

Short and Fat

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Photographs by Author

**The new short magnums are all the rage.
Are they fad, fantasy, or fantastic?**

Collectively, the short magnums are one of the biggest things to hit the centerfire rifle world in many years, possibly even

surpassing the excitement of the first "magnum craze" back in the late '50s and early '60s. I have to admit that this has been a great boon to many of us in the industry. We writers have had a rush of new cartridges (and rifles chambered to them) to shoot and write about. You have no idea how wonderful this is because it keeps us from being forced to turn on our imaginations to come up with story lines on the same old cartridges that are somehow just a wee bit different! Obviously the manufacturers of both rifles and ammunition have benefited as well. Not only have they sold a fair amount of new product, those same old cartridges and rifles have benefited more than you might imagine from the media blitz (and advertising hype) surrounding the new short magnums.

Have we, the hunters and shooters, benefited as well? That's probably the best question. Do the new short magnums really offer something new enough and good enough for us to spring for? I'll answer that question up front. Yes, but it's a very guarded "yes." Okay, well, if you're a rifle nut like I am it isn't guarded at all. The new short magnums give us excuses (as if we need any) to own more rifles! On the other hand, if you're more of a hunter than a rifleman, or if you're the kind of person that only wants to own, care for, and store the minimum battery actually needed, then that "yes" becomes very guarded indeed.

The new short magnums (all of them!) have genuine benefits, but they are not revolutionary developments offering exponential gains over our tried-and-true favorites. There are gains in some areas, but not in others. I think the success of the short magnums is



Lazzeroni's line of short magnums, with a very fat 2.015-inch case, includes most popular bullet diameters from .243 to .416. This proprietary line was the first commercially available unbelted short magnums and remains the fastest in all bullet diameters.

There's nothing wrong with the old .270 Winchester, and the .270 Weatherby Magnum is a great cartridge. But I rate the .270 WSM as one of the best mountain-game cartridges ever.

In terms of velocity, the RSAUM and WSM cartridges are best compared to standard (.30-06 length) belted magnums, while the Lazzeroni line is best compared to full length (.375 H&H length) belted magnums.

.300 RSAUM



.300 WSM



.300 WIN. MAG.



