Pedersoli's
Blackpowder Nº 1. magazine
8th Issue, February 2012

Tips and tricks
Indoor shooting

Pedersoli life
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Pedersoli's Blackpowder No 1. magazine

Editorial

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In this issue:

Dear Shooters, Collectors, Firearm Enthusiasts all over the World,

Springtime is always a busy time at our factory. The preparation for the Shot Show and IWA exhibitions helps us to review our activity of the last year, while triggering our thoughts about the future product developments. These exhibitions are very important for us, as we are receiving many feedbacks from our customers directly, that are helping our team to improve day by day.

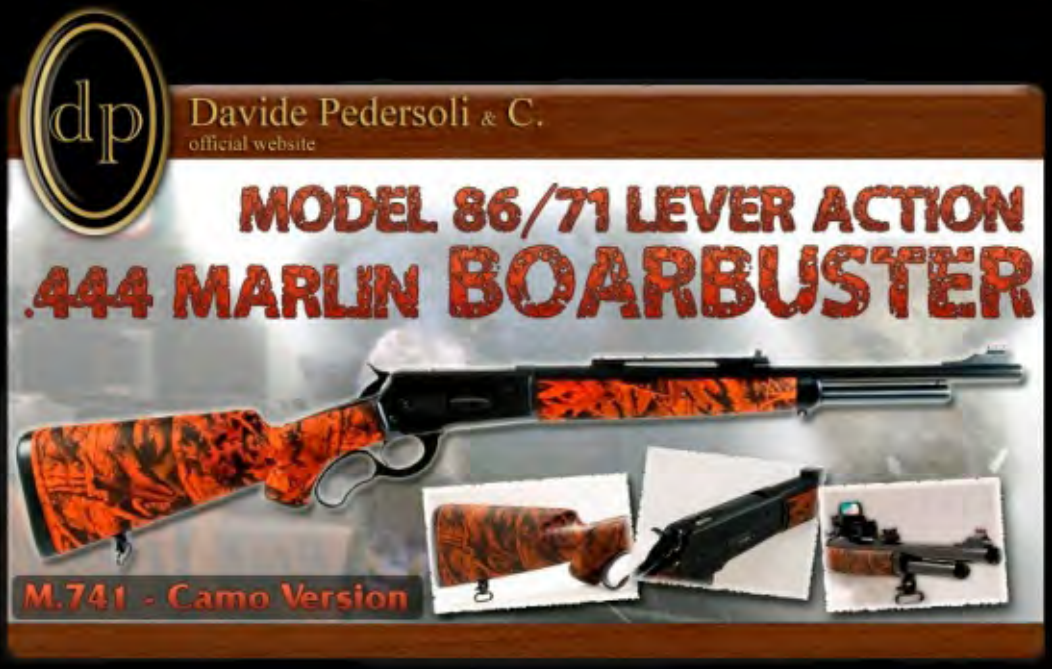
Innovation and heritage, highest quality with affordable prices. These notions seem sometime contradictory, but not for Davide Pedersoli. We would like to serve each and every shooter, hunter or collector who decides to choose our brand. Our company is the leading brand in historical shooting sports and replica manufacturing for more than 50 years now, and we plan to keep our good reputation.

Visit our booth at IWA show, see our newest innovations and projects, and please tell us your opinion about the progress we made in the past years.

Good hunting and good shooting to all friends who fell in love with the smoke of blackpowder.

Pierangelo Pedersoli *editorial director*

Balázs Németh *editor in chief*



Solid and easy to handle, typical of the lever action rifle models, easier to handle with the shorter barrel (19”), chambered in .444 Marlin, proofed for factory ammunition up to 3550 bar loads, makes this rifle the right choice for hunting in the bush. The ballistic accuracy of the PMG barrels from Pedersoli with 12 groove broached rifling, , together with the speed and stopping powder of this modern cartridge (2300 fps with 240 grain. bullet) make this rifle ideal for wild boar or deer hunting at up to 200 meters in Europe and in many other countries, world wide.

Features
- 19” PMG barrel (Premium Match Grade) with 12 grooves broached rifling.
- Magazine capacity: 5 rounds.
- Forged frame, CNC machined.
- Bolt right locking plates made of high carbon steel.
- Ready to fit an integrate base with fiber optic rear sight, that can easily mount the “red dot” sighting device or a long focal scope.
- Fiber optic front sight.
- American walnut stock and forend with camo-soft-touch finish.
- Ergonomic stock with micro cell soft butt plate.

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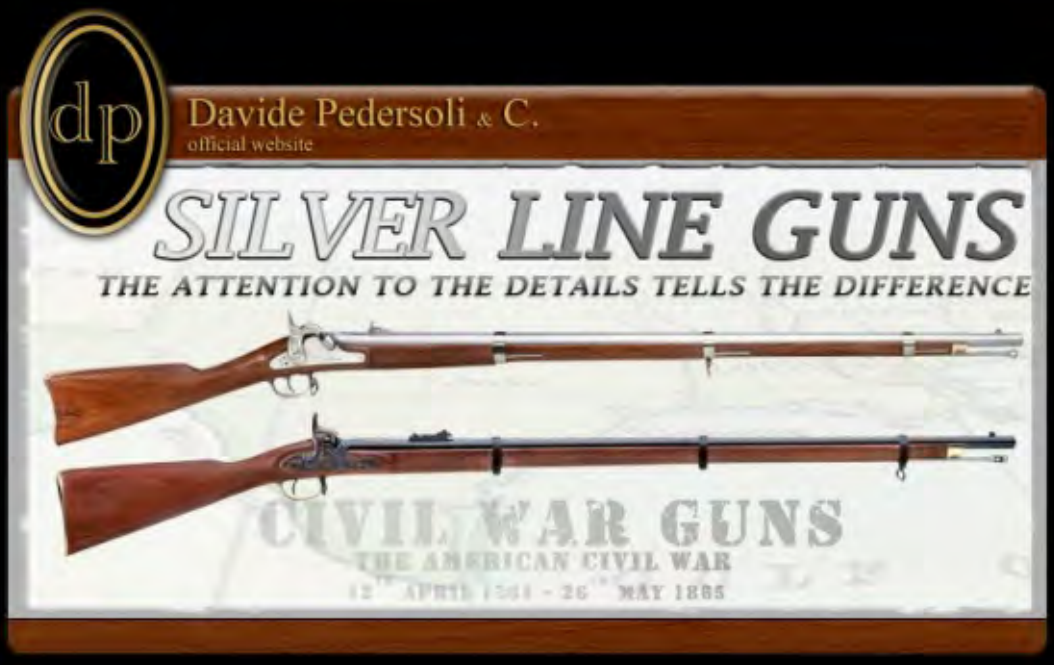
rClassics



2011 is the 150th anniversary of the beginning of The Civil War.In the hundred and fiftieth anniversary year of the War between the States, known as the American Civil War, or simply the Civil War (1861-1865) Davide Pedersoli introduced some months ago a series of rifles and carbines that include the most representative models that equipped the soldiers of the opposing armies in that war.

During the Civil War the various government arsenals, contract manufacturers, including many famous names, dedicated themselves to the production of guns that were to be assigned to the various units, mainly the infantry units. For various reasons, due to insufficient production to meet the demands of battle, or the search for a more favorable price, some European Arms manufacturers also dedicated a large part of their production for export to the American States, both for the Union and the Confederate troops. Many suppliers armed both sides of the battle.

The Enfield, Cook & Brother, Mississippi and Richmond models have been chosen by Davide Pedersoli to reproduce as these were guns used for almost the entire war period and that today, faithfully reproduced, represent the models preferred by historical re-enactors for the various commemorative events.

t us at Hall 4A booth 312

Steam cleaning machine for muzzle loading and many other guns. Featuring a steam boiler, a flexible tube 2 meters long with a fast connect handle with the stainless steel lance to direct the steam. The lance is 93,5 cm long and 8 mm diameter equipped with three discharge holes for best barrel cleaning. The lance is Teflon coated to prevent possible damage to the barrel.
You must wear the safety gloves supplied when handling the hot barrel as the steel could cause serious burns if handled without suitable protective clothing.

There are optional lances 112cm long and 26 cm long, this last features only one central flushing hole.

The Turbo Gun Cleaner is equipped with a heating boiler with a water capacity of 1,5 liters sufficient for twenty minutes of continuous steam flushing at approx. 130°C temperature. The machine draws 1500 Watts and is available for 110 or 220 Volt power. Heating is controlled electronically to minimize electricity consumption when maximum temperature is reached. The working pressure is 3,5 bar.

Heater boiler dimensions: 290x270x210H mm; weight 6 kilos, cable 2 meters. Operating temperature is reached in 10 minutes.

