Big-bores *and B&Ms*

by Daryl Lenkic

I never imagined that the decision to go on an African hunting safari would lead me to South Carolina in the United States, but life can take some funny turns.

While seeking answers to questions I had on big-game rifles and calibres on an online forum, I received a response containing excellent advice from an American gentleman with a wealth of experience in big-game African hunting. Further correspondence with this gentleman, Mr Michael McCourry of South Carolina, not only guided my thinking and led me down the right path, but also began a friendship that saw me travel to South Carolina to visit him.

I had built a rifle in .358 Winchester many years prior for feral pig hunting, but this was a relatively small cartridge in the big-bore scale of things. However, when I decided I wanted to hunt big-game animals in Africa, I realised I needed something bigger. 'Use enough gun' was a quote that sprang to mind.

I've never really liked long-action rifles - the type that are typically associated with African rifles - but with the proliferation of Short Magnum cartridges, new options existed. Having already made several forays into the field of wildcat cartridge design and development, I decided to build a cartridge suitable for Africa, which would fit a short action. This cartridge became the .416 Compact - a wildcat that could be formed from either a Remington Ultra Magnum case or a Winchester Short Magnum case, albeit a little short in the neck.

The B&M family of cartridges includes the 9.3mm B&M, left, .416B&M, .458B&M, .50B&M Supershort, .50B&M Alaskan and .50B&M Long. A .500MDM appears at far right.

While developing my design, I received advice from several online contributors, but none more so than Michael McCourry, whose knowledge of big-game hunting rifles and projectiles was drawn from vast

Michael testing his new 9.3mm B&M.

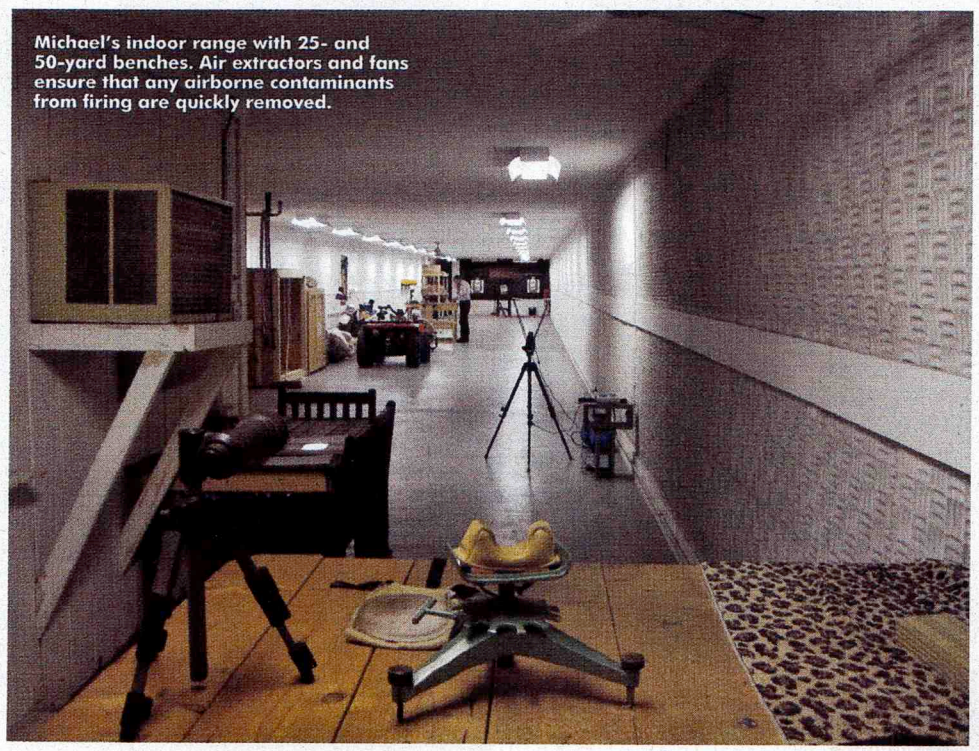
experience hunting big game, not only in Africa, but around the world. Most hunters who reload their ammunition tend to select the load to produce the highest velocity within safe pressure limits, which still delivers accuracy satisfying their needs. However, Michael espoused a different philosophy to most, one based on lessons he'd learned from testing and analysing projectile performance, both on the range and in the field.

