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Terminal Bullet Performance

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Warrior
One of Us

posted 27 February 2011 09:10

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quote:

It is thought that the reason why flat-nosed solids penetrate better in bodily tissue is because of what is known as the Vapor Bubble Theory. Such a nose shape creates a shock wave that surrounds the bullet as it passes through the fluid-rich medium of bodily tissue. The flatter the nose, the greater the wave, which displaces bodily tissue sideways. This creates a "bubble" in which the bullet then travels. There is obviously less resistance on the bullet while in the bubble, so it penetrates farther.

The "Vapor Bubble Theory" in flesh is a myth, flesh does not behave like water, as flesh is a "soft solid" and not a fluid, despite its high water content. Water is non compressable, it does not support shear, solids are compressable and they support shear.

Warrior

Posts: **2273** | Location: **South of the Zambezi** | Registered: **31 January 2007**



Gerard
one of us

posted 27 February 2011 11:36

[Hide Post](#)

<http://www.woodleighbullets.co...tatically-stabilised>

<http://www.grosswildjagd.de/penetrat.htm>

<http://www.rathcoombe.net/sci-...listics/methods.html>

From the last link:

quote:

he found by blacking the noses and shoulders of the bullet types he tested that the notion long held that a Keith-style semi-wadcutter cut a hole on the basis of its shoulder diameter (as opposed to its nose) was incorrect; the blacking on the shoulders was intact, only the nose was clean

This evidence, which is so simple to obtain, shows that the following sections, behind the flat meplat of an FN bullet, do not touch the penetrated media. This at a mere 1000fps. So, what does it fly in?

Warrior posted [here](#) :

quote:

I wish to quote Mr. Garrett ... "The diameter of the wound channel produced by a proper hard-cast bullet is far more a product of the diameter of the meplat than the diameter of the bullet. This is of critical importance. As a consequence of this, **wound channel diameter** and the resulting speed of incapacitation **can be substantially increased** through the use of hard-cast bullets with broad meplats.

If the wound diameter is bigger than the caliber, what causes it and what does the bullet fly in, if it does not touch the media being penetrated?

Posts: **2848** | Registered: **12 August 2002**



Cross L
One of Us

posted 27 February 2011 11:37

[Hide Post](#)

quote:

Originally posted by Warrior:

quote:

It is thought that the reason why flat-nosed solids penetrate better in bodily tissue is because of what is known as the Vapor Bubble Theory. Such a nose shape creates a shock wave that surrounds the bullet as it passes through the fluid-rich medium of bodily tissue. The flatter the nose, the greater the wave, which displaces bodily tissue sideways. This creates a "bubble" in which the bullet then travels. There is obviously less resistance on the bullet while in the bubble, so it penetrates farther.

The "Vapor Bubble Theory" in flesh is a myth, flesh does not behave like water, as flesh is a "soft solid" and not a fluid, despite its high water content. Water is non compressable, it does not support shear, solids are compressable and they support shear.

Warrior



SSR

Posts: **6725** | Location: **central Texas** | Registered: **05 August 2010**



someoldguy
One of Us



posted 27 February 2011 14:23

[Hide Post](#)

(I must have missed a page somehow....)

quote:

So let me introduce you to my new "Lab Assistant" Mercedes Dakota!

Cool!
Doctor M has an intern!



Glenn

Posts: **942** | Location: **Alabama** | Registered: **16 July 2007**



CCMDoc
One of Us



posted 27 February 2011 15:44

[Hide Post](#)

quote:

Originally posted by someoldguy:
(I must have missed a page somehow....)

quote:

So let me introduce you to my new "Lab Assistant" Mercedes Dakota!

Cool!
Doctor M has an intern!



SOG,

Please don't refer to that person as "intern". An intern is limited to an 80hr hour work week and in my opinion, not much can be learned with that limitation. Michael would actually have to do something more than unscrew the cap on his bottle of JD.

"Lab Assistant" - you can work these people as much as you need and actually get the job done with none of those sissy "duty hour" guidelines.

Posts: **3448** | Location: **In the Shadow of Griffin&Howe** | Registered: **24 November 2007**



I Bin Therbefor
One of Us

posted 27 February 2011 22:58

[Hide Post](#)

quote:

Originally posted by I Bin Therbefor:
Question to Doctari:

In your book The Perfect Shot, you state that hemispherical solids penetrate better than flat-nosed solids. However, in one of your recent Sports Afield columns, you stated that flat-nosed solids penetrate best. Which is it?

