

Caesar Guerini's Invictus - the shotgun good for one million rounds!

# AUSTRALIAN Shooter

March 2022  
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THE MONTHLY MAGAZINE FOR SPORTING SHOOTERS



## REVIEWS

- New entry-level scope from Leica
- Powa Beam's new illuminated batteries
- Bronze Wing shotshells • Mantis training aid

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The ongoing nightmare of Australia's invasive species

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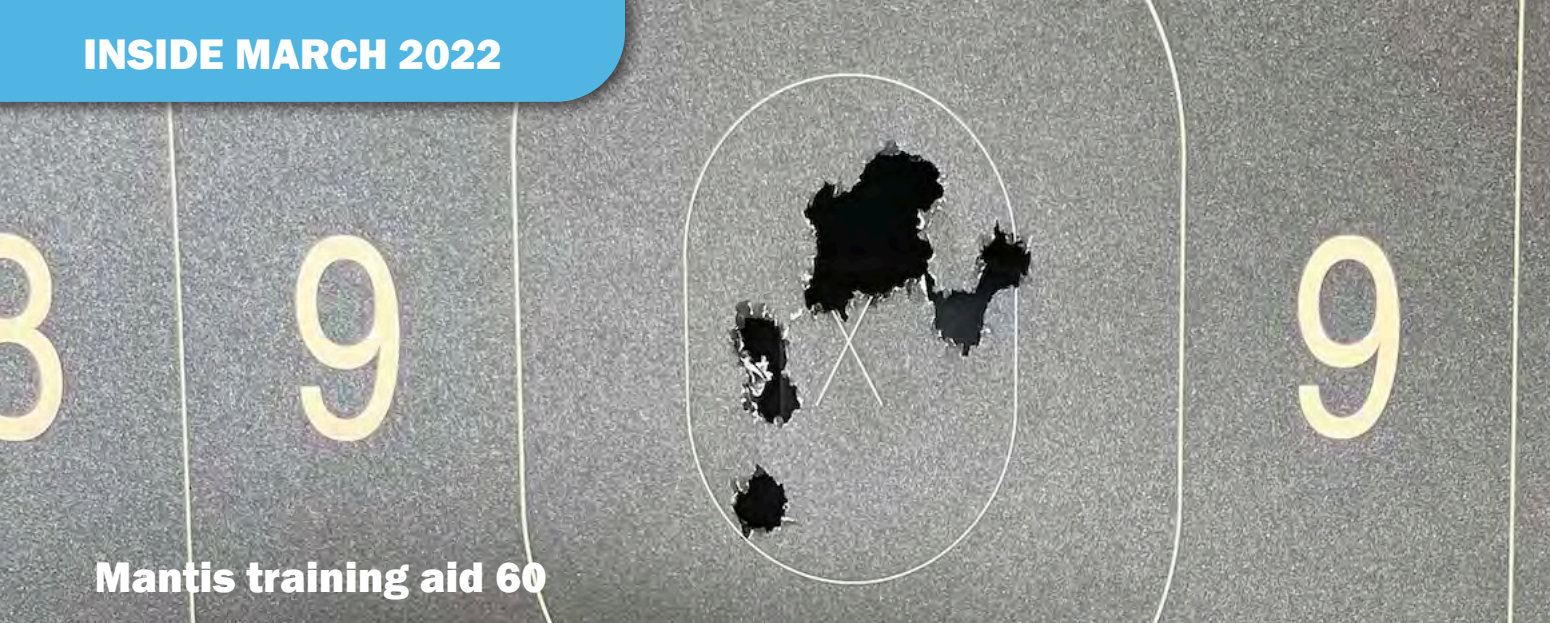
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A rival is someone who competes against others, so Canik have built a new competition pistol to give shooters the edge. But as Senior Correspondent Rod Pasco discovered, the new SFX Rival is in a race of its own - to top the fastest-growing sector of the handgun market.

The Sig Sauer Kilo BDX and Sierra 3 BDX series of laser rangefinders and riflescope combinations embrace ballistic data electronics and software packages to assist in achieving correct hold-over for a target at any range they wish to address.