I began to appreciate that in the world of dangerous-game rifles, "velocity is not always your friend," as Michael put it. The relationships between projectile design, shape, velocity and penetration was something that had to be determined for each cartridge combination, with lower velocities sometimes giving far better terminal performance on game.

Michael is not one to blindly accept that a particular premium bullet is the best for the job based on its price or advertising hype. Instead, he conducts his own rigorous testing in a 'bullet box', using a mixture of newspaper and glossy paper, soaked with water overnight. He explained that this test media in his 5ft-long bullet box was far denser on average than animal flesh (including bone) and that penetration distances achieved in the bullet box were increased by 80 to 90 per cent in animal tissue for expanding-style bullets and by 30 per cent for non-expanding styles. This was borne from comparing projectiles recovered from his bullet box against those he'd recovered from game.

Not only does Michael test for penetration depth and bullet deformation characteristics, but also for penetration path, with straight-line penetration being the most desirable. I assisted him in testing some new loads and observed first-hand the deliberate and measured way he went about his testing to ensure that all results are baselined to set standards. Not only were depth and path measurable, but the wound channel also became immediately obvious as we peeled apart the layers of wet paper while searching for a projectile's final resting point. The difference between soft-point and solid projectiles was noticeable both in the depth of the penetration and the wound channel created. Michael also explained that his testing has showed that the newer, flat-nose projectile designs penetrate the test media in a straight line and to double the depth of round-nose solid projectiles of equivalent weight, which also tended to veer off-course and sometimes exit the sides of the box.

A myrtle-stocked Winchester Model 70 in .500MDM, top, Daryl Lenkic's Winchester Model 70 in .50B&M Long with an 18" barrel, a Winchester 94 in .50B&M Alaskan and a Winchester Model 70 .50B&M Supershort with a 16" barrel.



Michael's indoor range with 25- and 50-yard benches. Air extractors and fans ensure that any airborne contaminants from firing are quickly removed.

As part of his test regime, two chronographs are used: one forward of the firing point to measure muzzle velocity and one just forward of the bullet box to measure impact velocity. By firing at different ranges or with different powder charges, Michael would test a projectile at a range of impact velocities in order to determine the optimum performance range for that projectile. In this way, he came to understand that even for solid projectiles, penetration depth would often begin to drop above a certain velocity, which is undesirable when hunting the biggest and toughest of Africa's game animals. He determined that for solid projectiles, the ideal impact velocities were usually in the 2000 to 2300fps range.

Once the firing was done, we recorded details such as load data, velocities, penetration depth, performance and firing details and any specific notes. Having done this, each pair or triplet of a given projectile type fired into the test media was labelled, bagged and catalogued for future reference. Given the amount of testing that he has performed, Michael has a huge amount of data (all of which has been put into his electronic database) and is filed by calibre, projectile

type and individual firearm, as most of his chamberings appear in multiple rifles with different configurations of stock, barrel length and appearance. As Michael says in his Southern accent, "If having one rifle in a calibre I like is good, then having three rifles in that calibre is real good." If you want to know how a certain projectile performs, Michael can quickly pull out a file containing all the load, firing and performance details, the paper targets and even the recovered projectiles in order to gain a full understanding of that bullet.

The amount of testing that Michael has done is truly staggering and almost defies belief, all the more so given that he is firing heavy-recoiling large-bore cartridges. I would be surprised if another private individual has collected the range and volume of data that Michael has and would think that only commercial bullet manufacturers may have similar experimentally obtained test results. Michael's enthusiasm for big-bores (he considers anything less than .416-calibre to be a 'medium bore'!), plus the fact that he has his own indoor 50-yard range beside his semi-rural home, have helped make this possible.

A recovered .500-calibre 470-grain copper hollow-point projectile, which penetrated 30" through the bullet box test media.

Many years of hunting with commercial cartridges, such as the .458 Winchester and .458 Lott, have led Michael to ask himself which cartridge he could fit into his favourite Winchester Model 70 controlled round feed rifles that would allow him to hunt with more compact rifles than the traditional big-bore Magnum bolt-actions he'd been using. Trial and error gave rise to a range of big-bore cartridges in his 'B&M' series. This series commenced with the .50B&M prototype, which was lengthened slightly to become the .50B&M Long, but expanded to include the .416B&M, .458B&M, .50B&M Supershort, .50B&M Alaskan and most recently, the 9.3mm B&M. These cartridges all fit into a

Two SSK .500-calibre copper projectiles, including a 515-grain solid flat-nose, left, and 470-grain hollow-point.

