



Classic African Cartridges

Part VII - The 450/400 Nitro Express

By Ganyana

Man has always looked for the perfect compromise, and the "all round cartridge" has been the hunter's Holy Grail since the invention of the brass case. The cartridge must produce sufficient power to cleanly take all game that may be realistically encountered, whilst producing as little recoil as is feasible.



Left to Right: .450/400 Jeffery, 450/400 3/4" , .404 Jeffery, .470, .458 Win. Mag.

Where dangerous game doesn't occur the choice of an all round cartridge is fairly academic. For African use though, an all round rifle must be able to safely deal with elephant, buffalo and lion, and yet must not produce so much recoil as to make its use on plains game an unreasonable option.

None of the blackpowder cartridges could really be considered 'all rounders'. The .450 and .500 bores threw soft lead bullets weighing 480 to 520 grains at between 1400 and 1800 fps.

All worked well on plains game, but would only just do for a 'behind the shoulder' shot on elephant or buffalo. Dangerous game rifles started at 10 bore, with 8 bores being the most common, and with many of the professional hunters of the day preferring the big 4 bores. The recoil from these shoulder mounted cannons is truly remarkable, and they are definitely only to be used when the target is likely to fight back. Probably the most successful of the blackpowder compromises were the .461 (.450) Gibbs and the .500 Magnum Express.

The advent of smokeless powder changed the whole hunting scene. Many hunters immediately fell in love with the new military small bore calibres such as the 7x57, .303 and 8mm Mauser rounds. These worked wonderfully well for brain shots on elephant, and were adequate for plains game up to eland. On buffalo, hippo and lion they were found to be sadly wanting. The British gun makers were quick to load up their blackpowder cartridges with the new smokeless powder and jacketed bullets to produce

outstanding dangerous game calibres, notably the .450 Nitro Express and the .577 NE. Meanwhile medium bore blackpowder cartridges, that had been suitable for only the smaller plains game, suddenly took on a whole new appearance as great 'all rounders'.

One of the very first hunting cartridges to be converted to smokeless powder was the popular .450/400 Magnum Express (31/4"). In its blackpowder guise this threw a 325grain lead bullet at 1900fps. In its Nitro loading, a 400grain jacketed bullet was launched at 2150fps. A 15% increase in velocity and a 23% increase in sectional density combined with a nickel jacket made for a whole quantum leap in performance. The only problem was that the thin brass cases designed for blackpowder pressures tended to stick in the chamber with the new load, so in 1896 Jeffery introduced a new version with a slightly shorter neck, thicker case walls and an overall length of 3". Performance and chamber pressure remained essentially the same. Here now was a true 'all round' African cartridge. The 'solid' bullets possessed enough penetration for head and body shots on elephant, whilst the soft points were comfortably adequate for buffalo, rhino, hippo and lion. The velocity was high for its time, giving as flat a trajectory as the new small bores (original 8mm Mauser and .303 mkII rounds gave 2100 and 2150 fps respectively), making the .400 popular for use on even medium sized game.

Jeffery prudently released the new round to the trade rather than keeping it as a propriety cartridge, as was common British practice. This ensured that his cartridge became 'the standard', and all the other fledgling .400 bores that were being introduced quickly faded into obscurity. The slim case meant that double rifles in this calibre could be made light (under 10lbs) and handy, and all the major British rifle manufacturers produced them. The single shot rifles built on Farqueson actions by Jeffery and Gibbs proved even more popular, especially amongst working men.

The 450/400 found immediate acceptance with the professional hunters of the day. Here at last was a cartridge with the trajectory and penetration of the new 'wonder' small bores, but possessing some real stopping power for use on dangerous game. In the 1890's Africa was being opened up and professional hunters abounded.

