to this day terrifying and often deadly encounters occur. While the statistical risk is very low, it is still high enough to warrant preparedness. But how do you prepare for such a nerve-wracking eventuality?

There is no specific right answer, though it sure helps to bring a gun to the fight. While this treatise is not about the philosophy, skills and strategies of dealing with bears, gun choice can't be considered in a vacuum. The really dangerous bears are largely confined to Alaska (with a smattering in Wyoming and Montana), so conditions there govern the discussion.

Conditions vary from the open areas around water to impenetrable undergrowth where visibility is measured in feet. Bear encounters range from near

consensual to startlingly sudden and heart-stopping. In the unlikely event you encounter a bear intent on hurting you, your prospects are probably mixed at best and good luck may turn out to be your best friend no matter how well armed and prepared you are. But you sure can help make your own luck.

Aside from the obvious requirement of having a gun handy, you've got to be pretty handy with the gun you have and have a gun adequate to the job. My guess is most Alaskan guides and veteran residents hold handguns for protection against bears in low esteem, especially in the hands of outlanders. While both Alaskan guides I know and hunt with carry accessible heavy revolvers in belt holsters, they always seem to have a heavy rifle close to hand. Neither would be so foolish as to employ a handgun to back up a hunter, which ought to tell you a lot about handgun effectiveness.

Unfortunately, there are all too many situations sportsmen encounter where a rifle is as handy as an extra navel. Like in the middle of a salmon stream, for instance. Since, in my humble opinion, a heavy revolver beats a sharp stick, I'll take my chances with one. Besides staying home by the fire and reading about fishing and hunting is not one of the options.

Bruin Fodder

Bears of any stripe are extremely tough, hardy creatures and won't dependably succumb to trivial guns. Outdoorsmen have carried backup revolvers for a long time but only in the last couple of decades or so have there been truly effective choices. The .44 Magnum is probably the minimum caliber for the job and, while we've had the Smith & Wesson M29 and Ruger Blackhawk since the middle '50s, we've had useful, high-performance, heavy-bullet ammunition only for the last decade or so. Freedom Arms put the .454 Casull on the map, which was probably the first seriously effective cartridge available.

However, law-enforcement officers of the last century carried double-action revolvers for good reason — they could be loaded and fired much faster. Same advantages apply where bear defense is concerned. Custom

SPEED DRILL TABLE

MODEL / CALIBER AND BULLET WEIGHT / TIME TO EMPTY (SECONDS)

M1911	.40 S&W 180	.81
S&W M629 MOUNTAIN GUN	.44 Mag 240	2.04
S&W ES X500	.500 Special 275 CorBon	2.29
S&W ES X500	.500 Mag 500 Grizzly (4 shots)	3.65
S&W ES X460	.460 S&W 200 CorBon	5.79

Notes: Time was the product of firing 5 shots at 10 yards as rapidly as possible.

EX 460 AND EX 500**Maker:** Smith & Wesson

2100 Roosevelt Avenue

Springfield, MA 01104

(800) 331-0852, www.smith-wesson.com**ACTION TYPE:** Double-action revolver**CALIBER:** .460 S&W, .500 S&W**CAPACITY:** 5**BARREL****LENGTH:** 2¾"**OVERALL****LENGTH:** 9"**WEIGHT:** 54.8 ounces**FINISH:** Stainless steel**SIGHTS:** Red ramp front,
adjustable rear**GRIPS:** Hogue sorbothane rubber**PRICE:** \$1,399