Answer:

The Perfect Shot was written almost ten years ago. At that time we all thought hemispherical round-nosed solids were the best penetrators, simply because there were few flat-nosed solids available in those days with which to compare them. Things are different today. Flat-nosed solids, we now know, are by far the best for penetration. This is why most manufacturers now offer them. And, more importantly, they also create a larger permanent wound channel, which appears to be about 2/3 of caliber in size. And they also appear to visibly "hit" harder. I have in my photo collection a photo of a large elephant cow that was shot from the rear with a South African-made 410-grain flat-nosed .416 Rigby solid called a Dzombo. The bullet entry wound is just to the side of the spine, and it was recovered in one of the tusks! Total penetration length was 23 feet! I now use these photos in my ballistic lectures. (The cow was shot on problem animal control here in South Africa.) It is thought that the reason why flat-nosed solids penetrate better in bodily tissue is because of what is known as the Vapor Bubble Theory. Such a nose shape creates a shock wave that surrounds the bullet as it passes through the fluid-rich medium of bodily tissue. The flatter the nose, the greater the wave, which displaces bodily tissue sideways. This creates a "bubble" in which the bullet then travels. There is obviously less resistance on the bullet while in the bubble, so it penetrates farther.

I am in the process of updating The Perfect Shot for reasons like this.



I take it by the responses that there is some level of agreement that flat nose bullets penetrate deeper than round nose bullets regardless of bullet manufacture X's statement and change back to round nose bullets. In effect we either know better now or there are better flat nose bullets or there are more of them.

No one seems to have a problem with a South African-made 410-grain flat-nosed .416 Rigby solid called a Dzombo penetrating 23 feet in an ele.

Some question the size of the permanent wound channel of the flat nose being larger than that of the round nose bullet.

There is also some difference of opinion as to the mechanics of what happens between a flat nose bullet and a round nose bullet and the choice of words presenting those mechanics.

Interesting, the flat bullets do work. It's the explanation that causes concern. The explanation is important to the extent that we can use the explanation to understand the mechanics and change the bullet design to accomplish whatever purpose we intend.

That's why Michael's list of variables and their importance to bullet design is so interesting to me. 🧐

Posts: **404** | Registered: **08 May 2005**



someoldguy
One of Us



posted 27 February 2011 23:30

[Hide Post](#)

quote:

SOG,

Please don't refer to that person as "intern". An intern is limited to an 80hr hour work week and in my opinion, not much can be learned with that limitation. Michael would actually have to do something more than unscrew the cap on his bottle of JD.

"Lab Assistant" - you can work these people as much as you need and actually get the job done with none of those sissy "duty hour" guidelines.

Aha! Gotcha! 😄

But I must stand in Michael's defense here. I thought Doc M's beverage of choice was actually Grey Goose. 🍷

Glenn

Posts: **942** | Location: **Alabama** | Registered: **16 July 2007**



Macifej
One of Us

posted 27 February 2011 23:41

[Hide Post](#)

Uh-Oh! Another Alf/Gerard/Warrior Wankfest alert ... must be something in the water in that part of the world.



Posts: **13301** | Location: **On the Couch with West Coast Cool** | Registered: **20 June 2007**



someoldguy
One of Us



posted 28 February 2011 00:29

[Hide Post](#)



Well, macj, wankfests are more fun than sudoku by a mile.



Glenn

Posts: **942** | Location: **Alabama** | Registered: **16 July 2007**



Warrior
One of Us

posted 28 February 2011 01:35

Hide Post

Mac,

Just getting back to my statement about the myth of the vapour bubble in flesh.

The notion that a vapour bubble is forming around a supercavitating bullet in flesh is an erroneous assumption. Flesh does not behave like water, and as such we need to make a quantum leap in faith to get to a vapour bubble. The water contained in flesh is housed intra-cellular, in boundary form, and not like water that can flow. Also an animal is not as homogenous as water, it consist of skin, flesh, bone, vacuum, lung tissue, ect. - all very different in density. Once the bullet enters the animal , the so-called bubble needs to be formed, it needs to be maintained, and the bullet needs to be stabilized within that bubble. How is such a bubble to be evoked through the complexity of skin, bone, tendons, muzzle, grass-filled gut, lungs and air and be maintained intact during its journey through an animal? When it comes to flesh and its properties I am much more inclined to believe a medical doctor rather than a physicist. I can well remember that Alf has answered Norbert Hansen very extensively on this issue of the vapour bubble.

I believe FN Solid bullets penetrate better largely due to shoulder stabilization, and not by way of 'supercavitation'. Another dichotomy that I have observed here on AR, is that Norbert placed a steel disc with a sharp edge at the nose of the bullet to form the apparant 'supercavitaion', whereas Michael has shown that slightly deeper penetration is obtained by actually rounding the edges of the meplat, albeit in paper and not in water. But as we all know, paper is not water, and water is not flesh.

Would love to know how you see it?

