

This topic can be found at:

<https://forums accuratereloading.com/eve/forums/a/tpc/f/4711043/m/2861098911>

michael458

23 January 2010, 15:56

Terminal Bullet Performance

Alf

Your dissection and points on the ele skull are excellent, and the description of points is very excellent! These efforts are appreciated, and I think will enlighten many folks. Thanks for taking the time to do so.

The skull of this elephant is what I would call only a medium size bull. This was one of the late season, left over permits, sort of a PAC hunt, but not, and as long as the ivory was under 30#s not consider trophy, and the ivory was exportable. This was a brain shot ele. Can't tell it, but as it happens the shot went straight through your #5 point and exited center of the rear of the brain. When we got the skull skinned out and off it was easy to see the exit hole in the back of the brain (now that thin bone is gone) and could see where the bullet went in the #5 area. Now there is no evidence of that, I suppose in drying, shipping, and what have you those points have disappeared.



It was just a lucky shot. We were hunting at night, bottom of the river bed, ele on top of the bank, about 6 ft elevation above me. Two bulls, one left, one in the bushes on the right (never saw the one on the right), left bull in open area. Dark as six foot up a bull! Hit the lights, 2 maybe 3 seconds to find the target and get a shot off. He was facing me at 31 yds, only shot was between the eyes, I took it, rear dropped first in that classic manner and it was party time from there! Damn that was fun and the only way I want to shoot elephants from now on! Big Big fun! The other elephant was 40 yds and I quickly decided broadside heart shot. Still big fun. This was November 2007.

These photos are from 2002 of a sectioned ele skull in camp in Zim. That's a 458 Lott cartridge I was using at that time. Notice the RN bullet! I shot a big body elephant in the Matetsi and it was October. It was broadside also, no exits. 500 Barnes RN at 2250 fps.







Michael

<http://www.b-mriflesandcartridges.com/default.html>

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!
Live Outside The Box of "Conventional Wisdom"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

michael458

23 January 2010, 16:21

RIP

Yes, I think you are very correct concerning the 44 and RN bullets. If one is careful and places the shot correctly it can be done with ease. It's been done too many times for that to not be so. As we can see there are some places on the skull where a bullet does not have much work to do. I know there are some hard points there too, one might have to do in an emergency, or by a simple miss the right spot. I would think some of those hard points could be rough on a bullet, especially if the construction of said bullet was not just right! I suppose anything and everything can happen in the field!

I have one of those "Anything/Everything" short stories for you, **HARD TO BELIEVE!** A buddy of mine and myself doing some shooting with Richard Cooke in Zim in 2004. He with a 458 Win loaded with 450 gr Barnes Solids--Me 458 Lott 500 gr Barnes Solids, both RN at the time. He wanted this single tooth old bull, we were in the Chete, and not really big big bulls there, at least none I saw. So medium sized bull, but old. We let him get to nine yards before my pal opened up. Should have been an easy frontal brain, but he got off to the starboard side of the ele. Ele turned to starboard and as he turned I shot thru the lungs, then as he turned his back I shot him in the rear spine, just about a foot up from the root of the tail, down he goes. Buddy finishes everything shooting I don't know how many times. During the dissect one of those 450 gr Barnes RN solids was found, in the side of the head. It had a bullet hole on one side! Somewhere along the line, another of those 450 Barnes RN had hit this bullet making a perfect hole just on one side of that bullet! Can you believe that? I never even heard of such! But there it was!

Anything/Everything, can happen in the field!

As far as my made up BS test, it looks pretty damn tough to me! I would think if a bullet can get through this, then it could be relied upon as good as anything you can get. Now it might not get through it 100% of the time, who knows? But it presents some tough material, angled, varied material and so forth. Not perfect of course, not a simulation of elephant skull by a long shot, but none the less a tough test for a bullet I think. Not only that, but it is fairly easy to set up, actually easier and less demanding than a straight wet print test. Since there is no way to be 100% consistent I don't have to concern myself with that. I still have some sample bullets of other things I am going to put thru this little test this week! Hell, who knows what the day might put forth?

Michael

<http://www.b-mriflesandcartridges.com/default.html>

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!
Live Outside The Box of "Conventional Wisdom"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

michael458

23 January 2010, 16:27

One added thing guys, while many of us have interest in elephant skulls, not everyone does, and I realize that. We have and will touch base with all sorts of bullets, as we have seen. This will not turn into a elephant head discussion only. We are just covering a lot of material, lot's of bullets, and of course there is a great deal of interest in solids, so we cover that too. This is not the "africa forum" this is big bores and bullets and shooting. I will keep it that way if I can.