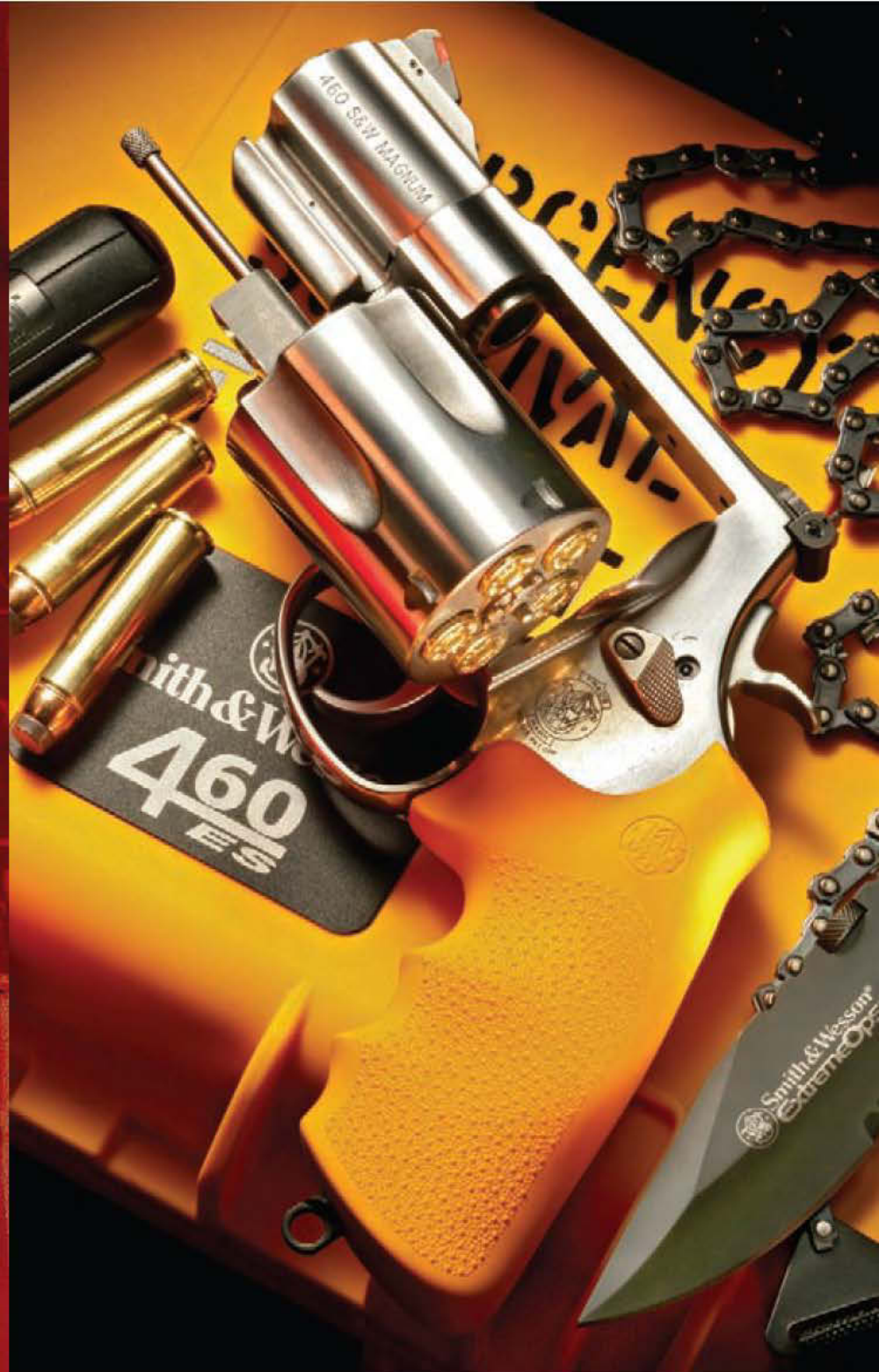
revolver-makers have been building powerful backup double-action guns for a couple of decades now, but only in the last couple of years have we had the happy confluence of truly effective cartridges paired with production double-action revolvers. The new Smith & Wesson X-frame revolvers chambered for the .460 and .500 S&W cartridges have ushered in a new era in revolver performance.

No other repeating handgun has the raw horsepower of a full-size .500 S&W Magnum. A solid hit with heavy-bullet .500 will stop (kill very dead) a big bear, no question. But the first X500 revolvers were mammoth 5-pound guns, so the clamor for a more practical variation in the form of a 4" model started immediately. Even so, that gun was still too cumbersome for serious holster use. Enter the latest versions, the 460 and 500 ES (Emergency Survival) guns.

Based on the X-frame, these guns feature cylinders 1.920" in diameter and 2.300" long to handle the 1.800"-long cases of the high-pressure .460 and .500 S&W cartridges. Internally, the guns have the familiar S&W action. The receiver, aside from size, differs from the smaller family members with its unique front crane lock, which eliminates the weaker barrel-mounted front bolt, which ordinarily engages the ejector rod. Barrels on other models sport muzzlebrakes.