Warrior

Posts: 2273 | Location: South of the Zambezi | Registered: 31 January 2007



RIP
one of us

posted 28 February 2011 06:35

Hide Post

quote:

Originally posted by I Bin Therbefor:

No one seems to have a problem with a South African-made 410-grain flat-nosed .416 Rigby solid called a Dzombo penetrating **23 feet** in an ele.



And an itty-bitty cow ele at that!

Yes, that made me want to look up the body length of cow elephants ...

<http://www.einfopedia.com/aver...e-of-an-elephant.php>

The average size of an elephant varies among the African and Asiatic elephant. The tusk of Asian elephants are bigger than the African elephants where as the brain size of an elephant is the largest among all other mammals on the earth. The elephant is among the most intelligent animal on earth. While the size of an elephant's brain is the largest in size among the land mammals, it actually only occupies a small area at the back of the skull. However, in proportion to the size of the body, the elephant brain is smaller than the human brain. Despite this, the elephant is one of the only animals along with all apes (including ourselves), sperm whales and a few other creatures who has a large brain relative to body size.

African Elephant Facts:

Head and body length of an African elephant: 6.0—7.5 m.

Shoulder height of African elephant: 3—4 m.

Weigh of African elephant: t 2,200—7,500 kg.

Weight of Elephant Brain: 4.2 to 5.4 Kilograms

Weight of an Elephant's heart: 28 to 30 Kgs. The heart of an elephant beats only 28 times a minute as compared to the heart of a mouse which beats 500 times a minute.

Asian Elephant Facts:

Head and body length of an Asian elephant: 5.5—6.4 m.

Shoulder height of Asian elephant: 2.5—3.0 m.

Weigh of Asian elephant: 5,000 kg.

And I thought that GSC .510/570-grain FN at 2400 fps entering the rump and exiting the throat of the big bull bison after only 8 feet was a lot of penetration.

I've been upstaged! 🤔

Doc M,

I'm with Paul, she deserves a better title than "intern." Much better: "McCourry Institute of Ballistics Research Assistant."

Introducing Mercedes Dakota, MIB-RA.

M-I-C-K-E-Y ... 😊

I have a great idea for a new Winchester-based B&M rimmed cartridge ... will leave you "hanging" for a bit ...

Oh yes, good job with Paul's double, I knew you would get the "hang" of the JB Weld, just needed the suggestion.

Also good job in removing the "hanging" JB Weld from the sides of the rib and barrels. 🤔

Posts: 28032 | Location: KY | Registered: 09 December 2001



RIP
one of us

posted 28 February 2011 07:12

[Hide Post](#)

Both RN and FN bullets do some cavitating in any medium, even in bone.
Permanent wound channel diameter is smaller than bullet caliber in the heaviest and most solid of cortical bone.
The bone had to expand to let the bullet through that part of it, and rebounded from the larger temporary wound cavity after the bullet passed.

The same bullet might leave a bigger than caliber hole in the more fragile cancellous bone of a marrow cavity, filled in with blood and fat between the lattice work of bone, or a sinus cavity filled with mucus and air.

Maybe the FN does better cavitation?

If not, it steers better by shoulder stabilization within that same cavity.

In fact, for shoulder stabilization to work, it presupposes contact with the medium at the "wetted" nose.
Does it not?

Both the RN and the FN cavitate, forcing the medium away from the sides of the bullet.

There is a high pressure zone at the nose of the bullet, and a relative vacuum behind the bullet in the expanding temporary cavity.

Can high pressure vapor/gas rub the black off the nose of a bullet?

What we need is the flesh and bone and blood of an invisible animal to do high speed cinematography on to compare the cavities of the RN to the FN.

Gotta be able to see what is going on. 😊

Posts: 28032 | Location: KY | Registered: 09 December 2001



RIP
one of us

posted 28 February 2011 08:00

[Hide Post](#)

Doc M,
Short-barreled-light-weight:



<http://www.shootingillustrated...show-caleb-giddings/>

Above is the Rossi "Trail Judge" that was listed in the 2011 Rossi catalog yesterday, and shown at the 2011 Shot Show. Gone now from the catalog, one day later.

Looked like a stainless Marlin 1895 Guide Gun sawed off.

Seems ATFE decided it was a no-no.

It had a rifled barrel and fired .410 Ga, and 45 LC.

Sawed-off shotgun "impression" prevailed?

The 28 Ga/.550-caliber "Raging Judge" revolver also bit the dust as an "AOW," maybe involved being over .50-cal, and no existing commercial handgun cartridge to fit it, despite existing 28 gauge shotshells to fit it, ha ha?