Winchester Model 70 WSM-length action and are based on cut-down Remington Ultra Magnum cases, except for the Alaskan, which is based on the rimmed .50 Alaskan and is suitable for lever-actions.

Coupled with the right projectiles, these cartridges perform beyond expectations in relatively short and light rifles by big-game standards. As an example, the new 9.3mm B&M delivers a 250-grain projectile from a 20" barrel at 2700fps, yet it has a case length of just 57mm. By comparison, this

outperforms the 9.3x64mm Brenneke from the same length barrel. Incidentally, the B&M name comes from the initials of both Michael and his close friend Billy Bruton, whose ponderings inspired the original B&M cartridge.

Michael's hunting rifles now predominantly sport barrels between 18 and 20" in length, depending on the calibre, and in the case of the .50B&M Supershort, barrel lengths of 16". Yet, his combination of cartridge design and careful projectile selection has produced rifles which deliver exceptional performance for their size and weight.

Despite having built my own .416 Compact rifle on a Remington Model 7 short action and being happy with it, I was so inspired by the performance of these calibres that I had Michael arrange the building of a Model 70 chambered in .50B&M Long, which I have since purchased. My best friend and hunting partner in Australia also purchased a .416B&M and both rifles have recently been imported into Australia. Slowly, the interest in his cartridges is spreading in the United States and Michael informs me that there are already other Australians interested in his B&M chamberings.

During a visit to South Carolina, I test-fired my completed rifle in .50B&M Long and after getting over my initial trepidation about the recoil of a rifle producing 2100fps with a 515-grain solid copper projectile from an 18" barrel, found that the rifle was quite manageable, particularly when fired offhand. Not only did we test the new rifle for function and accuracy with very pleasing

Wound channels in the bullet box test media demonstrate the depth and degree to which various projectiles perform.

results, but for my benefit, we also tested some projectiles in the bullet box. We fired some 470-grain solid copper hollow-points at 2160fps, which penetrated to depths of 25 to 30" through the bullet box, giving them a penetration depth in animal tissue somewhere between 45 and 57". Michael explained that sometimes, the 515-grain flat-nose solids at 2100fps pass though all 64" of media and exit the back of the box into his safe backstop, while the heavier 550-grain solids do this consistently! To say that this is astounding performance is almost an understatement.

Michael's most recent excursion into the field (and first expedition to Australia) was to Arnhem Land. Here, in serious field-testing mode, he took 20 water-buffalo with rifles in .458B&M and his new .500MDM, which is a longer version of his .50B&M Long and requires a Magnum action length. Many of the buffalo taken were cows as part of herd reduction, but four trophy bulls were also taken. Michael said the new .500-calibre 470-grain copper hollow-point provided the most effective knockdown power on buffalo that he has witnessed to date, with only one of the 13 buffalo he shot with this calibre not collapsing immediately on the spot after the shot. He was highly impressed with its performance, which I believe is no small praise coming from him.

This projectile is one of many produced by SSK Industries, a well-known US company headed by JD Jones, which Michael has a long and close relationship with. This, and several other solid copper projectiles, are the products of several years of collaboration between Michael and SSK and have been designed and weight-matched for optimal performance on game for the various B&M cartridges. Michael also chooses to use SSK exclusively to build his rifles, being extremely happy with their big-bore rifle expertise, workmanship and prices.

The time that I spent with Michael and his South African-born wife Jaun at their home and range was both educational and highly enjoyable. They were extremely hospitable and I look forward to seeing them again either in Australia or the US.

As for my two big-bores, I can't wait to take them to Africa and put them to work. I know that the .50B&M Long has already been tested extensively and backed by Michael's test-proven advice, so I am confident that I have the best selection of projectiles for my .416 Compact. I know that Michael is keen to hear my stories of African success in the future. It also seems that I've truly transitioned from zero interest in big-bore rifles to great enthusiasm, and my rifle safe now has a more complete range of hunting firearms to prove it.

Since the time of writing, Michael McCourry has added several more chamberings to the B&M line. Readers interested in learning more about this family of cartridges can visit www.ammoguide.com and www.accurateloading.com where Michael regularly posts. Information on SSK can be found at www.SSKindustries.com Reloading dies are available from Hornady and RCBS. ●

Four different 9.3mm projectiles recovered following the bullet box testing.