2

rClassics

The success enjoyed by the "back action" style and the single trigger originally produced by Baker in London enabled us to produce this side by side shotgun with 700 mm (279/16") and 725 mm (289/16") barrels.

The same mechanism featured in the Coach Gun models of this gun offers the advantage of a fast second shot, thanks to the back action lock reducing minor residues of black powder in the lock parts.

This shotgun will serve the hunters, the clay target shooters and the reenactors well. The double scatter gun is connected strongly to the American history as well. Many cavalry units of the Confederate States of America were amred with percussion shotguns in the beginning of the Civil War. Later these units were rearmed with carbines, but the old side by side offered something for the southern boys to ride with.

Our side by side shotgun is manufactured in 12 ga caliber with oiled walnut stock.

t us at Hall 4A booth 312

Deringer Philadelphia made by Ped

When John Henry Deringer (1786-1868), opened his manufacturing company in 1806 in Philadelphia, he could never imagine that one of his future creations would have such market success as to inspire several other makers to produce similar products until the beginning of 1900. Deringer manufactured military pistols and rifles, flintlock, travelling and duelling pistols and the produced about fifteen thousand units of this specific model from 1850 ending in the 1868, the year of his death.

The small pocket pistol was identified immediately as a classic in the history of the guns, becoming a true icon for its feature allowing the owner to hide pistols either in the trousers' pocket, or in the waistcoat, or in the jackets' inside pocket, particularly light, perfect for self defence (although sometimes used to commit an offence, to tell the truth). Such an important object aroused the attention of other manufacturers, who did not even try to make it much different, as often happens with new designs.

Deringer's pocket pistols notoriety was increasing noticeably and once more it was due to a very sad fact of American history. One example of Deringer's production, in fact, was found in one of the Ford theatre's boxes in Washington, where on the evening of the 14th of April 1865, President Abraham Lincoln was deadly injured by John Wilkes Booth.

Deringer's style, widely copied in the production years and during a later following period by other makers, almost every pocket pistols became identified with the term "derringer" (with two r).

One of the companies that produced many copies of the pistol was Slotter & Co., also located in Philadelphia, founded in the 1859 by Henry Slotterbeck together with his brother Charles and two other gunsmiths (W. Carrigan and J. Buckhalter) all who had working experience at Deringer facilities.

2

rClassics

ersoli

Slotter's pistols, produced between the 1860 and 1869 were distinguished from those of Deringer only by the hand grip being sharper at the front. This feature was not enough to save Slotter & Co. from an accusation of plagiarism and unfair competition from Henry Deringer: Slotterbeck, in fact was marking Deringer's name on his pistols, justifying this action by his partnership with one John Deringer, a tailor of Philadelphia who became his partner to allow the use of the name.

This replica's barrel, .45 caliber, is brown finished, and equipped with a V notch rear sight and a blade front sight. The hand grip is made of lacquered walnut and has chequered cross panels. The pistol is completed with brass furniture and on the case hardened lock there are two lines marked Deringer / Philadela. The lock plate and the hammer are enriched with floral engraving.

The gun is also available in a fitted wooden case, to retain the pistol, the ramrod and a small powder flask.
The "Deringer Philadelphia" has an overall length of 65/16" (160 mm), weight 0.54 lbs (0,247 kg); barrel length 31/2" (78 mm).

t us at Hall 4A booth 312

Terminal ballistics evaluation of the muzzleloading bullet vs modern hunting ammunition

There are many beliefs, disinformation surrounding the effect of the bullets fired by during the last centuries. There are many trying to guess how effective they may have been compared to today's modern hunting rifles. Every hunter has an opinion, but only a few have real experiences. We all know that, under 100 m, muzzleloading hunting rifles are capable of the same accuracy as modern rifles, and we know that any game can be taken with these arms. It's not a question for debate - our ancestors used these arms with great success for centuries.

I have been working on the legislation of muzzleloading hunting in my country for ten years now, and I have to say that only a very few hunters are against the project. I strongly believe that the values of this old hunting method are necessary to save the rich tradition of the real hunters. We received many questions about this project, and a great number of requests to demonstrate the wound ballistic effect of the heavy weight lead projectile of the muzzleloading era. I wanted to answer these questions in the easiest possible way, by comparing the effect of the blackpowder bullet to the effect of a well known modern hunting caliber, the 8x57 JRS:

How to use the data received from a ballistic gelatin test?

(Testing with ballistic gelatin allows many things to be examined). You can measure the penetration, the diameter of the impact wound and the cavity, the size of the temporary cavity (with high speed camera), the form of the permanent cavity, the deformity of the bullet, the straightness of the

8x57 JRS Norma
Alaska
.54 Plains
.535 roundball

patch of the bullet in the media and the infections entering the wound. There are professional recipes to simulate the density of animal flesh, but if you are not prepared to spend your life in the kitchen cooking stinking gelatin, there is an easier way. You can compare the result of a shot in gelatin to another different bullet effect. You will not get exact numbers from an experiment like this, but to determinate the effectiveness of a muzzleloading bullet the easiest way is to compare it to a modern hunting bullet, that we know from everyday use.

The recipe I used for the test does not simulate the substance of the flesh completely, so you cannot say that, if the bullet penetrated 50 cm in the gelatin, it will do the same in the body of the game. This is why we need a reference. I know that the 8x57 JRS penetrates both sides of all the big game (deer, roe deer, wild boar, mouflon) of my country within 100 m, and I know that it has more than enough killing power to take the game causing as little suffering as possible. To have a representative comparison it is not enough to shoot one with

Two 60 x15 x 15 cm gelatin blocks prepared for test shooting

the rifles, you need at least 3-5 shots to get an average you can use to evaluate the experiences.

The blocks used for both rifles must be of the same type of gelatin. The gelatin loses water when it is stored for a long time, so it is important that both blocks must be of the same age.

There is no need to test the bullet effect at point blank range. We have to simulate a real-life hunting distance, like 50-100 m, the true hunting range of the muzzleloaders.

The guns

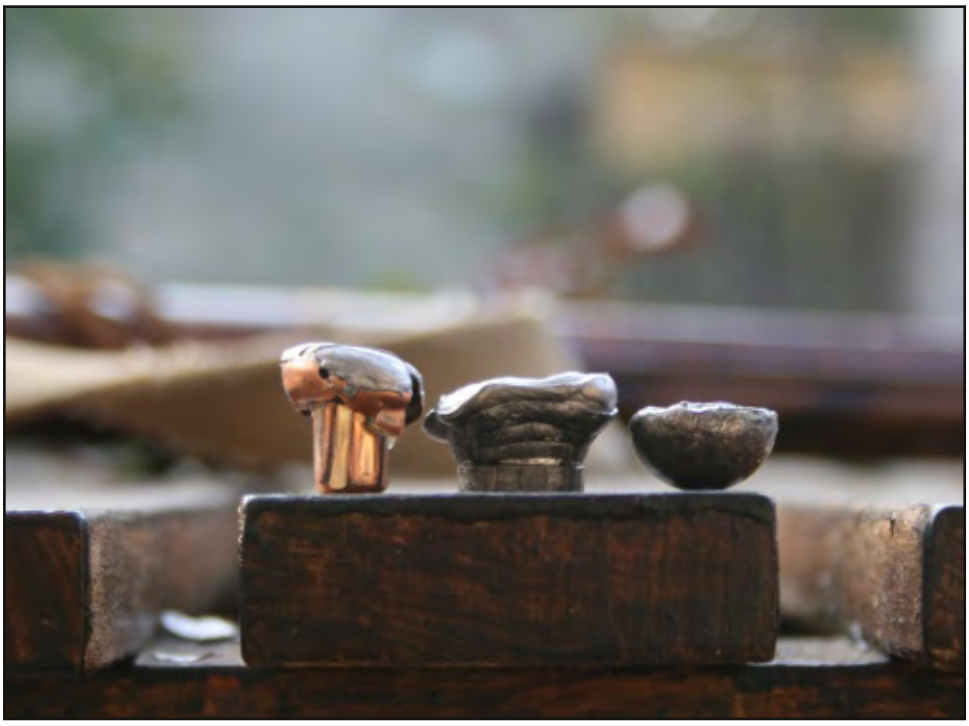
For the comparison, I selected two well accepted rifles: a Krieghoff Hubertus 8x57 JRS single barrel hunting rifle, and a .54 caliber Pedersoli Flintlock Frontier rifle. Both guns are popular, common hunting rifles, nothing special about them, both can do the job they were designed for with excellence . The Frontier has a 990 mm barrel, with a 1:65” twist rate and 8 grooves. This rifling is basically designed for shooting roundballs, but it performs well with Maxi bullets and Plains bullets as well.