Railways were being put in and new territories being explored and claimed. Demand for ivory from Europe was vast. Central and East Africa were a hunters paradise. Whether a man was hunting for ivory, protecting the communication lines, or providing meat for the road and rail gangs, a rifle suitable for dangerous game was needed. Buffalo formed the mainstay of the meat supply for the many railway gangs, but in certain localities, wildebeest or hippo took over. Encounters with lions, not infrequently man-eating ones, were unpleasantly common and there was always the opportunity for a crack at elephant. In short, candidates for the title of 'the all-round cartridge', had to be primarily suitable for dangerous game, but still eminently usable for everything else.

By 1900 the trend in rifle choice was clear. Adventurers and explorers generally chose small bores/military cartridges, gentlemen/sportsmen chose the hugely successful (and very effective) .450NE, whilst the professional hunter chose the .450/400. Even Karamojo Bell started his elephant hunting career with a Jeffery-built double in 450/400. John *Pondoro* Taylor is ecstatic in his praise of the 450/400 and rates it as "one of the grandest weapons imaginable for all big game hunting". He also noted "I derived greater pleasure from using the .400 than *any* other calibre; and no weapon behaved more successfully in my hands. I would happily finish the remainder of my career with a pair of them and nothing else-unless it was a third!" High praise indeed for a man who is usually considered to be the greatest proponent of the .375 as the 'all round rifle'. Taylor did indeed wax lyrical on the virtues of the .375, but he qualified his statements though, by saying if a man was going to hunt regularly in thick bush, the .400 was more liable to keep his hide intact. Many other professionals agreed with him.

Paul Mauser's introduction of the 9,3 Mauser in 1905 changed the concept of 'the all round' rifle forever. Following the Second Boer War (1899-1902), soldiers, explorers and farmers were solidly welded to the bolt action rifle, and particularly the Mauser. All that was needed was an 'all round' cartridge for it, which the 9,3 provided. Single shot rifles in general, and particularly expensive ones such as the Farqueson's, quickly fell out of use. If a rifle didn't have a magazine and facility for recharging said

magazines from stripper clips, it was simply passé. It's almost inconceivable today that Britain, by losing a few poorly planned and led battles against a handful of farmers, could change what was perceived as desirable features in a sporting rifle. Inconceivable or not, by the end of the war the Mauser was IN. None of this was lost on the British gun makers who developed suitable cartridges for Mauser actioned rifles. Jeffery again led the way with his .404, which was (originally) ballistically identical to the 450/400. The later cartridges developed by Westly Richards and Rigby both tried to keep up with the trend of increasing velocity, and later, the .404 was loaded up to give 2300fps with a 400 grain bullet, so as to remain competitive.

For the man who preferred doubles though, none of this mattered. The 450/400 worked, and continued to do so. The banning of the .450 Nitro Express in India and the Sudan in the early 1900's gave the .450/400 a further boost. All the large bore rounds developed to replace the .450NE used larger, fatter cases. Rifle actions had to be bigger to accommodate them, and so, to maintain the rifle's balance, they had to be built heavier. If a man wanted a double, suitable for all round use, weighing under 11 lbs, he had a choice of the 450/400 or, after 1912, the .375H&H. Both cartridges use the same sized action, and irreproachably balanced doubles can be built to weigh about 91/2lbs. This is a big attraction for the man who actually carries his own rifle.

Consequently the .450/400 continued to flourish up until the outbreak of the second World War. By 1945 economies had changed, and the cost of double rifles ensured that they ceased to be a common choice of firearm in the hunting field, even amongst professionals. By 1960 the days of the double were almost over, and the 450/400 for all intents and purposes died, when Kynoch ceased producing ammunition in the mid 60's. That said, however, interest in the .400 bore is re-awakening. The .404 and 416 Rigby have made a come back alongside the newer offerings by Remington and Weatherby. Krieghoff have even introduced a new .400 bore cartridge (the 500/416 NE) especially for doubles. The old 450/400 NE may produce a little too much recoil to fit my bill for a great 'one gun battery/all round rifle', but for dangerous game, I'd pick one over a .458 Winchester any day! 🐾