No Brakes

The new ES models, on the other hand, have 2¾" barrels without brakes. According to my handy RCBS scale, the .460 weighs 55 ounces, the .500 52 ounces. The orange Hogue grips are a clue these are not toys but serious working guns. More importantly, the grips have a giant swivel stud on the butt to accept snap-link style or homemade cord lanyards, vital to effective gun retention around water, ATVs and horses. Perhaps the most unique fea-



Both the .460 and .500 come in color-coded waterproof Storm Cases with a variety of survival tools including Blast Match Firestarter and WetFire tender, Saber Cut saw, Smith & Wesson Extreme Ops Liner Lock Folding Knife, Star Flash signal mirror, Jet Scream whistle, Polaris compass, two MPI Mylar Space emergency blankets and Bear Attacks of the Century — True Stories of Courage and Survival book by Larry Mueller and Marguerite Reiss.

ture is the packaging, a giant, waterproof lunchbox filled with gun, assorted survival tools and a book on bear attacks well worth reading. Both guns proved to be wonderful revolvers.

I'll have to admit I wasn't prepared to like these guns, based on my first

encounter with the 8¾" .500 model. Weighty and ill balanced, it was as awkward and clumsy as any "handgun" I've ever encountered and made shots in field positions a dreary enterprise. The gun fairly leaped into the air and tried to take me with it

when fired off-hand with heavy 450-grain loadings. Worse still, once out of nearly every cylinder load fired, I got a misfire, which I believe occurred not because the gun malfunctioned but because my trigger finger bounced around in the triggerguard in recoil and hit the trigger hard enough to drop the cylinder bolt and allow the cylinder to run backwards, aligning the fired chamber for the next shot. Not a real morale builder.

The ES models are a radical departure from the long-barrel guns in the behavior department. While still not lightweights — about the same as a .454 Ruger Super Redhawk — the ES guns are plenty agile and handy since the weight is all concentrated close to your hands thanks to the stubby barrels. Recoil is surprisingly survivable for reasons we'll touch on in a minute. Neither

the .460 nor the .500 exhibited any mechanical quirks in our shooting drills.

In view of potential wear and tear on the shooters, we decided to confine our testing activities to chronographing the ammo, running some speed drills and some very casual plinking. Like most serious working guns, these are made to carry, not shoot. Recoil simply takes a lot of the fun out of playing with them. They were designed for one purpose, to defend against dangerous animals, not pirates, so we figured shooting at the B27 silhouette target at about 10 yards would be reasonably realistic and give us some idea of the shootability of these guns.

Time Vs. Pain

Less concerned about elapsed time from the buzzer to first shot, we recorded the elapsed time from shot

one to shot five, just to see how long it would take to empty the gun onto the target. Bears move with astonishing speed, so this is a critical measure of performance. These numbers would exist in a vacuum otherwise, so we also shot some familiar guns to set the timing benchmark and put all this into perspective. Just to give the guns a fair shake, I conned friend Mark Dye, an athletic master-level IPSC shooter (who can probably bench-press 300 to 400 pounds), to handle the shooting drills. The accompanying table shows the results and offers a good deal of instruction.

Not surprisingly, the low-recoil autoloader emptied five in less than a second. I was surprised to see the M629 .44 Magnum revolver run almost as fast. The CorBon .500 Special loads with 275-grain bullets were nearly as quick. The .460, on the other hand, seemed to lumber on forever, taking over a second per shot with the 200-grain DPX CorBon round. Mark could not complete the string with the .500 loaded with the Grizzly Cartridge 500-grain cast bullet load. Despite the sticky Hogue grips, the gun got out of position in his hands so badly so quickly he nearly dropped the gun. Grimacing and shaking his hand in pain, I wasn't sure if we were still friends. To his enormous credit, Mark kept all but one shot from all these guns inside the seven-ring.

We knew going in recoil was going to impair the shooter's performance a great deal. We also knew the 2¾" barrels would reduce muzzle velocities considerably which would, in turn, mitigate recoil to a degree. I would not care to shoot a 500-grain bullet at 1,550 fps out of a 52-ounce gun unless it's the only thing standing between certain mauling and me.

That said, with a bit of practice and familiarization, a seasoned handgunner can handle these guns with even the heaviest loads. While gun recoil energy is high, gun recoil velocity is not. I did not find the .500 any more troubling to shoot than the 26-ounce .44 Magnum M329 loaded with 310-grain bullet Garrett cartridges. The .500 weighs twice as much but has twice the horsepower, the moral equivalent of a stoutly loaded .45-70 rifle in a 52-ounce package. A huge help is the Hogue grip, which has a sorbathane pad at the hump in the frame behind the hammer. While nobody can really control the circumstances where one of these guns might be deployed, the secret to maximizing a shooter's effectiveness lies in ammo selection.