The bullets

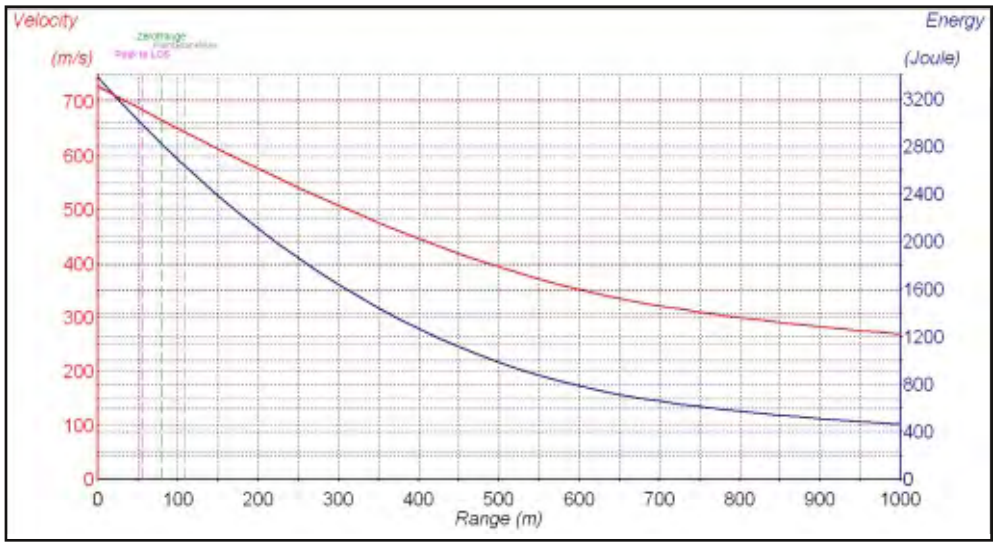
I chose widely known and accepted bullets for the test. The ammo for the reference gun was a 8x57 JRS Alaska round from Norma. The bullet of this good quality cartridge is a traditional soft point bullet. Nothing special, but it does the job perfectly according to my experience. I took wild boar, roe deer, deer with this round, and no game escaped more than 20 m-s with a well placed shot. The muzzleloading rifle was fired with two bullets: a .535” roundball, and a modern hunting bullet, the .54 cal Lyman Plains bullet. I prefer this bullet because I find it more accurate in the Pedersoli barrels than the traditional Maxi Balls. However, it has one disadvantage compared to the Maxi: the grooves hold less lube, so fouling can be an issue if you shot more than five with your rifle, but this is not a problem if you use the gun for hunting.

The loads of the muzzleloading rifle

Hungarian hunting regulations determine the minimum muzzle energy for the game types. For roe deer the bullet must have a minimum of 1000 J, for deer and mouflon the bullet must have minimum 2500 J. We don't have energy regulations for the wild boar, but in my opinion it's better to be closer to the 2500 than the 1000 J. These energies are more than enough for a heavy weight muzzleloading bullet, but rules are rules, so I set the roundball load and the