.308 PATRIOT



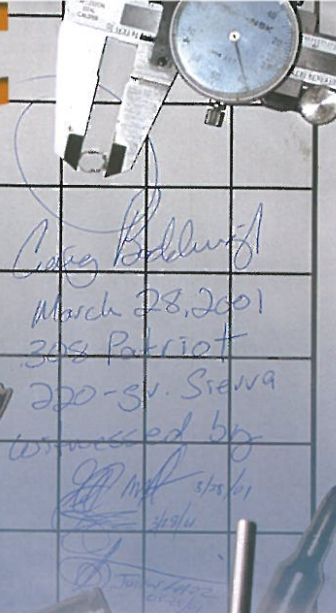
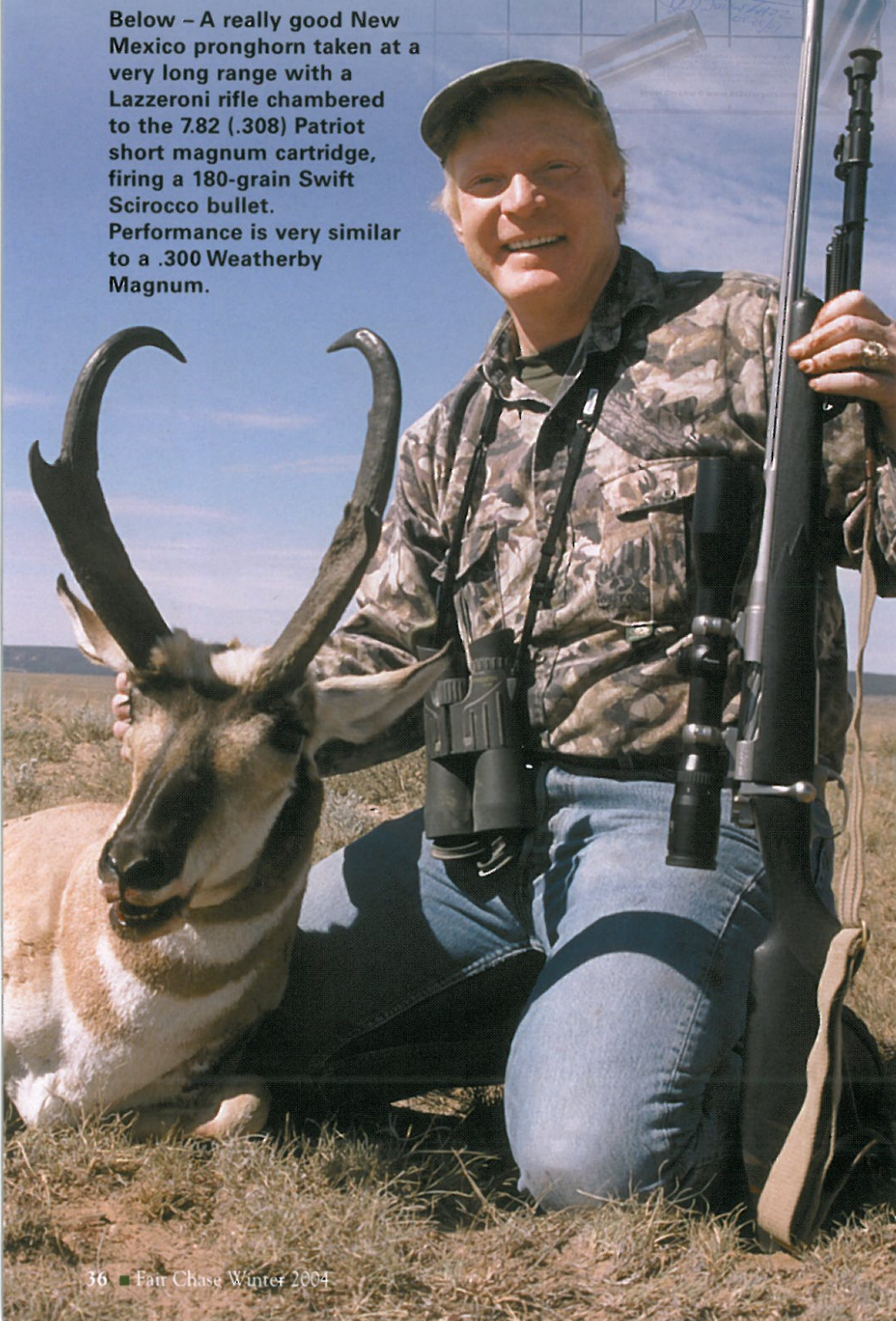
.300 WEATHERBY MAG.



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Measuring an incredible .010-inch (.040 outside, minus the .308 bullet diameter), this is the tightest group I have ever shot. It was fired with an out-of-the-box Savage 110 in Lazzeroni's 7.82 (.308) Patriot, firing Lazzeroni ammo with 220-grain Sierra round-nose bullets.

Below – A really good New Mexico pronghorn taken at a very long range with a Lazzeroni rifle chambered to the 7.82 (.308) Patriot short magnum cartridge, firing a 180-grain Swift Scirocco bullet. Performance is very similar to a .300 Weatherby Magnum.



absolutely wonderful and also much deserved. But I also hope that those who go that route really understand what they are buying into, which is exactly what this article will attempt to articulate.

EVOLUTION

"Magnum" cartridges have been around since the blackpowder era. The word was taken from a French designation for an extra-large bottle of champagne, which is very apt. The word was borrowed by the British gun trade in the 1880s to differentiate cartridges with larger, bottle-necked cases that used heavier powder charges to achieve higher velocities than existing cartridges (initially, from that same company). In other words, at least in the original sense, a "magnum" had to be a larger-cased, faster (and/or more powerful) version of a previous cartridge in order for the magnum suffix to be truly appropriate. During that first "magnum craze" nearly a half-century ago the term became both overused and misused; in fact, there were a number of cartridges introduced that were "magnums" in name alone.