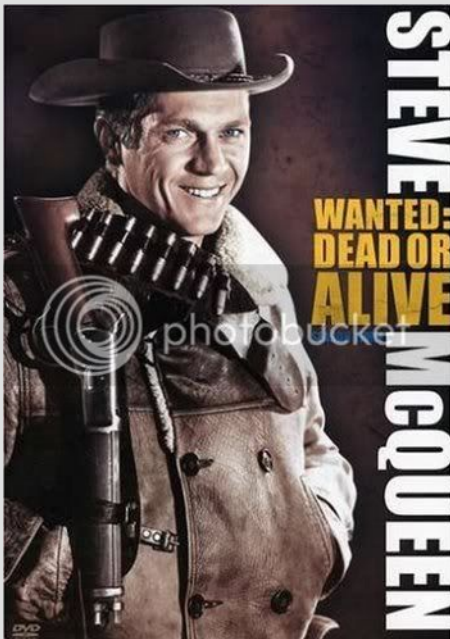
The 2010 model "Ranch Hand" (below) seems to be legal (without the \$200 tax for short-barreled rifle) because it is chambered in .357 RM, .44 RM, and .45 LC, all handgun cartridges only, and it starts from a Model 92 Winchester clone-action and is purposely made into a pistol or "handgun."

It is not a pre-existing rifle that was sawed off. 😊



How about a "50 B&M Micro," a "handgun" that would also fire the slightly shorter 500 S&W? That bit of extra freebore would allow you to load the 500 S&W hotter, until the 50 B&M Micro brass was available. 😊

Rebarrel a Rossi Ranch Hand?
Time for a B&M Handgun line?
Only 4 pounds and 24 inches long, 12" barrel!!!
Or shorten the barrel and buttstock some more, and remove the sights, like this, but maybe with a handgun scope on the barrel : 🇹🇼



Since I was 5 or 6 years old, my gender identity was firmly set as cowboy. 🇹🇼



Posts: 28032 | Location: KY | Registered: 09 December 2011

michael458
One of Us



posted 28 February 2011 15:21

[Hide Post](#)

Whew, I have some catching up to do. Been sorta busy, range work Saturday, hard labor, doing some maintenance on the range. Sunday, I was off! HEH....!

quote:

No one seems to have a problem with a South African-made 410-grain flat-nosed .416 Rigby solid called a Dzombo penetrating 23 feet in an ele.

23 Feet---

What has Doctari been smoking I wonder?? Typo? HmMMM? I am not going to "dispute" that by any means, I suppose most anything might be possible in our shooting world, have heard and seen many wild things out there! But 23 feet of penetration? I am like the good ole boys from Missouri, someones gonna have to show me that!

As for the mechanics of penetration--cavitation in question. Most animals are made up of a lot of liquid fluids, some cavitation has to occur I would venture to guess. We believe we are getting cavitation in the test medium here, marking on the side of some bullets is not touched or removed? I also believe that cavitation is not major factor that can be calculated and predicted like meplat size, radius and other real factors either. It either does or it does not. Cavitation may be effected by meplat or radius, but how much so is a question I can't answer?

As for my "Lab Assistant" that's what I termed her from the beginning. I think Glenn or someone else mentioned intern.

Yes, Glenn, Grey Goose !

RIP, yeah I was pleased with the way I chipped the extra JB Weld off Pauls rifle with the hammer and chisel, not a lot of damage at all--In fact it sorta goes with the engraving, hardly even notice it, I removed some of the deeper chisels with the bastard file. HEH HEH HEH...Poor Paul!

I think I will let you handle the 50 B&M Micro for handguns. Sounds like it might be a can of hairy worms to me!

HEH

Test day today! Yes, but not terminals. Oh man, have a very very large project starting this morning, barrel strains with several test and experimental band designs of the CEB BBW #13s in 458 caliber, 457 caliber. This along with other bullets in the test mix is going to account for now probably close to 200 rounds or more. Many factors to consider in this endeavor as well, can't afford to heat the barrel, might change barrel strains? So have to keep it cool somehow, which is going to slow the process some as well. I will be using a fan to try and keep things even and cool. Maybe I can be more productive that way? After or in between I will be working with Paul's rifle in 450/400 as well. New dies will arrive tomorrow, so maybe I can start with that today! Should be very interesting as well. So it's a big week this week and much to learn. Primer test is still ongoing as well, with some interesting results and surprises on that front as well.

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.

Posts: 8426 | Location: South Carolina | Registered: 23 June 2008

michael458
One of Us



posted 28 February 2011 15:31

[Hide Post](#)

Before someone wants to kick me in the teeth, let me expand on a point about Our Doctari! I praise him for his efforts and support those efforts 110%. It is my understanding that he is very much involved in some very serious research concerning flat nose solids and round nose solids currently in Africa. His conclusions as I understand are that the flat nose solids are far far superior to round nose which have been giving some issues in many arenas. His efforts are commended greatly. His research is changing things within these areas. Like many of US--He has too seen the light and making changes to reflect more light upon the "Darkness". Here Here Doctari! Keep up the good work!