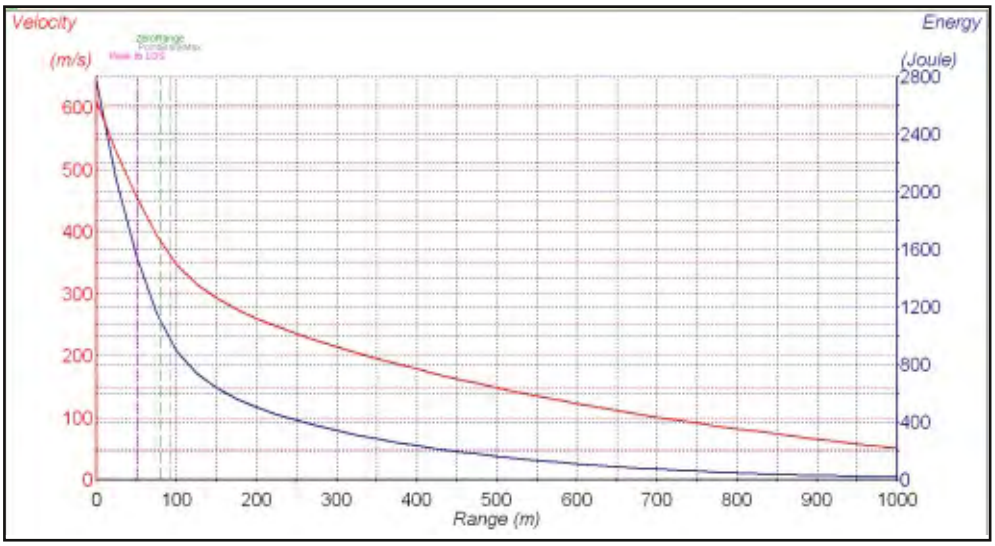


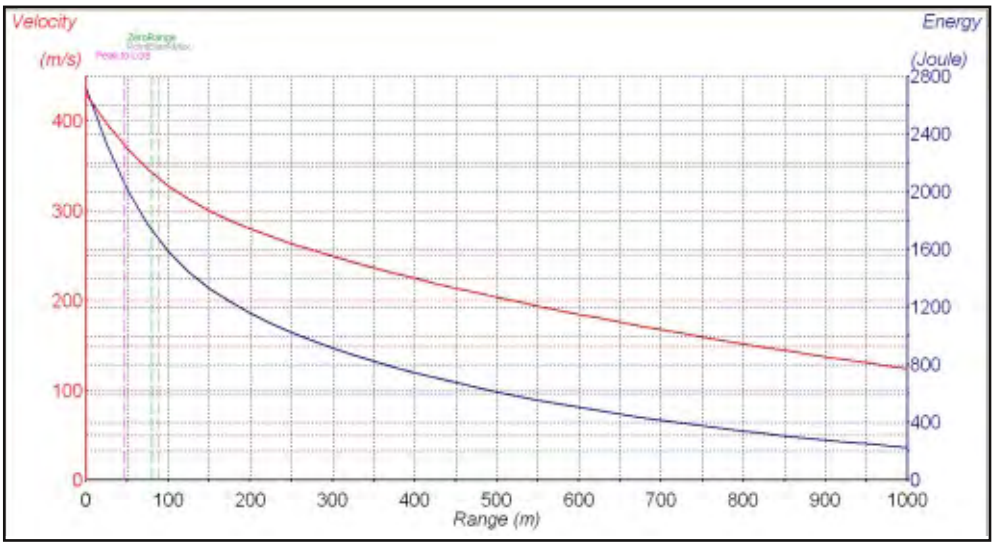
Bullets removed from the gelatin



Energy and velocity table of the Norma Alaska round

Energy and velocity table of the roundball

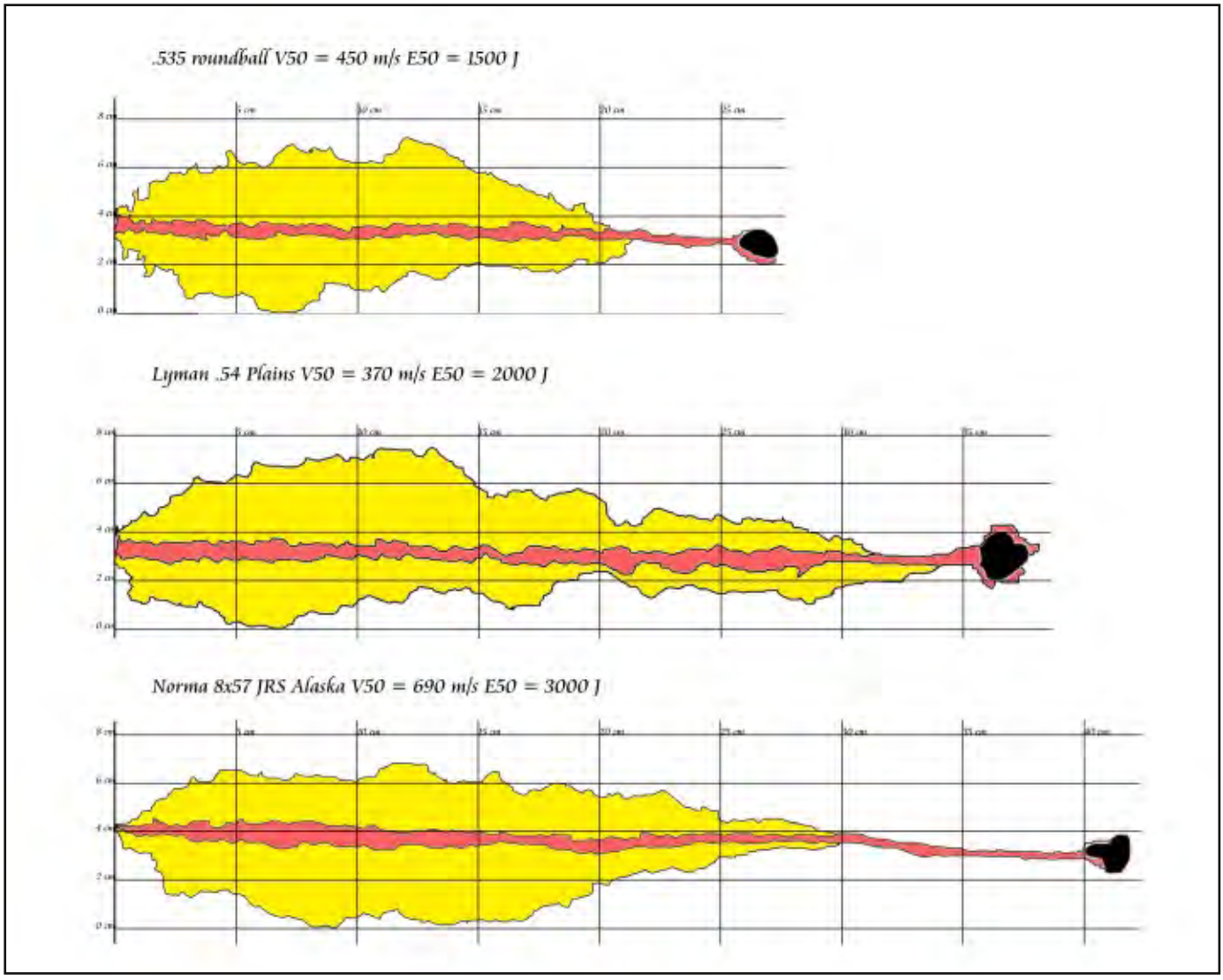




Energy and velocity table of the Plains bullet

conical bullet load to 2700 J, to securely go above the regulation level. I used 3Fg Swiss powder for the experiments, and Sellier & Bellot 4 mm caps.

Extracted bullets showed heavy expansion



The penetration

This part is the easiest to measure. The round ball passed average 27 cm into the media and became the bronze medalist of this game. Surprisingly the penetration of the Plains bullet and the 8x57 JRS was nearly the same. The Plains bullet passed 38 cm, while the Alaska bullet did only 4 cm more, 42 cm. The velocity of the Plains bullet at the point of impact was 370 m/s with 2000 J energy at 50 m, while it was 3000 J and

Clik the image for the video documentary:

690 m/s for the Alaska round. So with 50 % more energy it penetrated only 10 % deeper. This is surprising only if you skipped the physics classes of elementary school: the higher the speed of the bullet is, the stronger the effect of resistance will be when entering the media.

The damage to the surrounding tissue

The permanent cavity of the bullet shows two different effects in the media: first of all the bullet cuts a straight path as it goes through the gelatin (red area). Second, it damages the tissue as it transfers its energy to the surrounding flash (yellow area). This effect follows the the central wound like a wave. The size and density of this wave shows us the powder of the bullets.

The wave of the roundball was only 20 cm long, so it transferred its energy in a short path. The last 6-7 cm of the path of the ball was only a thin cut. The wave of the damage of the surrounding tissue causes 3-4 cm deep cracks starting from the central cavity. At the peak of the wave, there are 5-6 cracks like this. The effect of the Plains and Alaska bullet showed many similarities. Both the length of the wave (30-32 cm), the number and size of the cracks (8-10 3-4 cm deep cracks) were nearly identical.

The tests showed that the round ball transfers its energy faster than the conical bullets, but the penetration was much less, and the damage to the surrounding tissues was much less also. The deepness of the cracks was the same as with the Alaska and Plains bullets, but the number of cracks was significantly lower. The length of the damage wave of the Plains bullet was slightly greater than the Alaska bullet, but its penetration was shorter with a few centimeters. The two bullets are head to head in the competition, while the roundball is clearly the loser of the game.

However there is a factor that is not shown in these tests: the size of the temporary cavity. It is clear that this effect is stronger with the high speed Alaska bullet, but to check the exact difference, we need a high speed camera. I hope to test this later also.

The size of the impact wound

The size of the entrance wound was much bigger with the muzzleloading bullet, than with the modern Alaska bullet. The diameter of the roundball and Plains bullet was nearly identical (2-2,5 cm), while it was only 3-4 mm with the modern bullet. This is not surprising, as the nose of the muzzleloading bullets is more flat than the soft point bullet, and their diameter is much bigger also. Thanks to this effect, the bleeding at the impact caused by the muzzleloading bullet is much stronger.

Bullet deformity

In the case of deformity, soft lead bullets have a clear advantage: bigger diameter and softer material means better expanding capabilities. All three bullets showed good deformity during the tests. The Alaska bullet, with an original diameter of 8,2 mm became a nice mushroom, with a diameter of 16,8 mm. After the impact, it retained 93 % of its original weight. The 13,5 mm diameter round ball became 16,1 mm, while the 13,8 mm Plains became a 23,5 mm diameter nice big mushroom. The soft lead bullets did not use any of the original weight. These saltine tests however do not simulate the bullet hitting a bone.

The impact energies

The muzzleloading bullets lose their velocity and energy faster during their flight because of the unfavorable form compared to modern hunting bullets. The external ballistics of the roundball are inferior compared to any conical bullets. The .535 roundball starting with 2700 J of muzzle energy loses 1200 J when it reaches the target at 50 m, keeping only 1500 J of the original energy. This is the same value as the Alaska bullet, which hit the target at a distance of 330 m. The Plains bullet retains 2000 J at 50 m from the initial 2700, like the Alaska bullet at 220 m. The 220 m for the Alaska bullet is not a great distance, as this is the second point where the trajectory crosses the line of sight if the rifle is set to the 180 m GEE (Günstigste EnschießEntfernung) - and we all know that the 8x57 is capable of taking any European big game at this distance.

Summary

Muzzleloading bullets were used for hunting for centuries, and they are capable of taking any big European game today as well. But to use a muzzleloader effectively on the hunting fields, we must know the possibilities and limits of our loads. We have many choices like the caliber of the gun, weight and form of the projectile, type of powder, lubrication, etc.. so the responsibility is high. I suggest you keep some important rules to respect the ethics of hunting, and to minimalize the possibility of injury to the game and causing unnecessary suffering. First of all, do not use your muzzleloader above 100 m distances. The GEE distance of our bullets is much less than that of modern hunting bullets, as the muzzle velocity of our projectiles is lower, while they have inadequate ballistic form and a higher weight. In many hunting situations, you don't have time to adjust your sight to a higher distance. Our projectiles lose kinetic energy faster the modern bullets, but they certainly have enough killing power under 100 m. A .535” roundball starting with 2700 J energy has „only” 900 at 100 m. The flight time of our bullets is also longer because of the low velocities. So the game has more time to step into the shot. And we definitely don't want to injure the game, but to kill without causing suffering. The heavy weight conical bullet's terminal ballistic effect is comparable to the 8x57 JRS bullet's effect, so we can be sure that it is effective.

So pay attention to the distance. Know your rifle, know your load and make yourself an expert in shooting from the instinct, stalking, and judging distances. If you do so, you will realize that the slow reloading time and shorter distance is not really a disadvantage, it helps your hunting experiences.

NB

Plains vs 8x57JRS Alaska quick comparison

Advantages:	Bigger diameter impact wound There is no weight loss
Similarities:	Nearly identical penetration Nearly identical damage to the surrounding tissue Same diameter central cavity Similar expansion capabilities
Disadvantages:	Limits in shooting distance because of the curved trajectory Slow reloading

Invitations

2012 MLAIC World Championship

MLAIC is celebrating the 25th World Championships this year. This year's competition will be held on the beautiful shooting range in Pforzheim, Germany from 12th August – 18th August. This year's schedule is somewhat different from the the previous years as the starting day will be Sunday, not Monday as it used to be. The committee meeting will be held on the first day, and shooters will also have chance to start the training sessions one day earlier. The events are starting a half day earlier, with the Minié O and Lorenzoni O events on Tuesday.

The countries' delegates will have to send the preliminary registration forms to the German Shooting federation until 1st May, while the last date for the final registrations is 1st July. All competitions will be held listed in the MLAIC Constitution.

The cost of the match will be the following: Shooters' registry: 80 Euro, individual target events: 35 Euro, clay events: 40 Euro, Team events: 60 Eros.

Click the logo to access the official website:

Days of Truth 2012

The European Championship of cowboy action shooting will take place this year in Hungary, close to the capital city of Budapest in Dabas from 8th August to 11th August.. This is the first time for Hungary to organize such a great event for the western shooters of the old continent. The main program will the 12 stage match, with the possibility to compete in all SASS categories.

Side matches will include blackpowder night shoot, long range events, and various duels. The long range matches will be shot in 6 different categories – 4 single shot rifle and 2 repeating rifle events to 50 m and 100 m.