This does not apply to any of the short magnums. None of them are available in new or unique bullet diameters, and all of them offer a higher level of performance than some existing cartridges. On the other hand, and here is where you need to pay attention, none of them offer performance (as defined by velocity and energy) levels that are unavailable in cartridges that have existed, in most cases, for decades.

Two things about the short magnums appear different. Obvious is their extremely fat and very short cases. Almost as obvious is their lack of a belt, which, since 1912, has almost universally defined a "magnum" cartridge. In concert these two characteristics make the short magnums, if not altogether unique, at least a bit different. Taken separately, neither concept is either.

There are two stories about the origin of the belt, a thick ring of brass just ahead of the extractor groove that defines a "belted cartridge" (but does not define a "magnum cartridge.") In essence it's one of four common headspacing indexes, meaning the mechanical device that insures proper cartridge to chamber fit. Rimmed cartridges (like the .30-30) headspace is on the rim. Rimless straight cases (mostly pistol, like the .45 ACP) headspace is on the case mouth. Rimless bottleneck cartridges (like the .30-06) headspace is on the shoulder. Belted cartridges headspace on the belt. Shoulder headspacing requires a more precise case fit than belt or rim headspacing. A more precise case-to-chamber fit is conducive to bet-

ter accuracy, so shoulder headspacing is usually considered more desirable.

The other story about the belt is that it was developed in the early days of smokeless powder, which caused much higher pressures and sometimes caused case failure in the early cases made from coiled brass wire. The belt causes extra thickness at the base, and may have been intended, at least in part, to give the appearance of greater strength. It really does not. Case failure was cured by a shift from coiled to drawn brass, and this was done long before the first belted cartridge showed up. Come to think about it, this business of more precise headspacing also doesn't hold a whole lot of water. A belted case will allow a sloppier case-to-chamber fit, while shoulder headspacing requires a more precise fit. However, properly manufactured (or handloaded) belted ammo will have just as precise a fit as rimless ammo loaded with the same care.

The first popular belted cartridge was the .375 H&H Magnum. From 1912 into the 1990s most rifle cartridges called "magnum" have worn a belt — but, other than marketing hype and the fact that most magnums were based on the .375 H&H case— there has never been a sound reason for the belt. It has nothing to do with performance. Most of the new high performance cartridges, both short and long, no longer have a belt, but going back 90 years there are plenty of other examples of rimless cartridges that delivered "magnum" performance. In the teens, Charles Newton's family of cartridges (.256, .30, and .35 Newton) delivered similar performance to the belted .264, .300, and .338 Winchester Magnums from a slightly fatter, unbelted case. In Europe, the large cased, rimless, and quite popular 6.5x68 and 8x68S are unbelted magnums by any definition.

This business about a short, fat case is also not all that new. It has long been known that cartridges that are wider in relation to their length achieve a higher level of efficiency than long, slender cartridges. This is because the primer flame has immediate access to a greater percentage of the powder charge. The more rapid and uniform ignition delivers a bit more energy per grain of powder burned, and the smooth burning curve is also conducive to better accuracy. This is why, with a much shorter case and much smaller powder charge, the little .308 Winchester comes so close to the .30-06 in performance, and why it is considered a more accurate cartridge. This is also the theory behind the short, fat-cased PPC cartridges popular among benchrest shooters and varmint hunters.

Insofar as magnums go, short and fat also isn't altogether new. Most of our "stan-

dard length" (essentially 2.5 inches, similar to the .30-06) cartridges were based on the .375 H&H (or its progeny, the .300 H&H) case shortened and necked this way and that. These cartridges include the 7mm Remington Magnum and the .264, .300, .338, and .458 Winchester Magnums. Clear back in 1966 Remington took another step, shortening the same case to 2.170 inches and necking it to accept a .264 bullet for the 6.5mm Remington Magnum and a .358-inch bullet for the .350 Remington Magnum. These were the first "short magnums." Both are belted cases, far from the greatest sin a cartridge could have, and both benefited from a case that was fatter in relation to its length. Neither has been especially popular, although the .350 has made a bit of a comeback recently.