Michael

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

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Posts: 8426 | Location: South Carolina | Registered: 23 June 2008

someoldguy
One of Us



posted 28 February 2011 16:10

[Hide Post](#)

quote:

Before someone wants to kick me in the teeth, let me expand on a point about Our Doctari! I praise him for his efforts and support those efforts 110%. It is my understanding that he is very much involved in some very serious research concerning flat nose solids and round nose solids currently in Africa. His conclusions as I understand are that the flat nose solids are far far superior to round nose which have been giving some issues in many arenas. His efforts are commended greatly. His research is changing things within these areas. Like many of US--He has too seen the light and making changes to reflect more light upon the "Darkness". Here Here Doctari! Keep up the good work!

I already have enough teeth, thank you, so I'll pass on kicking yours out, Michael. 🇺🇸

See? Even doctors get some education here! 🤔

quote:

As for the mechanics of penetration--cavitation in question. Most animals are made up of a lot of liquid fluids, some cavitation has to occur I would venture to guess. We believe we are getting cavitation in the test medium here, marking on the side of some bullets is not touched or removed? I also believe that cavitation is not major factor that can be calculated and predicted like meplat size, radius and other real factors either. It either does or it does not. Cavitation may be effected by meplat or radius, but how much so is a question I can't answer?

Rathcoombe gives an interesting formula in his terminal ballistics page relating to cavitation of flat-nosed bullets in soft tissue.

$Cavitation = Velocity \times meplat / 225 - 0.725$

Glenn

Posts: **942** | Location: **Alabama** | Registered: **16 July 2007**



RIP
one of us

posted 28 February 2011 17:33

[Hide Post](#)

Doc M,
Well, if you don't want it, OK, I'll just stick to the 500 S&W Mare's Leg for now.
It will be the worst of both world's of
1) concealed carry and
2) long range accuracy 😊
On secod thought, yep, a can of worms.

Sorry you were not able to use a plumber's torch to remove the JB Weld overflow from Paul's rifle, might have removed the solder between the rib and barrels too.
That would not have made for good plumbing!

Glenn,
That Rathcoombe site was run by a member here, Harold, who used to post here years ago.
IRC, he was employed in a technical/scientific/number-cruncher area, space program engineering or such.
Do you have the link to that site?

Posts: **28032** | Location: **KY** | Registered: **09 December 2001**



someoldguy
One of Us



posted 28 February 2011 22:10

[Hide Post](#)

RIP

Don't worry! That formula wasn't my idea.

<http://www.rathcoombe.net/sci-...listics/methods.html>

Glenn

Posts: **942** | Location: **Alabama** | Registered: **16 July 2007**



Macifej
One of Us

posted 28 February 2011 22:27

[Hide Post](#)

quote:

was employed in a technical/scientific/number-cruncher area, space program engineering or such

If that's the same Cat I'm thinkin' of, he was totally FOS based on the data exchange's I had with him. He may be deceased?

Posts: **13301** | Location: **On the Couch with West Coast Cool** | Registered: **20 June 2007**



someoldguy
One of Us



posted 01 March 2011 02:46

[Hide Post](#)

quote:


Don't worry! That formula wasn't my idea.

That comment might not have appeared to be in the jocular spirit that I had intended it. Sorry. So to compensate I'll add a belated smiley.



quote:

If that's the same Cat I'm thinkin' of, he was totally FOS based on the data exchange's I had with him. He may be deceased?

Well, so far he hasn't come across with the classic calibers tests he'd been promising for the longest time. But if he's dead, I hate to hear it. I'd really like to see him take part in this discussion. In the interest of accuracy at least, if not science, some of our most cherished ideas need to be put through the rigors of peer review (and review by those who happen to know better. )

As far as FOS is concerned, I thought his penetration model seemed overly complex and didn't really pass muster as far as I'm concerned. But at least he put it out there for all to see.

Glenn

Posts: **942** | Location: **Alabama** | Registered: **16 July 2007**



boom stick
One of Us



posted 01 March 2011 02:51

[Hide Post](#)

The 500 JRH should be great in that mares leg. Or use 458 socom or 375 ruger brass to 1.285" long.