The detailed description and invitation of the match can be found at the official web page of the event, but you can also follow the registration on Facebook.

Click the logos for more info:

Indoor Shooting Experi

by Gabriele Tansella and Paolo Ortenzi

The set Pedersoli "Indoor Shooting Experience" has been created to satisfy on one side the muzzleloading agonist shooter and on the other to allow those who approach the discipline to profit from the existence of a training facility paying particular attention to gun safety handling requirements.

Although the type of product would suggest a trend causing a renaissance of the elegant "indoor target shooting" there are some thoughts that allow the enhancement of specific characteristics, that go beyond the limitations of a project intended only for indoor shooting, that actually switches the weapon used in a vintage pistol match into a

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training tool to practise maneuvers typical of muzzleloading shooting and into an object of refined attraction for those who love the playful art of shooting.

In addition, we would remind readers that the muzzle-loading weapon replicas in general, when well made, have the merit of combining modern and reliable construction, obtained by working with scientific criteria designed to ensure high quality standards, with the unique merits of the original design from which draws, using its best interpreting philological skills, its inspiration: highest level of ballistic quality - we talk about weapons first appreciated by the greatest exponents of the most famous European aristocracy and now by internationally famous athletes - and valuable aesthetic appeal.

Finally, we want to point out, from a cultural point of view of theoretical and practical studies of muzzleloading weapon systems is an essential element for those people who aspire to be considered an expert in weapons.

In general, the proposed system is a conversion set for muzzle-loading handguns based on the use of .209 type detonating caps and on special spherical shells made of polymer material of various weight and size: there is no need for the black powder. The use of powerful primer triggers, through the expansion of the gas, a proper release of energy propels the projectile out of the barrel of the weapon with sufficient stability to carry outstanding target grouping at three different distances from 10 to 15m.

The kinetic energy values typical of this type of weapon configuration make complex containment work unnecessary to such an extent that the kit producer company, thinking about a real set of shooting, has marketed a special device support that acts both as target and bullet stopper: this product used alone solves the problem of unpleasant and dangerous bullet fragment dispersion perfectly.

At the mechanical level, the "Experience Indoor Shooting" kit is based primarily on the use of a particularly suited nipple to perform three distinct functions: the first involves hosting the detonating cap, sealing it completely; a further task of the device is the activation of the primer through the action of

Excellent accuracy - the "Indoor experience" is a good solution for practicing in winter time, in the heated room.

its metal cover that houses a flat head firing pin; the third and last function is done by the bottom of the nipple, which blows the gas generated by primer detonation directly into the breech, propelling the bullet out of the barrel.

The kit we are talking about replaces, in a quick and simple way, the standard nipple supplied with percussion weapons, that will simply be unscrewed and stored during the "indoor" session.

The range test

The range test, carried out in collaboration with the manufacturer, took place in Milan at the TSN (Tiro A Segno Nazionale) site, using the firing line normally reserved for the training of local police.

The choice was determined by two important requirements: first, it seemed appropriate to perform the experiment in a large structure that would provide guarantees in terms of security and qualified support and second, the target distance, equal to 12.5 m , represents the position exactly intermediate between the values ??indicated by the manufacturer.

In the above mentioned conditions, we tested the product U.068 "Indoor Shooting Experience" on a Le Page Target shooting cal. .44 replica just taken out of the production line, and therefore not yet subjected to aging interventions such as manipulation of the sights and weight tuning of the trigger release.

Initially, to get an immediate feedback about the ballistic potentialities and to avoid any influence due to shooter mistakes in handling

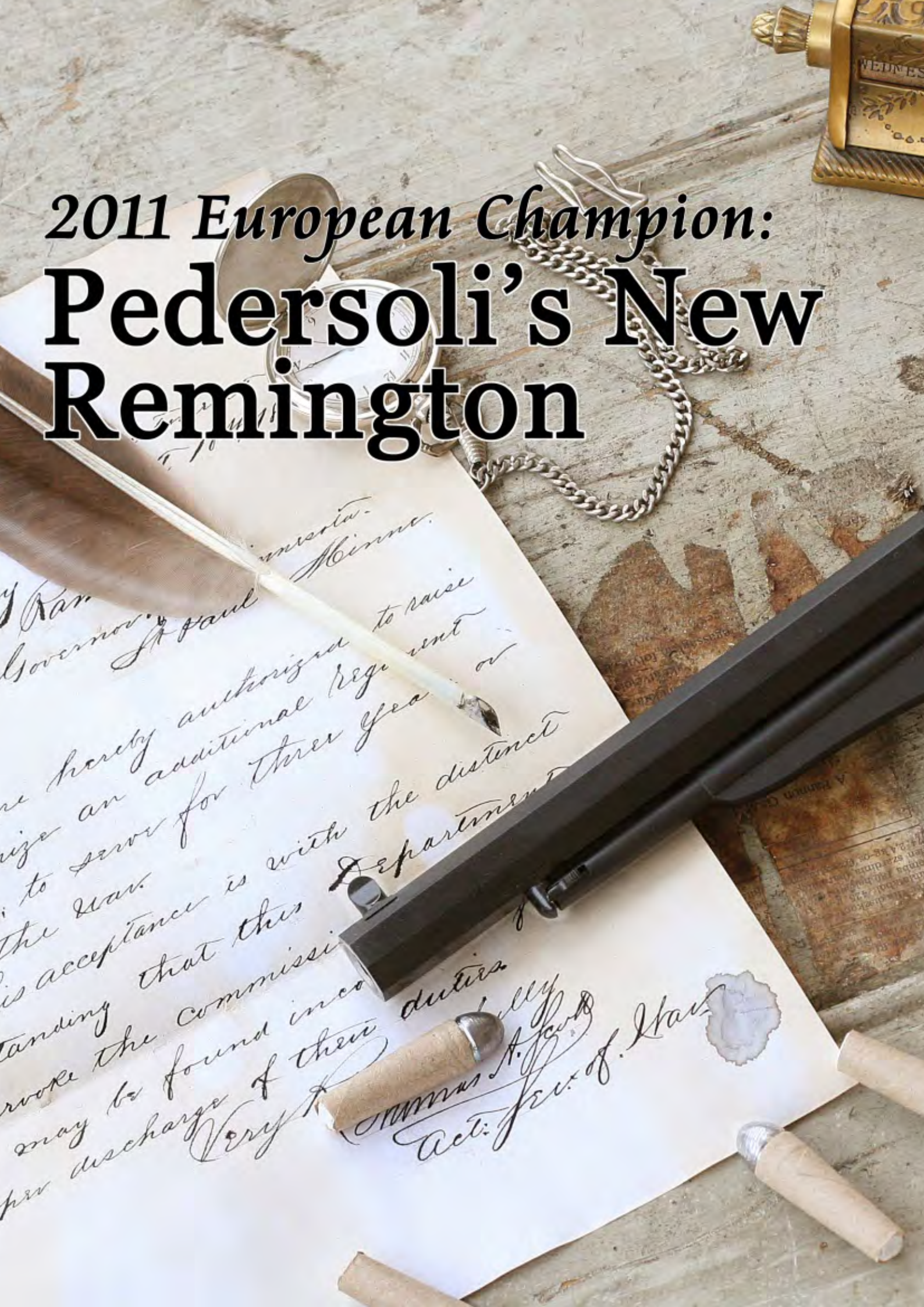
the weapon, we preferred to use a normal rifle support in order to establish a firing steady position.

Then, using the bullets, the shooting patches and the liquid lubricant distributed by the manufacturer, together with primers model 616 by Fiocchi, it was possible to obtain excellent long shooting grouping with the condition of paying particular attention to cyclic cleaning of powder residues from the barrel and careful loading of the bullet: without these little details – which the producer mentioned when delivering the kit and the weapon before our test - we have noticed a phenomenon of irregular dispersion of the bullet impact points which showed erratic behavior if compared with the previous encouraging results.

Conclusions

From our point of view, the conversion kit for muzzle-loading guns of large caliber is a brilliant solution for those who wish to practise shooting with replicas faithful in all respects to the glorious original designs which inspired them. Athletes could afford much more complete training sessions than those based on simple white shots, beginners could gain confidence with muzzle-loading systems with increased margins of safety for humans and the environment. With this in mind, we should not forget that the use of this “indoor” kit is, from a romantic point of view, an excellent opportunity to get people closer to the art of target shooting and to promote mutual understanding in an atmosphere of healthy entertainment.

The experimental session saw also the development of a real shooting lecture aimed at educating those who were not familiar with muzzle-loading weapon systems: on that occasion, the lesson included the simulation of loading the black powder, considering the aspect that the tested weapon can also be used for a real, full power target shooting session.