The new short magnums, then, combine unbelted with "short and fat," taking this latter attribute a step farther by using fatter cases than have previously been standard. This doesn't mean the case designs have been all new. Truthfully, there isn't much new under the sun in centerfire ammunition. All of the makers can and do claim that their cases have been designed from scratch, which has some truth if you talk about interior dimensions to enhance case strength. Outer dimensions, however, are somewhat familiar. The long Remington Ultra Mag cases are based on the fat .404 Jeffery case, with a base diameter of .550. Remington's Short Action Ultra Mags use this case cut down to 2.015 inches (the 7mm version has a slightly longer case at 2.035). Lazzeroni's cases, both short and long, are very similar externally to the fatter (.580-inch base diameter) .460 Weatherby family of cases, which, in turn, is pretty much a belted version of the old .416 Rigby case. The Winchester Short Magnum cases, with a length of 2.1 inches, are similar in diameter to the Remington, but not identical with a base diameter of .555 inches. If you look at them very closely you will find they are much like a rimmed, blown out version of the .348 Winchester. Both the Winchester and Remington short magnums use a rebated rim, meaning a rim that is smaller than the base diameter (.535 and .534, respectively) to enable these cartridges to fit the bolt face of standard magnums based on the .375 H&H case, which has a rim diameter of .532-inch.

THE LAZZERONI LINE

The cartridges designed by John Lazzeroni are almost-pure proprietary cartridges. The impurities come from rifles chambered by custom makers, plus limited runs of both Savage and Sako rifles chambered to a few of his cartridges. The only source for both ammo and brass is Lazzeroni Arms. Both are exper-

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sive, which is partly what proprietary cartridges are all about. Whether or not you are interested in paying the freight for Lazzeroni ammo is up to you, but in both correctness and fairness there are two things that must be made clear.

First, John Lazzeroni created the first commercially available unbelted short magnum cartridges. A longtime wildcatter and hunter, Lazzeroni has achieved considerable success in the unrelated world of helmet communications systems for motorcyclists. This gave him the ability to develop his own line of proprietary long magnum cartridges and launch Lazzeroni Arms in the early 90s. As he tells it, it was fairly early in the game when, at a show, a potential customer asked him if he could "cut down" one of his long (2.015 inches) cases.

Why not? That launched the extensive family of Lazzeroni Short Magnums. The two most popular are the 7.21 (.284) Tomahawk and the 7.82 (.308) Patriot, but the offerings run the gamut in most popular bullet diameters from 6mm (.243) all the way up to .416. Savage has done runs of Model 110 bolt actions chambered to both the Tomahawk and the Patriot. Unfortunately, Lazzeroni's wide case and full-diameter rim is too large for a great many commercial actions to handle. John Lazzeroni is a good friend of mine, and I think he hoped that some of the "majors" might pick up his cartridges. With the exception of Savage this didn't happen, but it was apparently obvious enough that he was onto something good. Lazzeroni should be given a lot of credit for spurring the development of the rest of the short magnums.

The second important point about the Lazzeroni short magnums is that, in terms of velocity, they are at the head of the class. This is primarily because that extremely fat case has considerably more powder capacity than the Winchester or Remington offerings, but also because, as a small proprietary manufacturer, Lazzeroni loads ammo to higher pressures than the majors are comfortable with (this is not unheard of; many Norma loads, including those for Weatherby, are "hot-

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ter” than domestic commercial loads).

As we will see, the Winchester and Remington short magnums come pretty close to the velocities of standard (.30-06-length) short magnums. The Lazzeroni short magnums exceed this performance by a considerable margin. With light and medium-weight bullets they knock on the door of full-sized (.375 H&H-length) magnums. In other words, the 7.21 (.284) Tomahawk comes very close to 7mm STW performance, and the 7.82 (.308) Patriot comes very close to .300 Weatherby Magnum performance.