Michael

<http://www.b-mriflesandcartridges.com/default.html>

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!
Live Outside The Box of "Conventional Wisdom"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

michael458

23 January 2010, 16:41

338s! Some interesting things so far. One that comes to mind is that little 215 Sierra that I tested yesterday. I was very surprised at how well it performed! Jacket/core did not separate, held together, decent penetration for small bullet, far better performance than the 200 Nosler BT for small work that I have used that for in the past, reasonable prices, and lot's of advantages for a non premium bullet. The reason I

have them is a couple of years ago playing with my 338 WSM. It's at it's best with 225s and less, that's why I have the 180 Noslers too. Was trying out a variety of bullets for this cartridge. For smaller critters, I'd guess 250#s and down, I would think it would be a superb choice in bullets for that work.

I suppose I will get to the 45/70 tests this week. Cases ready, bullets ready, not loaded. Waiting on the Midway delivery to finish the 338 project. Then we might start a 358 project. Anyone interested in 358s????????? If so speak up! If not I will just do the tests anyway and not bother to post them!

Any other special projects you guys would like to see?

Michael

<http://www.b-mriflesandcartridges.com/default.html>

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!
Live Outside The Box of "Conventional Wisdom"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

I Bin Therbefor

23 January 2010, 17:31

As you're taking requests 😊

I would like to see the SH-SuperPrecision line tested.

I would really like to see RIP arrive with the 395 and see that caliber tested with the GS and SH-SuperPrecision line!

Please post all your tests. I find that what doesn't interest me to day will likely interest me tomorrow 😊👍😄

michael458

23 January 2010, 17:56

quote:

I would really like to see RIP arrive with the 395 and see that caliber tested with the GS and SH-SuperPrecision line!

RIP buddy, you are being called up to serve your fans! I will second that request, and suggest strongly that results are kept in house on this thread!

Mac and I have communicated and I think some test material will be on the way shortly in calibers I shoot.

Michael

<http://www.b-mriflesandcartridges.com/default.html>

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!
Live Outside The Box of "Conventional Wisdom"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

jwp475

23 January 2010, 18:46

quote:

JWP475

You have that big 338 Lapua and I know you explode coyotes with it, but have you used any of the bullets we tested so far on anything? If so, report please?

I have used the 338 225 TSX to shot a Bovine that went a bit over a ton. The beast was going away at about a 30 degree angle I placed the shot toward the back of the rib cage angling forward the bullet broke through the skin just back of the shoulder and dropped him like a lead wright

A 9mm may expand to a larger diameter, but a 45 ain't going to shrink

Men occasionally stumble over the truth, but most of them pick themselves up and hurry off as if nothing had happened.
- Winston Churchill

michael458

23 January 2010, 18:55

JWP

With that 338 225 TSX, what velocity, what range, and guess at depth of penetration on the bovine?

Michael

<http://www.b-mriflesandcartridges.com/default.html>

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!
Live Outside The Box of "Conventional Wisdom"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

DWright

23 January 2010, 19:40



jwp475

23 January 2010, 19:49

quote:

Originally posted by michael458:

JWP

With that 338 225 TSX, what velocity, what range, and guess at depth of penetration on the bovine?

Michael

Just shy of 2800 FPS, let me check my records and see if I can find a reference to the dpeth of penetration. I do remember that Brain shot first with a 375 H&H with a 300 TBBC a little less angle and the bullet stoped under the hide and the 225 TSX actually broke through the hide and the nose was poking through

A 9mm may expand to a larger diameter, but a 45 ain't going to shrink

Men occasionally stumble over the truth, but most of them pick themselves up and hurry off as if nothing had happened.
- Winston Churchill

RIP

23 January 2010, 22:55

I Bin Therbefor,

Michael458,

In the IWBB, the .395/330-grain S&H brass FN edged out the .395/340-grain GSC copper FN.

Both used the same charge of H4350, about max for both in the .395 Tatanka (.395/.416 Rigby).

Just over 2800 fps for the S&H 330-grainer.

Just under 2800 fps for the GSC 340-grainer.

The S&H brass FN expanded very little, and penetrated a little more.

The GSC copper FN expanded more, and penetrated a little less.

Both stayed straight and true to aim.
Both beat .375-caliber 300-grain GSC FN's at 2500 and 2700 fps, which in turn did better than .375-caliber 270-grain GSC FN at 2900 fps (worst of all listed here).

But, the plywood and waterbuckets are obsolete.

I do need to test them again in wet print and T. rex Skull media.
When I get the .395 Berry Gibbs operational, I will do it.

.395 T at +/-2800 fps.
.395 BG at +/-3000 fps.

That will be my next step in "Penetration Studies."
I will do it in "wet print" or "Tyrannosaurus rex skull simulator."
I also need to do the 500 Mbogo with 570-grain GSC FN at 2500 fps.
That could be compared to the S&H .510/535gr S&H brass FN at 2700 fps, if Macifey ever gets off his ass and makes those ...
which would also be excellent in 500A2, 500J, 50BMG, and some other "special" applications. 😊

RIP 24 January 2010, 05:43

This bullet by S&H is the best penetrator I tested while the IWBB was roaming the range.
It is a model bullet for best penetration yet with good feed function:



This is the NonCon brass .395/310gr "HX Custom" aka VeloHex:



And the HEXagonal-shaped hollowpoint that put a HEX on Bambi's Ma (I got Bambi and his Pa too, culled as a family unit that year, 2008):



Same two bullets as above next to a similarly efficient .505/558gr brass FN, below:
(I also have a stash of .475/475gr S&H brass FN's that have a sharper edged meplat, smaller edge radius, and a slight boattail, and thinner driving bands, less bearing surface.
Perfect for 470 Capstick or 470 Mbogo.
Some other S&H solids have SHARRC gills like the VeloHex hollowpoint does.)