2011 European Champion:

Pedersoli's New Remington


6
OCTOBER
6 Combustible Envelope
CARTRIDGE
Made of American Powder Co's Powder
FOR REMINGTON'S, COLT'S, AND OTHER
Revolving Holster Pistol
44-100 inch Calibre,
WARRANTED SUPERIOR QUALITY

A lot of value for money – Pedersoli's Remington replica

It is not easy to enter the market of percussion revolvers. There are quite a few big names on the market producing good quality replicas, however the number of competition grade revolvers is much less. If you want to take up precision shooting with cap and ball revolvers, you don't have too many choices. First of all, you will need a solid frame revolver, like the Remington or the Rogers and Spencer. Second, you need a gun that is capable of putting every bullet into the ten ring.

In the pastoptions were limited: the Feinwerkbau Rogers and Spencer and the Hege Army match Maximum dominate the score sheets of the MLAIC revolver matches. These two guns are both beautiful items. The quality and accuracy are superb, but the price is also high. In the lower price segment, you can find the Pietta Shooter's Remington with the progressive rifling, and also the Euroarms Rogers & Spencer revolvers with Lothar Walter barrels. Pedersoli's goal was to offer shooters the highest quality possible at a reasonable price , so the serious competitor does not have to compromise between quality and price.

When Pedersoli launched its Remington replica, the goal was simple: to get to the top of the result lists. This was not an easy task, but the company took the challenge. It was a long road to achieve this, but in 2011 a Spanish shooter, Jose Galan Ramon Talens won the European Championships with Perdersoli's replica in Finland. The competition in Mariette discipline is always strong: the number of shooters is the highest of all events, and it is not easy to enter the first ten range with 95-96 scores. The Jose Galan and the Pedersoli Remington succeeded in this incredible task.

The barrel of the Pedersoli Remington Pattern Target .44 revolver

This gun was designed with the precision shooter in mind. The heart of the gun is the PMG (Pedersoli Match Grade)

Special script on the new model

The crown of the muzzle is important for accurate shooting

barrel, which is brooch rifled. The twist rate of the rifling is 1:18”, which allows extremely low loads as well. The bore has seven grooves. Thanks to Pedersoli's special barrel making process, the bore is shiny on the lands and in the grooves as well. This is achieved by pushing a button through the bore after the rifling is done to compress the material at the bottom of the grooves. The shiny surface means less fouling and less fouling means an accurate barrel through many shots. The internal diameter of the bore is .450” between the grooves and .443” between the lands. It is important to measure these parameters as this will determinate which size of ball to use in the gun. The easiest way to measure the bore is to push a slightly oversize pure greased lead slug through the barrel with a brass or wooden rod. (never use any harder material for this job, as you can easily ruin the rifling).

A common problem of today's replicas is when the diameter of the powder chambers does not match the groove diameter of the bore. I had many low quality replicas in my hands with chambers sizing the ball to .440-445”, while having a bore land-land diameter of more than .445”. We don't have to be mathematicians to understand that a barrel like this will not give a spin to the bullet. In fact, in a case like this, a smooth bore would be better... The chambers of the original percussion revolvers were different from today's replicas. The powder chamber of the original Remingtons tapered towards the nipples. The chambers did not size the bullet, but the balls stuck somewhere in the chamber, at the desired depth. The replicas have uniform diameter chambers, so the walls are parallel, and they are intended to calibrate the ball to the desired size.

Pedersoli payed attention to this common problem. The chambers of their replica size the bullets to .450 -.451”, exactly to the groove to groove diameter. This way we will have a complete fill in the bore, so the gases cannot escape between the bullet and the barrel wall. In fact you can still have an accurate gun, if the chambers size the bullets 0.001-0.002” under the necessary diameter, but it's much better have a complete fill.

For target shooters

All the moving parts of the gun are highly polished, so the action is smooth, not creeping. The trigger pull is light enough, so

Polished internal parts, light trigger pull

you don't need any modification, and it breaks like glass. The frame of the revolver is manufactured of forged steel not cast steel like other replicas. The front sight is dovetailed, it is easy to adjust it horizontally, and it is long enough so you have plenty of material to set the elevation according to your favorite load. The surface of the gun is matt black in favour of the target shooters. You can be sure that the light will not be reflected from this elegant finish.

It is important to pay attention to the grips as well. It is a common problem that the size of the Remington grip is too small for the hand of most shooters. It is important to understand that the MLAIC rules do not allow any modification to the gun that would affect its authenticity, but between certain parameters, you can adjust the thickness of the grip without disqualification. The factory grips are made of oiled walnut and they are thicker than the original, but you also receive

The front sight is dovetailed

a spare, unfinished pair of grips, so you can make your own if you wish.

The pistol comes with beryllium bronze nipples, another important feature for the target shooter.

At the range

I tested Pedersoli's 2011. European Champion edition revolver with several loads. The gun comes in a practical APS case, with several important accessories, like 100 .454" roundballs, a powder flask, nipple wrench and a DVD about the use and maintenance of blackpowder arms.

To have a tight group, a good quality gun is essential, but not enough. You have to learn how to load your gun properly to achieve maximum accuracy. First of all, select the diameter of the bullet. In the case of Pedersoli's Remington, this can be .451" or .454". Weigh each and every bullet you use for competition and keep only the ones within +/- 0,5% weight deviation. Measure the

5 grains of 4Fg Swiss - 6 shots @ 25 m

21 grains of 3Fg Swiss - 6 shots @ 25 m

powder into small containers, never load your gun directly from the flask, as if a spark occurs in the chamber, you can easily injure yourself. Use filler to raise the bullet to the face of the chamber, so when it starts to move, it will engage the rifling immediately. Always use the same force to push the bullet down on the powder, because if you crush the powder, you'll have unequal gas pressures from shot to shot.

Pay attention to the powder charge you use. First of all, you don't need a big bang to have an accurate gun, in fact the opposite is true: every grain of powder must burn in the barrel to create uniform gas pressure. If you overload the gun, you'll have an unpredictable amount of unburnt powder leaving the muzzle. For this reason, it is better to use fast burning powders like 3Fg or 4Fg with moderate charges.

It is also important to choose adequate lubrication. A good grease has several tasks to complete. First, it keeps your fouling soft, so all bullets can clean out the residue of the previous shot. It also seals the small gaps between the bullet and the barrel, so no gases can forerun the bullet in the bore. Good grease is insensitive to the temperature, can work in winter time and will not melt out of the chamber on hot summer days.

Before shooting, wipe out all the grease from the chambers and the bore and snap a cap on each nipple. Never shoot the first shot into the target. On MLAIC competitions, you have a chance to declare a fouling shot before starting the 13 shot relay. Use this to clean out the remaining oil from the barrel and to add a thin layer a blackpowder residue, necessary for the accuracy. If you don't do this, your first shot will be high for sure.

Loads

I usually measure the powder by volume, not weight. According to my experience 0.1 grain difference in the powder charge does not make any difference in performance. But, of course, if you are preparing for an important match, do everything by the book, and use that scale to

check every charge.

I tested the Pedersoli Remington with several loads and achieved good accuracy with 15, 18, and 21 grains of 3Fg Swiss powder. All the three loads threw the bullets into the size of the ten ring shot from a sandbag rest. I guess this is not surprising from a Pedersoli gun. It does what it has to. That day I fired eight full chambers with the revolver without loosing accuracy. My lube and the shiny bore did the job well: they kept the fouling soft, so the accuracy did not suffer. I also realized one more thing: the cylinder did not jam, I did not have to clean the axis even after the eighth cylinder. This is not common among the Remington replicas. Usually the gases escaping between the cylinder and the breech of the bore jam the axis after 18-20 shots. However the gap of the Pedersoli replica is so small that it limits the amount of escaping gases, saving the cylinder axis from the residue.

I like really low loads for target shooting, so I decided to do some experiments with extremely low loads as well. I started to reduce the the load of the revolver to determine the most cost effective but accurate set up possible. In several steps, I reduced the 4Fg Swiss charge to as little as 5 grains, but the revolver still kept perfect accuracy. The recoil was as light as a 22LR pistol, but the bullets hit the target well inside the size of the ten ring group, 20 cm below the center of the target. The sound was really funny, and you could actually see the bullet flying, but it worked.