Of the Lazzeroni short magnums the one I have the most experience with is the Patriot. In both Lazzeroni and Savage rifles I have obtained superb accuracy. And, while there is still a bit of “blue sky” in published figures from some manufacturers, I have never found this with Lazzeroni. The velocity of his loads is clearly marked on the box, and over a chronograph, provided the barrel length (which is also on the box) matches the specifications, his velocities have always been right on the money—sometimes with a small bonus, never with a shortfall.

Just the other day, shooting a Lazzeroni Patriot, I made a bad first shot on a pronghorn. The country was very open, and when we caught up the animal was a long, long ways off. I was shooting a Swarovski with a mil-dot reticle. I held the 500-yard dot a bit high and a fair amount into the wind, and the 180-grain Swift Scirocco hit precisely behind the shoulder. The ammo is expensive, but this is the kind of performance I have come to expect.

WINCHESTER SHORT MAGNUMS

The Winchester family of short magnums made its debut with the .300 Winchester Short Magnum in 2000. They followed just a year later with the .270 and 7mm WSMs. Then they took a break and cut the case still further to 1.670 inches, creating the Winchester Super Short Family. In 2004, as I write these lines, the fourth Winchester Short Magnum, the .325 Winchester, bullet diameter .323 (8mm) has just been introduced.

The .270, 7mm, and .300 WSMs cash in on the efficiency of the short, fat case by producing velocities very similar to the .270 Weatherby, 7mm Remington, and .300 Winchester Magnums, respectively, while burning about 10 grains less powder. With careful handloading it is absolutely true

that the traditional belted magnums can still exceed WSM performance, but the difference isn't worth arguing about. The new .325 WSM, uniquely, sort of

comes into its own class since there is no standard belted magnum to compare it with. It cannot, of course, approach the velocity of the .375-length 8mm Remington Magnum, but it looks pretty darned good with a 180-grain bullet at 3,060 fps, a 200-grain bullet at 2,950, and a 220-grain bullet at 2,840 fps. This compares quite favorably to the .338 Winchester Magnum.

In use, I consider all of these cartridges pretty much identical in performance to standard belted magnums of similar caliber. All tend to be very accurate. The .270 WSM and the .300 WSM, at least so far, are the most popular of all the short magnums. I have used the .300 quite a bit, and I like it. My intention is not to pick favorites, but I must say that my personal favorite is the .270 WSM. I generally use a 140-grain bullet at about 3,200 fps. This is a lot faster (as much as 250 fps) than the same bullet from a .270 Winchester, and with the short action the rifles are considerably lighter than a .270 Weatherby would be. Also, and this is important, the efficiency of that short case is such that longer barrels aren't needed. Figures for Weatherby cartridges are calculated from a 26-inch barrel. A 24-inch barrel is all you need for the short magnums, and they do surprisingly well with a 24-inch tube.

REMINGTON SHORT ACTION ULTRA MAGNUMS

Remington had introduced four full-length “Ultra Mags” when Winchester started their WSM family. Legend has it that a shortened version of the Ultra Mag was already on the drawing board, but Winchester beat them to the punch and, so far, has enjoyed considerably more commercial success.

Since Winchester was already on the market with a 7mm and .300 WSM one might question Remington bringing to market their 7mm and .300 Remington Short Action Ultra Mags just a year later. Remington's problem was that, at 2.1-inch case length, the WSMs were just a bit too long to fit into Remington's little Model Seven action, which was tightly built around the 2.015-inch .308 Winchester case. With case lengths of 2.015 and 2.035 (.300 and 7mm), the RSAUMs fit just fine.

The existence of such similar-appearing cartridges has been confusing, but it need not be. The 7mm and .300 RSAUM have a

bit less case capacity than the WSMs and will lag just slightly behind (less than 100 fps) in velocity. This is not worth worrying about. When you think 7mm or .300 RSAUM, think 7mm Remington Magnum or .300 Winchester Magnum in performance and don't worry about it. The benefit is that these chamberings are available in the Model Seven Remington, thus offering “traditional belted magnum” performance in the slickest, sweetest, and lightest commercial package available.