Also, for more aesthetic viewing, the S&H VLD .395/325-grain "Ripper" that will see use in the .395 BeeGee:



The best penetrator and what it looked like after traversing the IWBB, starting off at 2811 fps MV, and impacted at 25 yards.
Look closely, below, and you can see some slight nose expansion.

The second from left, below, is a .396/410-grain LFNGC cast boolit (custom LBT mould) that was retrieved from water buckets after impacting at about 2100 fps.

Third from left, below, is the worst bullet I have yet to recover from a mere single waterbucket. Maybe 1800 fps from a 50-cal muzzleloader: "Power" Belt?



DRG says: "Kiss my liberal grits!" 🍷

michael458 24 January 2010, 15:24
RIP

Excellent! Very good looking bullets. In reading down the list there I see you mention a "sharper" meplat on the .475s. I took notice of the meplat on the .395s not being a sharp edge, like most meplats. Obviously they perform well. Damn good looking bullet.

NonCons, doing exactly what they do! Wicked looking stuff. Velocity is your friend with a NonCon! But, fortunately they also work at lower velocity! I plan on taking the 416 B&M to Cambridge Bay in April, I have two muskox on my list. I am going to use that 330 Brass HP NonCon for that mission.

I was thinking of my 350 gr brass HP NonCon in .500 caliber yesterday. At 2450 it performs fantastic in the 50 B&M--Now that I have a lot of these bullets I can take it up to 2500+ easy I am sure. At these velocities penetration of the remaining slug is 20 inches in the test medium. As we know, 20 inches in the test medium I use is "Cape Buffalo" territory. 500 Woodleigh, 500 Nosler Partition, 458 Lott 2200+ both at 19 inches and 20 inches. I know that this will work, I know it would do well, might do really good, but it certainly goes against the "grain of instilled knowledge" to consider such a light for caliber bullet to do that sort of work, eh? But the very definition of our "NonCons" Non Conventional! I suppose that should bring with it, Non Conventional thinking too?

I tell you now, I hit the ground in Australia in September last year with 20 buffalo on quota for me. With the 500 MDM, first outing, and the 470 Copper HP at 2400 fps. Before the first buffalo was hit, I was very much convinced I might need to up the weight to 500 plus grains for this work! I had already added a 1/10th inch to the base of the bullet, that would bring it to 510 grs, in my mind! I felt "light for caliber". After shooting the first buffalo that thought completely disappeared. Broadside, slight angle, hammered and complete penetration. All the shooting I did with that bullet I only recovered 3 or so, two that sheared, one at a bit longer distance that did not shear, but had made it all the way to the far side. No, I did not require, or even remotely need any more weight to that bullet at all.

A very difficult concept to process as we consider our "instilled knowledge" that has been beat into us for many many years. It's hard for many to overcome, myself included.

It is the same story with the flat nose solids. It is extremely hard for us to overcome our "instilled knowledge". It was for me I know! I remember well, as it was not long ago I was "converted". Amazing things with bullets these days!

Man, that cast bullet really looks like perfection! Oh and I had one better than you 50 cal Power Belt once. I got on a test mission a few years ago with 45 Colt and 45 acp. I tested many of the factory loads in 45 acp to see what was what. I tested one of the light weight super high velocity loads in 45 acp. Penetration was shallow to say the least, explosive effect up front, but NO BULLET AT ALL, not a fragment, not a piece, nothing, zero, notta thing! Had metal detector, nothing. I suppose it vaporized is all I can figure? Gone. In my bag of 45 acp bullets tested I have an envelope that contains a bullet in each telling what it is, I have an empty one too with that load described. When showing the bullets to others, here is this load, here is this bullet, and by the way here is "bullet XYZ" and hand them the empty envelope with nothing but air in it! Gets some odd looks sometimes!

Michael

<http://www.b-mriflesandcartridges.com/default.htm>

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!
Live Outside The Box of "Conventional Wisdom"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

michael458

24 January 2010, 15:44

Of special note, yesterday I finally received the Midway order! Bullets to test. Barnes 338 160 gr Blue tip things, 185 gr blue tip things, 225 TSX! Holy smoke, my current Barnes manual says I can get 3300 fps plus out of the 185s in the Ultra, the 160s not listed, that's smoking. Has me curious! Same story, will test in the Ultra and test in the 338 Win.