The latest practical range of Javelin bipods and attachments are a credit to Spartan Precision Equipment engineers who've refined a decades-old concept for the modern hunter. Lightweight carbon fibre kit isn't cheap but Javelin bipods are competitively and realistically priced.





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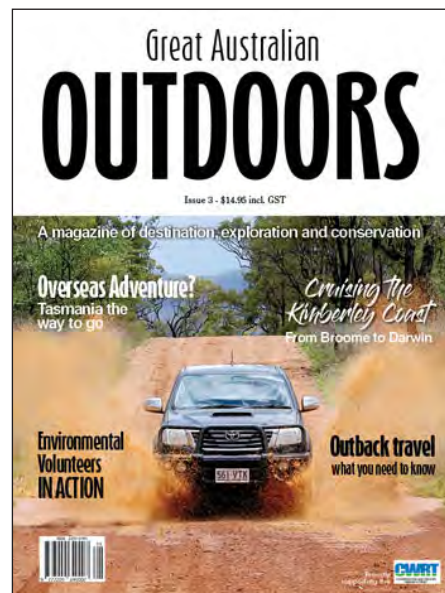


The year has started with promise as a research project spearheaded by Sporting Shooters' Association of Australia (SSAA National) wildlife programs leader Matthew Godson has helped secure a quail-hunting season for South Australia and provide a scientific example for the rest of the nation. Quail population abundance data, gathered to present to the SA Government, involved more than 16,000 stubble quail sightings across the state and has ultimately hauled the season back from the brink with hunters able to harvest quail for the first time in three years.

Our international award-winning cookbook *Field to Fork - Second Helpings* is poised to represent Australia in the Gourmand World Cookbook Awards for the Best in World 2022 title in Sweden in June. It's an honour to be listed among the best cookbooks in the world with our celebration of sustainable harvesting of game meats and this is the icing on the cake for the Association following a prosperous 2021.

The third edition of our destination, exploration and conservation magazine, *Great Australian Outdoors*, was released last year and is proving as popular as the now sold-out issues one and two. Similarly, our 20<sup>th</sup> anniversary edition of *Australian & New Zealand Handgun* magazine has experienced an 80 per cent increase in sales, with this edition of the southern hemisphere's premier small-arms publication a true celebration of a sector with a passionate following.

Our *Comprehensive Guide to Shooting and Hunting in Australia* is being reprinted after selling out what was already an above-average print run and the popularity of this introduction to sports shooting, hunting and our Association is testament to what we do. Correspondingly, member numbers continue to steadily increase with female shooters joining our ranks in droves. Female membership numbers have



now experienced an annual growth rate of around 10 per cent on average for the best part of five years.

Accompanying your *Australian Shooter* this month you'll notice *Australian Women's Shooter*, a quarterly publication which caters directly to this section of our membership. Seasoned shooters, experienced hunters and the novice looking to become involved are sure to enjoy this issue.

And lastly, a federal election by the end of May will allow a majority of our almost 210,000 members to have their say on who'll represent them and ultimately lead the country for the next three years. SSAA National will be liaising with those seeking election to garner their viewpoints on our chosen sport and pastime. We know from experience that both friends and foes are among those seeking election and we'll endeavour to communicate relevant policy information to members closer to voting day. As ever, members are encouraged to educate themselves on their local candidates and make their vote count when it really matters.



# Megan takes the reins at SSAA Insurance Brokers

Rachael Oxborrow

**S** SAA Insurance Brokers (SSAAIB) has a new general manager - and members can be confident they're in good hands.

Megan Spiniello has worked in the insurance industry for the past 17 years, nine of those at international broker Aon as both an assistant and broker across a range of commercial insurance products.

For the past five years Megan has been with SSAAIB, working as an assistant in domestic insurances and claims before taking on a broker role three years ago. As she moves into her new position, Megan aims to bring a fresh approach to the brokerage while maintaining the same high level of customer service and attention to detail our members have become accustomed to.