WINCHESTER'S SUPER SHORT MAGNUMS

In 2002, Winchester introduced the .223 and .243 WSSM, following a year later with the .25 WSSM. I guess you could say that the word “magnum” is a bit of misnomer in that these cartridges do not exceed the velocities of existing standard cartridges. The .223 is similar in performance to the .220 Swift; the .243 is similar to the 6mm Remington; and the .25 is similar to the .25-06. On the other hand, the case is based on the WSM case cut down, so we don't need to split hairs.

These cartridges carry “short and fat” almost to its ultimate level with a very short fireplug of a case. Accuracy is superb and velocity — from such a short case — is magnificent. The short case means that these cartridges can be housed in a “super short” action that is incredibly short, light, and handy. With heavy bullets I suppose the .223 could be used on deer and antelope where legal, but I see it as primarily a long-ranged varmint cartridge. The .243 WSSM will do anything the .243 Winchester and 6mm Remington will do (which is a lot), but (picking favorites again!) the one that I really like is the .25 WSSM. It will do everything the .25-06 will do, but in a much shorter, lighter, and handier package.

WHAT SHORT AND FAT IS...

The short magnums are all about efficiency. They burn less powder and burn it more efficiently. This translates to a potential for greater accuracy and also a bit less recoil (since the “ejecta,” or the weight of the powder charge, figures into the equation for deriving recoil energy). Equal performance for less recoil is clearly a good thing, and although this claim has been disputed, I can consistently feel the difference in recoil between a short magnum and a belted magnum of similar performance and gun weight. Better accuracy is also a very good thing, but this one is a bit elusive. The short, fat, unbelted cartridges are absolutely conducive to enhanced accuracy. Though cartridge design is not as important as quality of barrel, sound bedding, and good ammunition. With all things be-

ing equal, a short magnum should outshoot both standard and standard belted magnums, but since these things are almost never equal you won't see this in all rifles.

What you will absolutely see is equal performance in a shorter, lighter, handier rifle. Depending on how and where you hunt, this could be extremely valuable. Of them all, I have developed a significant love affair with the .270 WSM. There's nothing wrong with the old .270 Winchester, and the .270 Weatherby Magnum is a great cartridge. But I rate the .270 WSM as one of the best

mountain cartridges ever. You get the performance, but at reduced gun weight. I have used it for elk, deer, and antelope, and it's fine (just like any .270). Last year I carried a Winchester Model 70 Featherweight to the top of the world for Marco Polo sheep, and this year I carried a sweet, little Kimber M8400 in .270 WSM on a really tough Stone's sheep hunt. I have gone nuts over the cartridge and the rifles chambered to it. A 7mm fan might feel exactly the same about the 7mm RSAUM or 7mm WSM. For larger game I do prefer a .30-caliber, so ditto for the .30s.

... AND WHAT IT IS NOT

The short magnum concept is not a sugar pill for either enhanced performance or accuracy. Note, one more time, that there is no enhanced performance. Even the fastest of the short magnums, the Lazzeroni cartridges, merely approach velocity levels that Roy Weatherby brought to market in the 1940s. The difference is that, with the short magnums, you can now have this performance from a shorter, lighter action and, generally, from a shorter barrel.