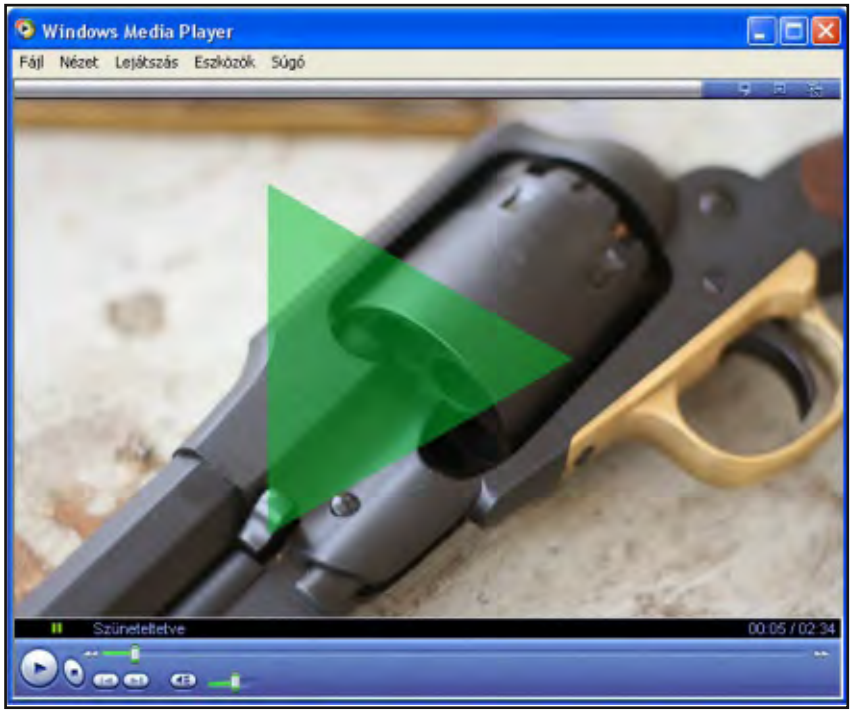
Economy

The Pedersoli Remington is capable of match winning scores. It is up to the standards of the big names like Hege or Feinwerkbau, while its price and maintenance are much more cost effective. The cost of the gun is only 2/3 of the great competitors' prices, and also feeding the gun is really cheap. It's like buying the newest Mercedes-Benz for 2/3 of the price and running it on 3 liters of fuel consumption on 100 kms (or 90 miles to the gallon for our non-European readers!).

NB

Visit the Capandball youtube channel to see the video documentary of the test.

Click the image to watch the movie



A South Dakota buffalo

by Wm Hovey Smith

Nineteenth century images of tens of thousands of buffalo being pursued by Indians on horseback or by white hunters with their long-range black-powder rifles will forever color the American hunter's view of buffalo hunting. These images are periodically reinforced by movies such as Dances with Wolves and Wyatt Earp which depicted classic buffalo hunts.

Gone are the vast herds of yesteryear. Yet, buffalo are part of the success story of modern conservation, and herds have been rescued from the brink of extinction. There are now thriving buffalo populations in many western states, although the majority of these buffalo are on private ranches. There are a few hunting opportunities for free-ranging buffalo on public lands in the Henry Mountains of Utah, in Alaska and sometimes on a mix of public and private land adjacent to Yellowstone National Park.

Today's hunting is nothing like the old hunts where the animals were shot until the hunter ran out of ammunition or lost the desire to kill. The plains are now crisscrossed by interstates and dissected by feeder roads and fences. Many of these features were designed to facilitate raising and transporting stock, and now this stock includes buffalo as well as cows and sheep. Some ranches raise buffalo to supplement their income with hunters' fees helping many of them avoid foreclosure while providing a hint of what buffalo hunting was once like.

Why hunt ranched buffalo?

Motivations that drive individual hunters to take any species of game are complex. On one level buffalo hunting is a spiritual experience – particularly for someone who is part Native American. It is a direct link to a lifestyle and ancestors who are now long gone. This sharing of experiences in this place in modern times connects back and forward to link a distant past to the present.

Times long gone also draw those who wish to recapture the spirit of the early white trappers who first saw the plains with their seemingly endless herds of game. These hearty individuals shot an occasional buffalo, but had neither space nor time to deal with the heavy hides, and always had to keep an eye out for Indian war parties who resented this intrusion onto their lands. Today's buckskinners with their antique-pattern rifles hunt buffalo so that they can personally experience what was part of this nation's progress to a modern state.

Buffalo are also hunted because they are the largest land animal native to the Americas. This alone is a reason for a passionate hunter to take a real piece of Americana. No collection of North American game animals would be complete without a buffalo. To have hunted in the U.S., and to not have hunted buffalo, would have been to those like Grand Duke Alexis (the future Russian Czar) almost like not to have hunted at all.

Strong influences of the historic past, adventure, risk taking, confidence building and accomplishing something that relatively few in modern times will do are all reasons that compel today's hunters to kill a buffalo. For some, more practical considerations dominate and a buffalo represents, as it always has, a good portion of a family's meat supply.

Personal reasons

My motivations for shooting a buffalo were, in part, technically driven, because I was seeking first-hand information for this book. The historical aspects of the hunt and the chance to take the animal from its native habitat also had considerable appeal. At 1-month short of 65, it was also time for me to confront my buffalo.

I determined to drive from Georgia to the hunting area and transport the trophy to my Taxidermist, Tim Hill, in Missouri. Since this was likely to be my one, and only, buffalo I wanted a trophy animal. Price was also important. The best opportunity that I could find was to book through Table Mountain Outfitters at the Triple U Ranch in South Dakota, about 30 miles west of Pierre. This ranch offered trophy and meat hunts for the same $1,700 price.

This hunt would be the climax of a 20-

Roy Bain with his muzzleloaded buffalo. This is a handsome animal, but smaller than the old bull that the author was seeking.

Dissembled bolt assembly of the Austin & Halleck rifle. The author had difficulties with both the rifle and shotgun caused by weak mainsprings and, in one case, a short firing pin.

day trip which would include cooking a wild game meal at the Columbia Café in Shreveport, Louisiana; a spear hunt for wild hogs at San Saba, Texas; and a prairie chicken hunt at Atkinson, Nebraska. Hunting tools included spears, a crossbow for a fellow outdoor writer to try, two muzzleloading shotguns and the Austin & Halleck .50-caliber muzzleloading rifle that I planned to use on the buffalo. I had worked up a load of 150 grains of TripleSeven powder and a PowerBelt 444-grain bullet and sighted the rifle in at 50-yards for the close range neck shot that was required.

Unusually warm late November weather greeted me in South Dakota. There had been a dusting of snow and a little of the white stuff still held on in shaded areas. I found visiting pheasant hunters complaining of dry conditions. The drought had the advantage of making overland travel possible, because with a little rain the unprotected soils would very quickly turn into axle-deep mud.

My hunt was to begin on the 21st, but I was to accompany Jon Schiller and Roy Bain on their hunts the day before to insure that I had adequate photography. When I arrived at the ranch they had already sighted in their rifles. Both would use Bain's .50-caliber Thompson/Center Encore .209X50 muzzleloading rifle with 150-grains of powder and a Thompson/Center saboted ShockWave bullet with a bonded core designed for deep penetration.

We hunters were welcomed, but were only an incidental part of everyday life at the ranch. Ongoing activities including attempts to find a veterinarian to do pregnancy testing on some cows that were to be sold because the lack of grass would not enable them to be carried-over through the Winter. Others were engaged in moving cattle from one pasture to another.

Guide B.J. Humble questioned Schiller and Bain about the buffalo they wanted. They replied that they were looking for nice display heads with good capes. Schiller opted for a darker-colored animal while Bain was looking for one with a lighter-colored cape. After driving a mile or so from the ranch, a small group of 15 animals was spotted. These were glassed and Humble said that there were a couple in that group that might do, but it was early and we would look some more.

Cresting a rise we saw about 200

animals scattered towards the horizon. We could see at least a mile and buffalo were scattered in groups of various sizes feeding or just standing. There appeared to be no inclination for the herd to move except to go from one clump of grass to another. There were no trees to break the slopes and only buffalo trails indented the prairie. With blue skies and scattered white fluffy clouds this was the view that all of us had hoped to see, and from all appearances we felt fulfilled by the experience.

Leaving the large herd we drove to where we could examine another detached group. “That first group still looks the best,” Humble said.

“Can we stalk them on foot,” Schiller asked?

“We can get closer with the truck, but they will likely move off if we try on foot. There is no cover, but you can try if you like.”

As predicted, the stalk was unsuccessful, and the group returned to the truck. Approaching the group from another direction, Humble drove the truck to within 100 yards of the standing animals. Schiller got out of the truck, used the hood as a rest and aimed at the designated animal. The first shot hit low on the neck. The animals milled around, but did not run. Schiller reloaded and tried again. This time the shot hit the spine and the buffalo was down. A point-blank shot with the guide’s 7mm-Remington Magnum finished it. This buffalo was taken back to the ranch; we ate and then returned for Bain’s buffalo.

Bain took his animal from what was apparently the same group. He tried a head-on shot at the brain, but the big buffalo only shook its head. He reloaded, waited until the animal offered a side shot and then finished it with a neck shot. Humble remarked that he had once recovered a bullet from a .45-70 that was stuck in the front of a buffalo’s head that he was skinning. “It takes a tough bullet to penetrate the brain on a head shot,” he remarked.