[577 BME 3"500 KILL ALL 358 GREMLIN 404-375](#)

we band of 45-70ers (Founder)
Single Shot Shooters Society S.S.S.S. (Founder)

Posts: **27557** | Location: **Where tech companies are trying to control you and brainwash you.** | Registered: **29 April 2005**



Cross L
One of Us

posted 01 March 2011 03:16

[Hide Post](#)

quote:

Originally posted by michael458:
Before someone wants to kick me in the teeth, let me expand on a point about Our Doctari! I praise him for his efforts and support those efforts 110%. It is my understanding that he is very much involved in some very serious research concerning flat nose solids and round nose solids currently in Africa. His conclusions as I understand are that the flat nose solids are far far superior to round nose which have been giving some issues in many arenas. His efforts are commended greatly. His research is changing things within these areas. Like many of US--He has too seen the light and making changes to reflect more light upon the "Darkness". Here Here Doctari! Keep up the good work!

Michael

Doc M

I dont believe that anyone has ever accused you of thinking that you were "THE WAY THE TRUTH AND THE LIGHT" one of the things that first attractd my attention to this thread was a spirit of earnest inquiry. No one here cares who gets the result as long as it is the best possible result. Many thanks to all and esp Doc M.

SSR

Posts: **6725** | Location: **central Texas** | Registered: **05 August 2010**



drewhenrytnt
One of Us

posted 01 March 2011 07:48

[Hide Post](#)

quote:

Now where are those files at?

I don't think files will help. You might have to resort to using a Farrier's Rasp!

We Band of Bubbas
N.R.A Life Member
TDR Cummins Power All The Way
Certified member of the Whompers Club

Posts: **2969** | Location: **South Texas** | Registered: **15 January 2008**



michael458
One of Us



posted 02 March 2011 14:31

[Hide Post](#)

Good Morning all! Sorry that I have not done much test work this week, as I had planned. I ended up having some help yesterday, so we started doing some much need range maintenance that I had scheduled for Saturday. Since I had help, I took advantage of that to get some of the work done before Saturday. Now we are involved in re doing the inside walls of the range, should finish today hopefully.

Monday I did get a new barrel strain test completed. I tested 31 or 32 different bullets down the bore of the 458 B&M, I had a difficult time starting, a bad connection giving faulty readings. Once I solved the connection I think I had the best connection and numbers I have had in the 458 and the outcome is predictable, along with correlating with all the work that Sam and I done in 470 as well. I still need to combine the barrel strain with chamber pressure of these particular bullets, and then some 50 yd accuracy work as well.

Still have CCMDocs double, it's waiting for it's turn at the test work as well. This bit of range maintenance has put me behind on that too. Next work done, after range maintenance will be this for sure.

Michael

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

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

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



Dave Bush
One of Us



posted 02 March 2011 22:27

[Hide Post](#)

I am really curious to see how Paul's gun shoots with the shorter barrels! 😊

Dave
DRSS
Chapuis 9.3X74
Chapuis "Jungle" .375 FL
Krieghoff 500/.416 NE
Krieghoff 500 NE

"Git as close as y can laddie an then git ten yards closer"

"If the biggest, baddest animals on the planet are on the menu, and you'd rather pay a taxidermist than a mortician, consider the 500 NE as the last word in life insurance." Hornady Handbook of Cartridge Reloading (8th Edition).

Posts: **3728** | Location: **Midwest** | Registered: **26 November 2006**



CCMDoc
One of Us



posted 02 March 2011 23:18

[Hide Post](#)



NRA Lifer; DSC Lifer; SCI member; DRSS; AR member since November 9 2003
STILL waiting for my Taksdale double or a refund

Don't Save the best for last, the smile for later or the "Thanks" for tomorrow

Posts: **3448** | Location: **In the Shadow of Griffin&Howe** | Registered: **24 November 2007**



someoldguy
One of Us



posted 03 March 2011 07:14

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quote:

Posted 02 March 2011 13:27 Hide Post
I am really curious to see how Paul's gun shoots with the shorter barrels!

Do you mean that short barrel double rifle with the rebel flag stickers stuck on both sides of the stock?

That's a purty one, ain't it?



Glenn

Posts: **942** | Location: **Alabama** | Registered: **16 July 2007**



Cross L
One of Us



posted 03 March 2011 07:41

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someoldguy,

Thanks, nice catch down in the sectional density thread. Sometimes I just cant resist poking things in cages with sharp sticks.

SSR

Posts: **6725** | Location: **central Texas** | Registered: **05 August 2010**



Esskay
One of Us



posted 03 March 2011 20:45

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Folks,

Possibly a lil bit off topic but I need to ask the experts. Does anyone reload for the 404J using GSC HV 320 grn bullets? If so, what powder etc etc and at what velcity? Or any other non-con bullet of approximately the same weight? Thanks much

Posts: **740** | Registered: **08 December 2009**



someoldguy
One of Us



posted 03 March 2011 22:29

[Hide Post](#)

quote:

Originally posted by Cross L:
someoldguy,

Thanks, nice catch down in the sectional density thread. Sometimes I just cant resist poking things in cages with sharp sticks.