The accuracy claims about the cartridges

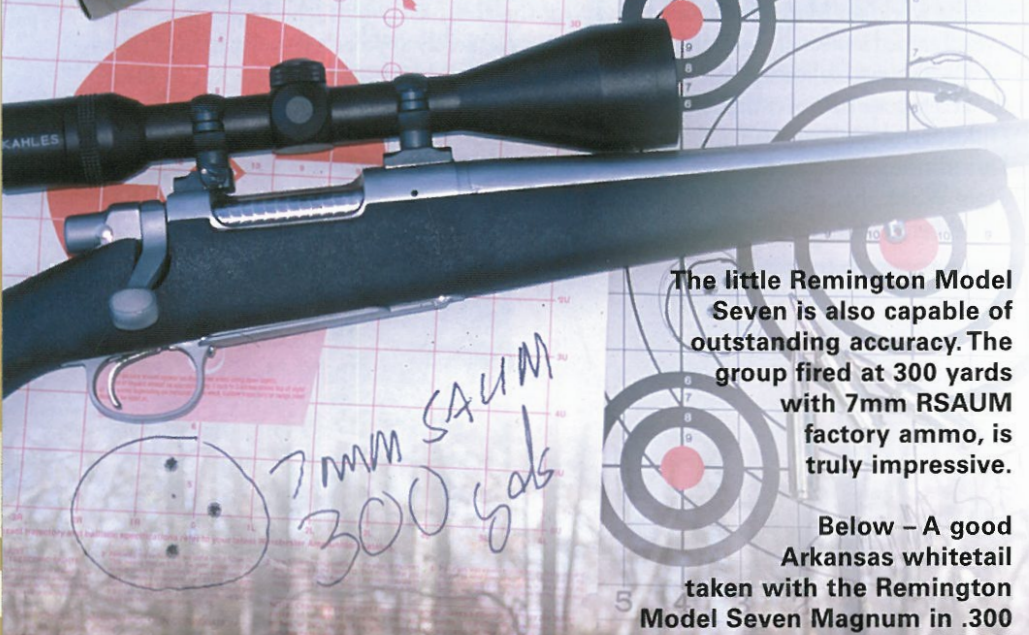
This was one of the first groups fired from the .300 WSM when it was first introduced in 2000. Not all rifles will produce this kind of accuracy, but it was this group that made me a believer in the short magnum concept.

Below - The author and guide Randy Babala, right, pictured with a good Stone's ram taken in July 2004 with the .270 WSM cartridge in a sweet, light Kimber Model 8400 rifle equipped with a Leupold scope featuring the new Boone and Crockett™ Big Game reticle.

I rate the .270 WSM as one of the very best mountain-game cartridges ever developed -
Craig Boddington



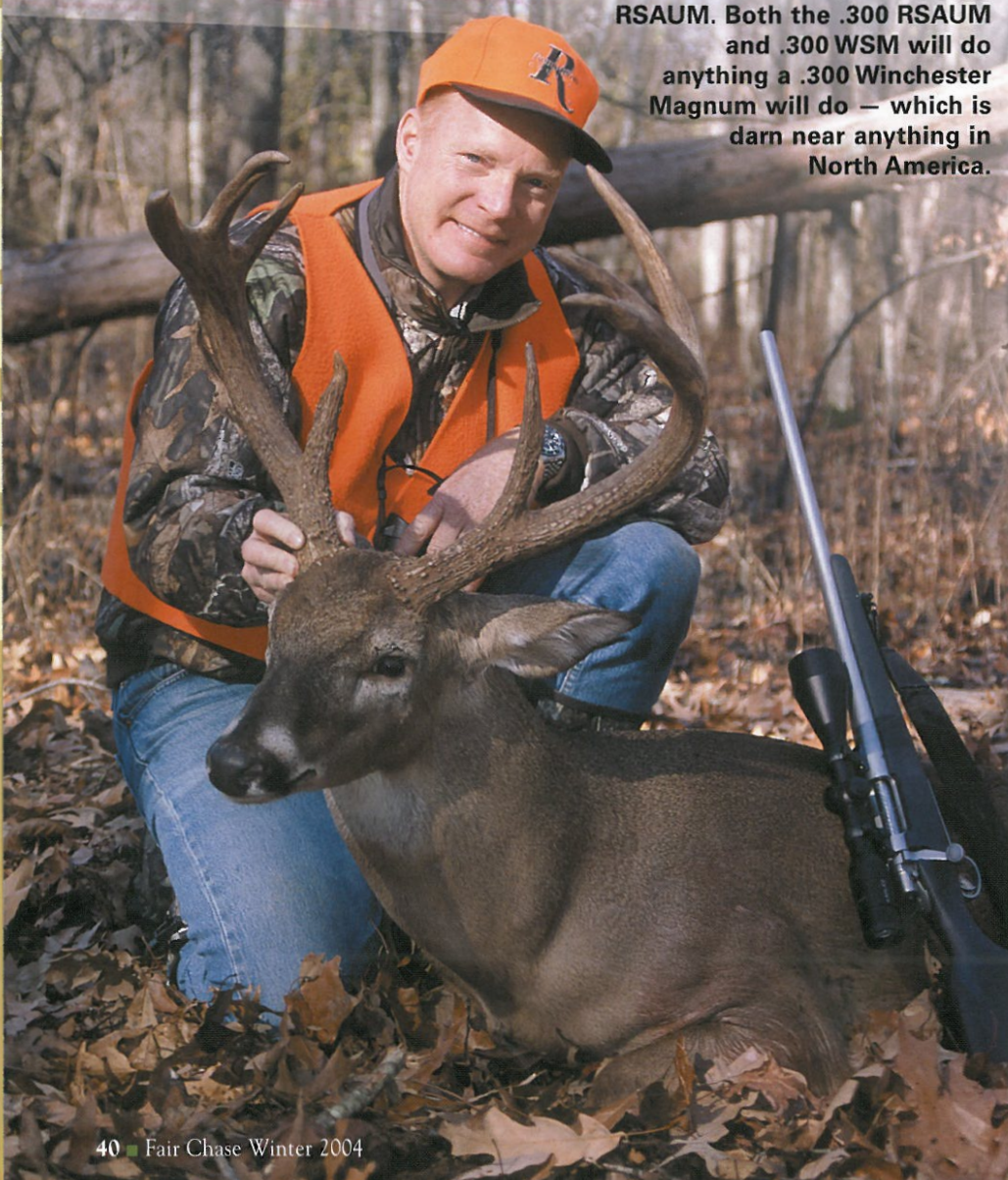
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The little Remington Model Seven is also capable of outstanding accuracy. The group fired at 300 yards with 7mm RSAUM factory ammo, is truly impressive.