I also got a box of the 400 gr Barnes Busters .500 caliber, might be interesting in my 50 B&M Super Short at 2000 fps or so. I have the 400s in .458 caliber, tested for accuracy in a couple of loads only in the 458 B&M and sorta lost interest in them. But intend to put them in 45/70 and see what happens too.

<http://www.b-mriflesandcartridges.com/default.htm>

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!
Live Outside The Box of "Conventional Wisdom"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

416Tanzan

24 January 2010, 16:40

Here is some data from Barnes on the 160s and 185s from Sept 2008
Let's see if it posts and formats legibly.

From Barnes Bullets company data (PDF, revised 9-2008)
338 WinMag, Win case, case trim 2.49", Bullet weight 160 gr., TTSX (blue tip)
Primer FedGM215m, Twist 10", COAL 3.34"
sd. .200, bc .342

Powder	Minimum	Maximum
Charge (grains)	Charge (grains)	
Vel (fps)	Vel (fps)	Load Dens (%)
IMR4320	62.0	2972 69.0 3301 92
RL15	61.0	3118 68.0 3295 93
H380	69.0	3113 76.0 3363 97
IMR4007SC	67.5	3084 74.5 3354 101
H414	70.5	3092 77.5 3347 96
Hunter	75.0	3139 83.0 3366 105

and

338 WinMag, Win case, case trim 2.49", Bullet weight 185 gr., TSX
Primer FedGM215m, Twist 10", COAL 3.31"
sd. .231, bc .352
(Note: the 185 TTSX has a bc .432 G1, for better ballistics, but the same loading information has been recommended to me by Barnes)
Powder Minimum Maximum
Charge (grains) Charge (grains)
Velocity (fps) Velocity (fps) Load Density (%)
Varget 57.0 2797 63.5 3013 88
AA 2700 63.5 2798 70.0 3011 88
IMR 4350 66.5 2848 71.5 3067 101
Hunter 70.5 2937 78.5 3141 100
IMR 4831 67.0 2785 73.5 3046 104
H4831SC 68.5 2793 76.0 3018 103

Quickload with Reloder17 and 185 gr Barnes in 338 WnMg would predict
71.5 gr R17 for 3100fps, 59k psi.
(max SAAMI pressure standard for 338 WM is/was 64k)
Some people think that Quickload is a tad conservative, overestimating the heat of the load by a 2%. Meaning that 72 or 73 grains of R17 might be needed for 3100+fps and 3900+ ft lbs.
Rel17 is the new Alliant powder that is supposedly 'equal' to IMR
4350 burn rate but with a slightly broader/extended peak for more efficiency.

+ + + + +

"A well-rounded hunting battery might include:
500 AccRel Nyati, 416 Rigby or 416 Ruger, 375Ruger or 338WM, 308 or 270, 243, 223" --
Conserving creation, hunting the harvest.

416Tanzan

24 January 2010, 16:50

Your observation about 'smoking' is correct.

Even the 338 WM can do 3100-3150 with the 185 gr,
which ought to make a great deer, light plains
game bullet, IF we see decent penetration.
And that is what Barnes is good at.

The 160 is even wilder:
3300+ in the WinMag,
and Barnes doesn't even list it in the Ultra,
maybe 3500 fps.

It's your call. It would be fun to push a bullet in the Ultra max and see what a little blue tippy thing does at 3450++ fps.

+ + + + +

"A well-rounded hunting battery might include:
500 AccRel Nyati, 416 Rigby or 416 Ruger, 375Ruger or 338WM, 308 or 270, 243, 223" --
Conserving creation, hunting the harvest.

michael458

24 January 2010, 17:28

Tanzan

Thanks for the info. Not sure what version I have of the Barnes book. But no listing for the 160 in the Ultra, did not even look at 338 Win. Probably load up in the morning and give some a try. Yes, I intend to push the limits with them to see what is what in both cartridges.

I almost made an order for some RL 17 yesterday. But backed down on it. I was looking for some IMR 4064 (good powder for 500 MDM) and some extra AA 2520, 458 and 416 Burns 2520 and is tops for both of those cartridges. So got 8 lbs each one.

Capoward told me how to get RL 17 in my quickload, but have not done it yet!

Michael

<http://www.b-mriflesandcartridges.com/default.htm>

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!
Live Outside The Box of "Conventional Wisdom"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

I Bin Therbefor

24 January 2010, 17:38


RIP,

Thanks for the S & H posting. I think I had most of the photos from your previous postings in my infallible file system which went fallible on me!

Michael,

Your observation on "sharp" meplats is interesting. I have a mental picture of a trade off between tissue damage and penetration based on the "sharpness" of the meplat. If true, the SuperPenetrator should "cut" more tissue with a narrower wound channel and the more rounded meplats "push" more tissue with a wider wound channel. The rounded should feed easier.

The VeloHex looks like a Roto-Rooter!