SSR

;

No problem, Cross. 😊

I don't have any money on any of that stuff. 🌐

Glenn

Posts: **942** | Location: **Alabama** | Registered: **16 July 2007**





I posted this down on the double rifle thread, but here was this past Mondays work on barrel strains. Several posts down on doubles for more info.

Blue is for Approved Loads			Yellow for Loads that Need More Tests				Average	Comments
Date	Bullet	Powder	Primer	High	Low	ES		
Data Current		2/28/11						
458 B&M	Barrel Strain Data							
All Tests Conducted with 56/H-322								
500 Woodleigh Soft Considered Benchmark Bullet								
Bullet			Diameter		Velocity		Barrel Strain	
.416 Caliber	400 North Fork FPS		0.416		1359		10294	
500 Barnes	Banded		0.456		1860		11414	
480 CEB #13	3 Band X2-.457 X1-.456				1892		11653	
450 CEB #13	4 Band		0.458		1907		11695	
480 CEB #13	3 Band X3 .457		0.457		1888		11777	
480 CEB #13	3 Band X2-.458 X1-.456				1889		11781	
480 CEB #13	4 Band NE		0.457		1876		11909	
480 CEB #13	3 Band X2-.458 X1-.455				1895		11942	
480 CEB #13	3 Band X2-.458 X1-.457				1893		11983	
420 CEB#13	NonCon HP 4 Band		0.458		1917		12043	
450 North Fork	FPS		0.458		1908		12107	
450 North Fork	Bonded Soft		0.458		1902		12321	
450 CEB #13	NonCon HP 4 Band		0.457		1914		12409	
325 Hornady	Flex		0.458		1938		12519	
450 Barnes	Banded		0.456		1896		12700	
405 Remington			0.458		1831		12733	
450 North Fork	CPS		0.458		1869		12761	
450 Woodleigh	Hydro		0.457		1877		12945	
350 Speer			0.4575		1772		13205	
450 Swift	A Frame		0.458		1873		13492	
350 Barnes	TSX		0.457		1823		13507	
500 Hornady	RN Soft		0.457		1830		13702	
500 Woodleigh	Soft		0.457		1799		13852	
400 Barnes	Buster		0.458		1877		14283	
500 Swift	A Frame		0.458		1848		14619	
500 Woodleigh	FMJ		0.457		1809		16044	
500 Barnes	X Old No Bands		0.457		1876		17376	
460 Cast	Performance		0.459		1908		17578	
500 Barnes	RN Old Solid		0.457		1871		17579	
450 Barnes	X Old No Bands		0.457		1914		18274	
430 Cast	True Shot		0.459		1915		19649	

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.

Michael,

Do you have some of the original two bands that you can test?

465H&H

michael458
One of Us



posted 04 March 2011 23:56

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465

No, I don't, and I never had any .458s.

M

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

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



I Bin Therbefor
One of Us

posted 05 March 2011 01:35

[Hide Post](#)

The Truth Wears Off

Article in New Yorker magazine about The Decline Effect ends up with: "Although many scientific ideas generate conflicting results and suffer from falling effect sizes, they continue to get cited in the textbooks and drive standard medical practice. Why? Because these ideas seem true. Because they make sense. Because we can't bear to let them go." and "The decline effect is troubling because it reminds us how difficult it is to prove anything. We like to pretend that our experiments define the truth for us. But that's often not the case. Just because an idea is true doesn't mean it can be proved. And just because an idea can be proved doesn't mean it's true. When the experiments are done, we still have to choose what to believe."

<http://dcoda.amplify.com/2010/...e-scientific-method/>

Worth pondering

Posts: **404** | Registered: **08 May 2005**



465H&H
One of Us

posted 05 March 2011 02:09

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quote:

Originally posted by I Bin Therbefor:
The Truth Wears Off

Article in New Yorker magazine about The Decline Effect ends up with: "Although many scientific ideas generate conflicting results and suffer from falling effect sizes, they continue to get cited in the textbooks and drive standard medical practice. Why? Because these ideas seem true. Because they make sense. Because we can't bear to let them go." and "The decline effect is troubling because it reminds us how difficult it is to prove anything. We like to pretend that our experiments define the truth for us. But that's often not the case. Just because an idea is true doesn't mean it can be proved. And just because an idea can be proved doesn't mean it's true. When the experiments are done, we still have to choose what to believe."

<http://dcoda.amplify.com/2010/...e-scientific-method/>

Worth pondering

I wish I had said that!