7mm SAUM
300 yds

Below – A good Arkansas whitetail taken with the Remington Model Seven Magnum in .300 RSAUM. Both the .300 RSAUM and .300 WSM will do anything a .300 Winchester Magnum will do – which is darn near anything in North America.



are real on a theoretical basis. On average, I firmly believe an out-of-the-box short magnum will group better than an out-of-the-box standard or belted magnum rifle, so long as we're comparing factory loads to factory loads and handloads to handloads. But that's "on average." Individual rifles with above-average barrels will still outshoot rifles with average barrels, regardless of the chambering. So you cannot expect to see increased accuracy with all rifles, and if you see it the difference is likely to be fairly incremental — and certainly not exponential.

You will save a few ounces on action weight, and you may save a few more by going to a 22- or 23-inch barrel versus a 24- to 26-inch barrel. This can be significant, but it's important to know that barrel contour and stock material are more important to overall gun weight than a couple of ounces of action weight. Yes, the short magnums can be made lighter, and will certainly have a shorter bolt throw, but whether you realize a noticeable weight saving depends on the rest of the package.

The other down side to most of the short magnums is that, since they are all new and the popularity of some of them is limited, the selection of factory loads is much more restricted than is the case with standard cartridges and standard belted magnums that have been popular for decades. This does not mean they are handloaders' cartridges. Bullet selection is plenty adequate for all sensible uses for all of them, and there is quite a selection for both the .270 and .300 WSM. But unless you handload, the opportunities to tinker with loads is much more limited than would be the case with cartridges like the .270 Winchester, 7mm Remington Magnum, and .300 Winchester Magnum.

DO YOU NEED THEM?

That's up to you. If I had a sweet shooting, accurate, standard belted magnum that I trusted, and had tolerable weight, I probably wouldn't trade it in for a short magnum of unknown (until you shoot it) accuracy. I have made this decision regarding the 7mms and .30s; I have all the rifles I need in these bullet diameters! On the other hand, as much as I love my old .270 Winchester, I really like the enhanced velocity of the .270 WSM. I popped for that one! As for you, if "magnum performance" is a gap in your current battery, then I'd take a hard look at the short magnums. Short and fat is here to stay, and I like the concept . . . just so long as you understand what the short magnums really offer. ■