I suppose, the ideal bullet would penetrate to the vital area and then "explode" there, destroying everything in the immediate area. 

michael458

24 January 2010, 19:02

IBT

I was just talking with 465HH about how sensitive I think the nose profile can be. Rounded edge meplat, sharp edge meplat? I don't know? Proof in the pudding I suppose, works or does not work. I just noticed because most of the solids I have the meplat is rather sharp. Have to have another look at some of the GS samples and North Forks to remember how sharp they are at the edge. While the Barnes is sharp at the edge of the meplat, it blends right into the rounded nose profile. Pretty much looks like what they did was put a meplat on the old style round nose. They might have done more than that, I really have not studied them that close. Do they even make a RN anymore? If so I have not seen one.

Now the ideal bullet, explode the vitals, keep on penetrating like a solid? Hmmm, sounds like some of the VeloHex and the NonCons I am working with, or getting close anyway?

Michael

<http://www.b-mriflesandcartridges.com/default.html>

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!
Live Outside The Box of "Conventional Wisdom"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

ALF

24 January 2010, 20:14

416Tanzan

24 January 2010, 20:50

Alf, I think that Michael was already agreeing with you that high velocity was hindering the penetration of EXPANDING bullets, because the energy went into excessive expansion and explosion, and the lighter resulting slug and larger diameter nose results in a shallow penetration.

BUT non-deforming solids have a different algorithm. Logically, they must. At some point the faster solid slows down to the point of the slower solid at the beginning of its penetration, and from that point on both would be just as deep penetrating as the slow solid.

Still, I look forward to tomorrow's 338 tests.

In particular, what will the wild velocity TTSXs do? Can Michael strip the petals? And if so, what will the penetration be?

And what kind of penetration will the 225 grain TSX produce, either fast (3000-2900) or slow (2800-2700)? I'm hoping for 16-18" in the TSX 225, though my hope is tempered by the short 13" penetration of the 210 TSX.

The Nosle 250g at 16" and the 250 gr. A-frame at 18" were impressive and become a kind of bench mark.

+++++

"A well-rounded hunting battery might include:

500 AccRel Nyati, 416 Rigby or 416 Ruger, 375Ruger or 338WM, 308 or 270, 243, 223" --

Conserving creation, hunting the harvest.

ALF

24 January 2010, 21:15

DWright

24 January 2010, 21:28

I remember hearing somewhere, that if one were to increase 'non-expanding' bullet weight in a given caliber, to the point where a maximum of only about 1,500 FPS could be achieved, then maximum penetration would be realized. Like possibly a 900 gr. from a .460 WBY.

There's a test for you Michael. That would either end the controversy for good, or start a shit storm!



<http://www.mazamasportinggoods.com>

416Tanzan

24 January 2010, 21:35

Alf,

My speech was loose. By algorithm I meant velocity curve through the medium.

At some point a fast solid will reduce to the velocity of being a slow solid. From that point on, both solids are 'slow' solids, the difference being that the fast solid had a little extra trajectory in the medium before becoming a slow solid.

+++++

"A well-rounded hunting battery might include:

500 AccRel Nyati, 416 Rigby or 416 Ruger, 375Ruger or 338WM, 308 or 270, 243, 223" --

Conserving creation, hunting the harvest.

michael458

24 January 2010, 21:36

Alf

Too much time at the bar today I see!

You have far too many things on your mind today! I think you must sit back and relax a bit, have one more drink!

We are comparing one bullet to another bullet in the same test medium, that's what we are doing, that's what we have been doing for 15 years or more. I don't believe in boundaries! I like free range! From the beginning of time I have said there is no simulation. There are realistic correlation between the two, I have that established pretty well with expanding, working on correlation with solids, and also with the NonCons, but that takes a little more animal shooting, but have some reasonable ideas on the two. Simulate NO. Correlate, Yes.

Michael

<http://www.b-mriflesandcartridges.com/default.html>

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!
Live Outside The Box of "Conventional Wisdom"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

DWright

24 January 2010, 21:40

quote:

Originally posted by ALF:

416 Tanzan:

"BUT non-deforming solids have a different algorithm. Logically, they must. At some point the faster solid slows down to the point of the slower solid at the beginning of its penetration, and from that point on both would be just as deep penetrating as the slow solid."

This is where you are wrong, from a physical point of view there is just one physical event, not one or two or three based on how a bullet is constructed.

The physics rules and the forces that the bullet is subjected to remain the same, what is different is how the different bullet's, based on construction react to these forces.

I believe the problem that we have as recreational shooters, and I include myself is that we do not have enough knowledge of impact mechanics, math and physics to even begin to deal with the subject properly.

Now I'm just a ol' Cowboy Hillbilly, but being brought up about 1/2 a block from the beach, I have lot's of experience bobbing around in the ocean durring about 20 years of surfing. One thing I have observed is when we would drop something in the water even as heavy as a concrete pier pad; is that if it was dropped from just a few inches from the waters surface, it would fall thru the water with little resistance from the start of the penetration path. But, if we dropped it from the pier, some 30' higher, it would hit the water, and it would actually stop all penetration for a brief moment from the impact before continuing downward. The return increased resistance from the waters surface did make a difference. The faster it hit, the more the concrete would appear to come to a stop before desending. Seems to me that a flat point bullet would react the same way to a varying degree in fluid filled tissue. . . .