Asked what he thought of the experience, Schiller answered, “It was really more like buffalo shooting than buffalo hunting.”

“Frankly,” I replied, “that is what buffalo killing has always been. You can see how easy it was to nearly exterminate them. A hunter takes one out of a group and the rest just stand there waiting to be shot.”

One-shot buffalo hunt

On the following day my turn came to take my buffalo. On my sighting -in trip at the shooting bench I was more than a little aggravated with the Austin & Halleck .50-caliber in-line that I had chosen for my once-in-a-lifetime hunt. I could not get the gun to shoot despite reassembling and readjusting the position of the striker on the bolt several times, changing bolt assemblies and even making a 2-hour trip to town and back for another bolt. The firing pin would strike the 209 primer and indent it, but would not fire the primer

The gun had performed perfectly 15-days before when I sighted it in with the load I planned to use on the buffalo. This gun’s shotgun equivalent had also done well 2-days previously when I had shot pheasant in Nebraska. A year before I had missed my chance at a North Carolina swan with the same shotgun, when it also refused to fire due to a defective firing pin and/or weakened bolt spring.

Whatever happened on this hunt, I was not going to stand there on the South Dakota prairie with a trophy buffalo in front of me holding a gun that might, or might not, shoot.

“It is time to put the toys away, and get out a real gun,” I remarked to my guide B.J. Humble who looked rather puzzled as I went to the truck and pulled out another gun case. I am sure that he wondered if I did not consider a .50-caliber gun that was loaded with 150-grains of Hodgdon’s Triple Seven powder and a .444-grain PowerBelt bullet to be a real gun, what was?

Among the hunting tools that I had brought on this trip was a replica 12-gauge flintlock fowler made by Italian maker Davide Pedersoli. This replica was patterned after a

1790s gun made by Mortimer in England. His fowlers were among the most advanced and elegant of the period. When I first used the gun a decade back, I had trouble working up an effective shot load for it; but had recently discovered that it performed very well with HeviShot and plastic wads. I had also worked up a patched round ball load (.680 round ball, lubricated canvas patch and 120-grains of black powder). This load shot to the point of aim when the stock was firmly cheeked and the gun aimed by sighting down the barrel and lining up the brass bead on the target.

Earlier in the season, I had taken a deer at 47-yards with this load and also used it on the last evening of the Texas spear hunt to take a wild hog at 20 yards. The round ball completely penetrated both animals. I had also squirrel hunted with this gun and used a shot load to take a dozen bushytails with as many shots. In preparation for this trip I had brought shot, black powder, priming power, a few round balls and wads with the idea of using the fowler on game birds and to take a hog. This gun had proven that it would perform. Using nominal 12-gauge round balls on big game was not new to me as I had employed a similar load to take a blue wildebeest in South Africa (Chapter 8).

Nebraska unfortunately produced only one desperation shot at a fleeting prairie chicken and one pheasant for the Austin & Halleck shotgun, and there was no opportunity to use the flint fowler. I had one round ball remaining for the smoothbore, and I had put it in my truck with the idea of using it to provide a second rapid follow-up shot if it was necessary. When hunting with single-shot muzzleloaders, I always like to have a second loaded gun at the ready in case it is needed.

The Triple U Ranch

Most people have seen the Triple U ranch, although they did not know it at the time. This ranch was where many of the western segments of the Kevin Costner movie Dances with Wolves was filmed. The remains of part of the Ft. Sedgwick set are located not far from the ranch headquarters. This large ranch has 8-miles of highway frontage and is located west of Pierre, South Dakota.

Owned by Kaye Ingle and Shari Amiotte, the Triple U is operated as a combination cattle and buffalo ranch. To provide extra income, hunters are allowed to take either trophy or meat buffalo on day-long hunts. With the trophy bulls the hunter keeps the hide, head and horns; whereas the meat hunters shoot yearling buffalo for their freezers. The buffalo are skinned, inspected by a federal inspector and processed on the property. Because the meat is to be sold, no chest cavity shots may be taken. The buffalo must be taken with either head or neck shots, with spine shots being preferred. Should meat be damaged, the hunter is charged extra for the carcass.

A guide accompanies the hunter to help him choose an appropriate buffalo, as any buffalo looks huge to first-time hunters. Usually a 4-year old buffalo has the best combination of horns and hides for those who want attractive wall mounts. Older animals may be larger but very often have heavily broomed horns and may have rubbed and scared hides. Shots are usually taken at 100 yards and less and cartridge rifles having the power of a .30’06 or greater are preferred.

My hunt can be said to have started when I drove to the ranch and spotted four buffalo bedded down on a small bench above a creek about 4 miles from the ranch’s gate. Looking at the largest of these, I thought that this was the sort of buffalo I was looking for. It was a large animal with slight brooms on both horns, but with very heavy bases.

They were still in the same area when I made my trip back to town, and I told Humble about them. He said that someone else had seen these buffalo, and that he thought that this group contained the old animal that I was looking for – one of the largest on the ranch.

After putting away the Austin & Halleck, I found myself asking, “When is a flintlock smoothbore better than an in-line

muzzleloader?" The answer was, "When the flintlock shoots and the in-line does not."

Several miles of road and overland travel ultimately found us overlooking the valley and the buffalo. Humble examined the group and concurred that this one contained the old buffalo that I had seen.

I had loaded Mortimer before we left the shooting bench and opened the frizzen and put the hammer down on the empty pan. (The only way to safely transport a loaded flintlock). Now picking it up again, I checked it over. The lock was firmly screwed into the stock. The flint was sharp, properly aligned and firmly held in the cock. All that was needed was to get within 30 yards.

Getting out of the truck, I primed the gun and we approached the group. If Schiller and Bain's buffalo were big, this one was huge. We slowly inched up on the group. "Is this close enough?" Humble whispered. "It looks like they are going to run." Compared to deer, they certainly "looked" close enough, and I cocked the hammer and lined up the front sight bead in the middle of the buffalo's neck.

With the shot the buffalos repositioned themselves and started moving down into the creek valley. "You hit the neck all right, but I think it was low." Humble said. "We are going to have to chase this bunch."

By the time we returned to the vehicle, the buffalo had crossed the creek and gone up the other side. Humble had given me his scope-sighted Model 700-Remington in 7mm-Remington Magnum to finish it off. After going up the creek we found a crossing and ultimately took a position overlooking the buffalos' travel path.

"Second from the rear," Humble said.

I braced the rifle on the hood of the truck, found the walking animal in the unfamiliar rifle's scope and shot. Again the bullet hit the neck, but the animal continued. The buffalo changed their gaits from a walk into a run, and we moved the vehicle to get ahead of them again.

"It's your turn this time," I told Humble. With good reason the ranch has a two-shot policy. If the hunter fails to kill the buffalo with two hits, the guide finishes it. The buffalo stopped and fell to a single shot from the guide's rifle.

Epilogue

In retrospect, if I had known that I was going to take my buffalo with the smoothbore, I would have used hard-cast lead bullets. The ball recovered from the neck had expanded to 7/8ths of an inch in diameter, but failed to penetrate the neck. Increasing the powder charge to 150-grains of GOEX FFg might have also flattened the trajectory. Judging from the scars on the bullet it had not hit bone, but remained in soft tissue without cutting the jugular vein which is carried well below the spine. It also appears that the shot was taken at 50, rather than at 30-yards, which might have lead to less precise aiming and a lower trajectory.

Once home, the Austin & Halleck rifle bolt was again reassembled, two washers put around the striker to increase the working pressure of the spring, and the rifle restored to full serviceability. For whatever reason, the bolt spring had apparently lost sufficient strength between the sighting in and its attempted use that it failed to fire the primer.

Austin & Halleck discontinued operations on October 1, 2006. I think that the poor functional reliability of their guns contributed to their demise along with a failure to keep up with emerging trends towards simpler to operate in-line muzzleloaders. Other than the firing pin and weak spring problems, the guns are excellent performers. If you own one, buy some ¼-inch lock washers to fit over the firing pin and provide more tension to the mainspring and, if necessary, have a machinist drill the old firing pin and install a new one of hardened steel in the striker. These two corrections will keep these attractive and otherwise excellent guns shooting for decades.

From my later experiences with the 444-grain PowerBelt bullet in Africa, I believe that I would opt for their steel-pointed 530-grain bullet for another attempt at these huge animals. This bullet worked well on a Cape buffalo (Chapter 20) and would likely provide pass-through performance with lung shots on a bison.

The author with his trophysize buffalo shot with, but not killed by a Davide Pedersoli 12gauge flintlock fowler. With hard lead balls and a lung shot, this gun would have worked, but it would likely have taken multiple shots to kill this massive animal quickly.

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