465H&H

Posts: **5686** | Location: **Nampa, Idaho** | Registered: **10 February 2005**



CCMDoc
One of Us



posted 05 March 2011 03:36

[Hide Post](#)

Worthy of publication in the National Enquirer or the Star!

Read the single comment - says all that need be said.

NRA Lifer; DSC Lifer; SCI member; DRSS; AR member since November 9 2003
STILL waiting for my Taksdale double or a refund

Don't Save the best for last, the smile for later or the "Thanks" for tomorrow

Posts: **3448** | Location: **In the Shadow of Griffin&Howe** | Registered: **24 November 2007**



I Bin Therbefor
One of Us



posted 05 March 2011 04:03

[Hide Post](#)

quote:

Originally posted by CCMDoc:
Worthy of publication in the National Enquirer or the Star!
Read the single comment - says all that need be said.

Actually it was in the New Yorker

Click here: http://www.newyorker.com/repor...101213fa_fact_lehrer

Lots of comments in various places on the article. The paradox that it creates is that "It is the absolute truth that there is no such thing as an absolute truth." or "All generalizations are false except this one."

I love it!

Michael started the process on this thread to find something that was useful to him and was willing to share his exploration. He never said that his results were anything but useful to him in selecting/designing bullets to compliment his concept of a carbine like DG rifle. I choose to accept that he has accomplished his purpose to the point that the CEB and NF designs he's approved, along with the S & H designs fill his needs.

Along the way, he's developed his model of what he concludes is important in DG bullet design. He is reporting the reality of his experience. This coming hunting season, I am looking forward to reading about field experiences with those designs. Others, apparently independently, are reporting very similar models. Doctari for one.

Never have I seen Michael claim that his design is scientifically prefect, whatever that means, rather that in his experience his design works effectively as a DG bullet and permits the execution of the entire B & M rifle line. The most he claims is that his designs work more effectively than any other he has tested against the primary criteria of penetration.

Others have quoted extensively from published works with the tone that these works present some sort of absolute, rather than representing the reality of others experience that may or may not be applicable. Further there is real doubt that the work these papers present was

varified in a "proper" scientific method. Being extensively quoted is different than being extensively varified.

Posts: **404** | Registered: **08 May 2005**



Cross L
One of Us



posted 05 March 2011 04:40

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quote:

Originally posted by I Bin Therbefor:
quote:
Originally posted by CCMDoc:
Worthy of publication in the National Enquirer or the Star!
Read the single comment - says all that need be said.

Actually it was in the New Yorker

Click here: http://www.newyorker.com/repor...101213fa_fact_lehrer

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varified in a "proper" scientific method. Being extensively quoted is different than being extensively varified.



Bravo Author Author



Wish I could have said it that well

SSR

Posts: **6725** | Location: **central Texas** | Registered: **05 August 2010**



Andy
one of us



posted 05 March 2011 06:41

[Hide Post](#)

Back to page 139, I am surprised that Doctari says that the permanant wound will be just 2/3 of flat meplat diameter.

Here is a photo of elephant skull shot with 450 grain North Fork FN at 2550 fps at 9 paces.

The cavity in blood filled skull is much larger than 458 caliber!!!

Sorry.

This Image Is currently
Unavailable

photobucket

I appreciate the DVM updating his work to reflect modern bullets, way to go, but please dont confuse laboratory results from field work, which made his reputation.

23 feet penetration could only happen if the bullet path went through alot of air or no dense tissue. My 450 grain FN went about 64 inches downward through skull and recovered in elephants sternum.

Regarding low velocity (1000 fps) SWC bullets, I knew Elmer Keith fairly well. Sent him bison meat on dry ice from NE Oregon to Salmon Idaho. He never ever claimed that a SWC had more penetration than a blunt or pointed RN. But it did make a bigger permanant wound chanel. I shot alot of feedlot cattle with 45 acp and I can tell you with certainty that the very small diameter meplat of a 200 grain H and G SWC which was popular IPSC round in the 1970's with 7.5 grains unique at 1000 fps which made major power, made as large a hole in 600 pound to 900 pound calves as a huge flat nose Keith style 250 grain with small shoulder, and larger than a 255 grain flat nose RN 45 LC cast bullet. So there is some truth to both statements. (Meplat diameter matters and shoulder diameter also matters if it is a pronounced shoulder like the H and G.)

Sorry to interject reality into a theoretical discussion.



Andy

Posts: **1278** | Location: **Oregon** | Registered: **16 January 2004**



Cross L
One of Us

posted 05 March 2011 06:46

[Hide Post](#)

Andy,

Michael and most of the rest of us are all about reality. Dont care much why it works or if its the theoretical "best" as long as it does work. Making things better never should preclude finding something better yet,

SSR

Posts: **6725** | Location: **central Texas** | Registered: **05 August 2010**



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