<http://www.mazamasportinggoods.com>

michael458

24 January 2010, 21:51

quote:

I believe the problem that we have as recreational shooters, and I include myself is that we do not have enough knowledge of impact mechanics, math and physics to even begin to deal with the subject properly.

Alf, I won't disagree with the above statement, I will disagree with the last few words however which are "to deal with the subject properly". I think for myself only, that I don't have enough knowledge of impact mechanics, math for sure, physics to "Understand the Subject Properly", and that's a fact. To deal with it is easy! Very simple in fact---Either the bullet does what you want it to in the test medium, and then in the field, or it does not! Now, simple simple simple, if a bullet performs well in the test mix, it has always performed well, and very nearly exactly in many cases in animal tissue. If it breaks in the test mix, it will break in animal tissue. If it performs well in the test medium, then it will perform well in animal tissue. This is pertaining to all expanding bullets I have ever shot in wet print, and then in animal tissue. This appears to be the same with NonCon bullets, this is why I just took deliver of 2000 NonCon bullets, at a cost of twice as much as most folks pay for a nice bolt gun! It's simple Alf, to deal with the subject is simple, to understand it always is really not a priority, not with me.

A very great man once said this about a subject, and I agree and use the same line many times;

"The only thing that exceeds my lack of knowledge on this subject, it my lack of giving a damn about it"

Since being a rec shooter, and not in the bullet designing, making, building business then my lack of knowledge on certain subjects concerning some aspects of why, what, the physics, the math, and even the understanding of, is only exceeded by not really wanting to know, or even caring. I shoot, leave that to others whose business it actually is. So it works the way I want it to, or it don't, then I take that to the field and give it a go. Simple, but it works for me. I did not start doing the tests and work with bullets 15 yrs or so ago to make a science out of it, it's a way that I can make a choice for using the proper bullet for the job, or mission at hand. What works for me, works in other areas too, should one decide to allow it to, but that's up to each and every individual to decide. No one has to follow what I do!

Now have another on me!

Michael

<http://www.b-mriflesandcartridges.com/default.htm>

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!
Live Outside The Box of "Conventional Wisdom"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

RIP

24 January 2010, 22:11

Here is a .338/225gr Brass FN solid by S&H, that was engineered to perform like a Round Nose solid in the IWBB. It was fired from a .338 Lapua 1:10" twist at 3019 fps MV, impacted the IWBB at 25 yards.

I think it has some stability problems after impact in 7.5"water/1"plywood/7.5"water/1"plywood ... in the IWBB, a 10-compartment train of flat-sided plastic water buckets with 2 half-inch plywood boards behind each bucket. That leaves 1.5" thickness of air and thin plastic bucket walls in each 10" thick compartment.

I fired 3 shots and 2 of them ended up striking the steel frame on the sides, yet were recovered on the ground or in a bucket.

One of the three .338/225 FNs did stay fairly straight in flight and scored about 6 compartments, whereas the .395/330grS&H brass FN did 8 compartments, when started off at 200 fps less velocity.



The one that did stay "straight" has obviously tumbled and been expanded and shortened on both ends, and it is slightly bent, maybe hard to see in the photo.

Is that melted bucket plastic adherent to both ends of the bullet?



I think the above bullet design was a goof.

The meplat is sharper edged (smaller edge radius precisely programmed into the CNC) than the better penetrator, but that did not make up for other problems.

Three other better solid designs are shown alongside it below:

.338/225gr
.395/330gr
.505/558gr
.475/475gr





The previous .395/310gr NonCon was shown for 1600 fps to 2600 fps.
Here is another one that stayed straight at 2800 fps, starting to get a little expansion now:



Just another baboon in the tree here:
I'll bet the bullets that perform well in Michael's bullet traps will do well in the field.
I'll bet there is some correlation,
whether wet newspaper or T.rex skull.

Dwright,
Interesting observation on the 30' fall into water arresting the concrete and steel pier column.
That first 7.5" of the water in the IWBB was the "hardest" part of my trap on a bullet.