CorBon makes three .460 and six .500 cartridges while Grizzly Cartridge Company offers seven .500 loadings. These range in power from the pleasant



AMMUNITION MUZZLE VELOCITIES

Brand (factory)	Caliber (bullet weight & type)	Velocity (fps)	Energy (ft-lbs)
CORBON	.454 Casull 250 DPX	1,460	1,383
CORBON	.460 S&W Mag. 200 DPX Spitz	1,878	1,566
CORBON	.460 S&W Mag. 300 JSP	1,592	1,689
CORBON	.460 S&W Mag. 395 Hard Cast	1,381	1,673
CORBON	.500 S&W Special 275 Barnes X	1,115	759
CORBON	.500 S&W Special 350 FMJ	1,118	971
CORBON	.500 S&W Mag. 400 JSP	1,413	1,774
CORBON	.500 S&W Mag. 440 Hard Cast	1,360	1,807
GRIZZLY CART.	.500 S&W Mag. 350 Hawk BCFP	1,092	926
GRIZZLY CART.	.500 S&W Mag. 360 LFNGC	1,115	994
GRIZZLY CART.	.500 S&W Mag. 370 HC Cast Perf	1,436	1,694
GRIZZLY CART.	.500 S&W Mag. 400 BCFP	*1,450	1,868
GRIZZLY CART.	.500 S&W Mag. 440 WFNGC	1,329	1,726
GRIZZLY CART.	.500 S&W Mag. 450 Hawk BCFP	1,174	1,377
GRIZZLY CART.	.500 S&W Mag. 500 LFNGC	1,238	1,702

Notes: Velocity is the average of three shots at 15'. *Factory listed velocity only. No velocities recorded, but we did score a one-shot kill on the PACT chronograph sky screens.

CorBon 275-grain bullet .500 Special loading to the brutal Grizzly 500-grain bullet .500 Magnum. A wise shooter will try several different cartridges to ascertain the maximum amount of power he can handle. Ammunition from both firms was of first-rate quality. Every cartridge yielded minimal shot-to-shot velocity variations over the chronograph (our minimalist sampling notwithstanding).

No Jumping Allowed

I was very worried the high-velocity, heavy-bullet loads would exhibit bullet crimp jumping. The 440-

grain CorBon and 500-grain Grizzly .500 cartridges showed only about .005" bullet movement in four rounds thanks to heavy roll crimps and the extremely high neck tension obvious from the bullet's grease groove shadows in the brass. Shooting on a rainy, overcast afternoon, I would have expected visible muzzle flash in such short barrels but saw virtually none, a credit to propellant selection.

As for which of the two guns is best suited to the job, I'd have to pick the .500 simply because I believe it to be the most effective if you subscribe to the Taylor Knockout Value numbers. Taylor was an African hunter with vast experience who devised a formula to measure the relative effectiveness of cartridges on big game animals.

Based on bullet weight, velocity and diameter, Taylor's scale has over the years proven a fairly accurate indicator of a cartridge's performance in stopping game even though it does not take into account bullet design and construction. The .460 shooting a 395-grain bullet scores 35 while the .500 loaded with a 500-grain bullet scores 44, a significant difference. Josef Stalin once opined quantity has a quality all its own, an observation equally applicable to armies and Taylor Knockout Values.

Smith & Wesson has succeeded in building affordable, effective, backup guns for bear country. With a bit of practice, most shooters will be able to use them effectively. Deployed in an accessible holster, I cannot think of a production revolver I would prefer to have in a clutch more than the .500. My only complaint is the survival kit doesn't contain a satellite phone, 25 gallons of Evian bottled water and 50 pounds of Snickers bars.

Editors note: A comparison of various Taylor Knockout Values for guns from the .22 LR up through the .500 X-



The business end of the .500 S&W would impress any sentient being. The problem is bears aren't exactly sentient.



The firing pin is contained in the frame of the ES Series following new S&W tradition.

Frame is on www.gunsmagazine.com. We'll also post a comparison of the advertised velocities of .460 and .500 Magnum ammo taken from 8 1/2" barrels to the actual velocities as shown in the accompanying chart.



A more recent development (above), the .460 S&W Magnum already has an adequate selection of cartridges available from CorBon and has the advantage of handling the .45 Colt and .454 Casull, both loaded in endless variety. A .500 S&W Magnum cartridge for every occasion (below).



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