Robgunbuilder

24 January 2010, 22:33

Since we are now talking about practical issues, I thought I'd present my personal opinion after 40 years of Building rifles from .14 to 20MM. and hunting Africa 6 times for the Big 5.
1. The larger the bullet diameter the more evident the reaction the Animal has to the impact, assuring you hit it in a vital area.
2. A bigger entrance hole and a even Bigger exit hole is a VERY good thing.
3. Few animals with a 1 inch or larger exit hole go anywhere fast.
4. Large diameter, FN, .620 Copper bullets, particularly if constructed of a slightly softer nose than the shank offer the best of all worlds at impact velocities of 2100 fps or more. They dont shatter on bones and tend to stay together, better than other bullets. You almost always get exits, even lengthwise on Buff and the exits are huge.
The Buff know they have been HIT and you can see the reaction!
5. Thus, in summary for those who can handle it, and you all can in reality, a .620 copper FN bullet of 900 grs with a impact velocity of 2100fps will be and is, the most dramatic Killer of critters large and small there is (from a hunting perspective). Remember, the entrance hole of this caliber is what a .458 wants to grow up to be on exit! Once you have tried it, you'll see the difference! Till then , well believe what you will!
I didn't get to this conclusion by accident either. -Rob

Never underestimate the power of stupid people in large numbers to do incredibly stupid things- AH (1941)- Harry Reid (aka Smeagle) 2012
Nothing Up my sleeves but never without a plan and never ever without a surprise!

RIP

24 January 2010, 23:18

But, but ...
Do we have to carry heavy artillery to hunt varmints and plains game?
Is it not much more practical to have a light and handy short-barreled rifle that can do it all?

michael458,
What is the smallest caliber wildcat of yours that you would choose, if you had to pick just one, as an all-rounder?
Please try hard to pick something smaller than .500-caliber, merely for purposes of humoring me. 😊

jwp475

24 January 2010, 23:21

Why stop at .620? Why not the 700 Nitro?

A 9mm may expand to a larger diameter, but a 45 ain't going to shrink

Men occasionally stumble over the truth, but most of them pick themselves up and hurry off as if nothing had happened.
- Winston Churchill

michael458

25 January 2010, 01:09

RIP
I very often ask myself the same question. Of the B&Ms and the MDM, what would I do if I could only have one. I am so happy I don't have to make that compromise.

However, if I did it would not be the 500 MDM--although small rifle for what it is, it's still bigger than I would want to carry every single day, day in day out. I like short, handy and fast. The 50 B&M would be close, 7.5 lbs, 18 inch barrel, plenty of everything. But short on range if I needed that for all around. 416 B&M I love, it can do everything, but I just don't have enough 416 experience to have that much faith in one yet. Of course the 9.3 is for rats and such, so it's my rat rifle. The 50 Super Short is a super nice little play gun, but buff, hippo, ele it is not, and the 50 B&M Alaskan is a lever gun hammer, and I would use it for all the heavies, but it suffers all the .500 caliber issues with range for all around. By process of elimination, the winner iss--458 B&M!

Winchester M70 458 B&M, 18 inch barrel, 7.5-8 lbs with wood stock--6.5 lbs with Ultimate stock. For the heavies 450 Swifts or 425 NonCon at 2350 fps and 450 Barnes Banded 2200+ fps--for the mediums 350 Barnes TSX 2450-2500 fps, and for the lighter stuff, 305 NonCon at 2700 fps! All around, do anything, light, handy, stainless and ultimate for alaska, wood and stainless for everything else, small game, big game, everything, 458 B&M, that's my choice.

Michael

<http://www.b-mriflesandcartridges.com/default.html>

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!
Live Outside The Box of "Conventional Wisdom"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

RIP

25 January 2010, 01:55

Well, glory be! I have finally figured out a use for a Winchester M70 in 300 WSM!
Rebarrel it to .458 B&M!
Of course!
It has a better shoulder than the .458 Ruger!
It has a 6% greater case capacity than the .458 Winchester and has a shorter, fatter, more efficient powder space.
It will still go three-down in the non-dropbox/standard magazine and stock, plus one in the chamber!

Forget the .458 Ruger!
A .458 B&M M70 would make a fine "Winchester Wasilla" and much preferred over a "Kimber Talkeetna" or "Kimber Caprivi."
Guess I will have to have one.
Aiming for 6.5 pounds with a barrel of undecided length ...

That puts some Blue Goose in this 😊🐓😊
Thanks for making it easy.

michael458

25 January 2010, 02:11

RIP
It is the ONLY use I have seen for a WSM anything! 50-458-416-9.3 B&M! Best of show? All of them! 458 is damn hard to beat. I have a couple in 20 inch barrel, a couple in 18 inches, and have a 1885 with 24 inches. It's proven to be quite a nice fit, excellent small short platform, plenty of good bullets, plenty of case, zero issues. 458 B&M is hard to beat. I had no idea you were shopping! When you are ready let me know how I can help out!

A good goose is hard to beat! 😊🐓😊
Michael

<http://www.b-mriflesandcartridges.com/default.html>

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!
Live Outside The Box of "Conventional Wisdom"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

416Tanzan

25 January 2010, 11:43

Your 458 and 500 B&Ms sound extremely practical and pack a great punch for anything on the planet. I would love to have one in the thick of things. Or even a 'long' 450 Rigby.

But you have to admit the a 416 Rigby can be loaded to better allaround ranging qualities. (Not the factory loads, but 400gr can be loaded over 2600, and non-cons can be loaded to 2800 and 3000 should one desire.)

Anyway, neither of us are limited to one gun, though I only have two in Africa (OK, a couple more, maybe, in a country somewhere). You have your rat gun (9.3), and I have my light rifle (338WM). A person can cover a lot of ground with either pair, though some of us need to be careful if we only have one pair!

So today we learn a bit about 338 non-cons.
. . . drum roll . . .

+ + + + +

"A well-rounded hunting battery might include:
500 AccRel Nyati, 416 Rigby or 416 Ruger, 375Ruger or 338WM, 308 or 270, 243, 223" --
Conserving creation, hunting the harvest.

416Tanzan

25 January 2010, 14:27

Testing is always more fun if there is a hynthesis on the table. Here is one

Assuming similar metal and nose thickness in the different 338 Barnes TSXs, then after the initial deformation stage, again assuming similar frontal area without petal loss, the various penetrations might be a linear reflection of remaining momentum (say 'post-6 in').

However, since the various weights are typically loaded to increasingly faster velocities at lighter weights, the lighter bullets will impact faster, and possibly spend more energy on deformation. This may allow for an increasingly deeper penetration with heavier bullets since they will relatively have both more energy and more momentum after spending less energy on deformation (and maybe with a smaller frontal area).

So I will predict a non-linear increase toward the heavy side of the non-cons 338 Barnes in

WinMag:
160:9-10",
185:-----11-12"
210:-----13" +/-?
225:-----15----17"
250:-----19----21"

The 210 figure is taken from last week's single shot 338WM.

So Michael, how do you feel? You may not know how big the 'lurking' audience is, but you have a very attentive audience nevertheless.

Blessings on your day.

+ + + + +

"A well-rounded hunting battery might include:
500 AccRel Nyati, 416 Rigby or 416 Ruger, 375Ruger or 338WM, 308 or 270, 243, 223" --
Conserving creation, hunting the harvest.

416Tanzan

25 January 2010, 14:59

And maybe the non-linear increase based on increased relative momentum retention will be capped by the deformation equivalent of a 338 solid, perhaps down around the 1800-2000fps level, providing a limit for a calibre? I wonder what that limit might be? FN at 1700 maybe around 40"? Below that a non-con may not open up to simulate even a solid, resulting in 'leaving the box' before 30".

+ + + + +

"A well-rounded hunting battery might include:
500 AccRel Nyati, 416 Rigby or 416 Ruger, 375Ruger or 338WM, 308 or 270, 243, 223" --
Conserving creation, hunting the harvest.

michael458

25 January 2010, 17:14

Tanzan

You are a busy boy this morning I see! It's Monday here, Mondays can be ugly for me, and this one has been so far. I have been on the phone for a solid 2 hrs already! I am working towards getting to the range, my curious nature is aroused by these little 338 bullets.

You see the entire premise of the B&Ms is not all about the cartridge it's self, it's about the rifles they are chambered in. Lot's of cartridges out perform the B&Ms, but none of which can be put in such a tiny package! And it's not even really about the action being a short WSM either, it's about that cartridge being able to be efficient in 18-20 inches of barrel. Now I never once really bought into the "efficiency" crap with the WSMs or other short fat cartridges. I am just not interested in those at all, and don't care if they showed a percentage increase in "efficiency". I did not expect that out of any of the B&Ms at all. It was somewhat unexpected to tell you the truth. But I found as bore sized increased, it seemed "efficiency" did in fact increase as the volume of the bore increased. This is the only concept I can come up with to explain why I can get 458 Winchester 24 inch barrel ballistics from the 458 B&M with an 18 inch barrel, and keep the pressures below max? I may be wrong, as I have not investigated an 18 inch 458 Winchester, but my 22 inch barrel 458 Winchesters start to loose out over the 24 inch tubes? Drop 4 more inches of barrel, I don't see it happening and being able to keep up? So there must be something to this "efficiency" thing, I am not the one to answer that, just report the results I get.

Now back to the real world, BULLETS!

Whew, Tanzan, you got a lot of non-linear, linear, deformation, momentum and theory going on today! I may not be able to keep up! How do I feel? It's Monday, too early to tell, have had too many work related issues to catch up with this just yet. But looking at your penetration estimates, I certainly would not disagree with what you have there, looks pretty close. I would have to go back to remember exactly, but I think the Noster 180 Accubond did 9-10 inches, I would think the 160 Barnes would do that easy, yes, looking at the numbers you have, I think that will be fairly close. Might be some surprises, you never know? I am hoping for good things with the 225 Barnes however!

We will see, I hope today, and will be working towards getting that done.
Michael

<http://www.b-mriflesandcartridges.com/default.html>

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!
Live Outside The Box of "Conventional Wisdom"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

416Tanzan

25 January 2010, 18:39

I was just working up an appetite for the data.
With appreciation.

+ + + + +

"A well-rounded hunting battery might include:
500 AccRel Nyati, 416 Rigby or 416 Ruger, 375Ruger or 338WM, 308 or 270, 243, 223" --
Conserving creation, hunting the harvest.

ALF

25 January 2010, 19:38