"We place great value in building relationships based on trust and respect with our clients," she said. "Our number one goal when discussing your insurance needs is to make sure you understand what insurance

is and where your risks are. Insurance is one of those things that sits in the back-ground all too often until you suddenly need it."

SSAAIB has access to some of the most competitive products, rates and services on the market. The brokerage offers insurance for travel, business, retail, trades, farming and other professional needs with all these services in addition to the great range of SSAAIB products offered to SSAA members.

"We're here for the members first and foremost, which means we're able to offer specialised products and advice relevant to the industry," Megan said. "But we're also a general insurance broker, which is definitely a bonus when it comes to our product offerings. We can give members the specialised protection they need but also offer them cover for day-to-day life."

The SSAAIB team combines to serve Australia-wide with Megan overseeing the operation while also focusing on insurances



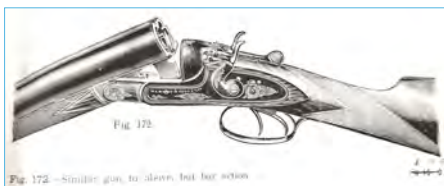
General manager Megan Spiniello aims to bring enthusiasm and a focus on client relationships to her new role.

in South Australia, Western Australia, Victoria, Tasmania and Northern Territory. Ali Mulla is based in the eastern states servicing New South Wales, Australian Capital Territory and Queensland while the business is also welcoming Luke McCarthy to the Sydney office and new broker Nadia Borrett to service insurance products in SA, WA, Vic, Tas and NT.

Together they'll manage your insurance from initial obligation-free quote to maintaining cover and managing claims to make your insurance policies work for you. For more information visit [ssaaib.com.au](http://ssaaib.com.au) or call the SSAAIB office and speak to Megan or Ali on (08) 8332 0281.

## Letters

WRITE TO PO BOX 2520, UNLEY, SA 5061 OR EMAIL [EDIT@SSAA.ORG.AU](mailto:EDIT@SSAA.ORG.AU)



### Webley & Scott - rebadged

I WAS READING the magazine and came across the Top Shots query from Robert Bliss about a vintage shotgun (*Shooter*, September 2021). This gun is almost certainly made by Webley & Scott, one of the big Birmingham makers of yesteryear. I've included a photo of a similar gun from their 1914 wholesale catalogue as the details, especially the hammers and engraving, show the connection. Webley & Scott tend to be less well known as about

90 per cent of their production was sold to the trade, that is, sold wholesale to retailers and gunsmiths across the Empire. As in Robert's gun these retailers often had firearms badged with their own name. Many famous British gunmakers and retailers such as Manton and Army & Navy sold at least some rebadged Webley & Scott guns, or in some cases bought W&S barrelled actions and finished them in-house. As a matter of interest the £8 10-shillings list price in the catalogue equates to about \$1800 nowadays.

Ian Cowie, NT

### Gun safe solution

One simple solution to the costly damage caused by open desiccant containers in gun safes as outlined by Rob Blomfield in the Top Shots column (*Shooter*, July 2021) would be the use of sealed 'rechargeable' dehumidifiers as an alternative. These are relatively inexpensive, can be hung on a hook inside the safe and recharge within 24 hours from saturated to absorbent state using a 240v power outlet. While they may not suit all shooters, given the convenience and utility of these units it may be an option for members seeking to reduce moisture in safes, especially when combined with containerised moisture absorption units available in any good hardware store.

Simon Troeth, via email

## SA quail hunting back from the brink

For the past two years South Australia has not had a quail season, the reason being the Environment Minister didn't want to make a declaration with no abundance data. Hunters have been pulling their hair out at the fact the Minister wouldn't declare a season for a species

known to be highly abundant and with low hunting pressure (across SA stubble quail have roughly 70 million hectares of habitat they can call home).

After discussions with the Environment Department throughout early and mid-2021 on the need to gather data for the Minister to reboot quail hunting in SA, it became clear to those involved the Department was dragging its feet. It was as if the Minister's own department didn't feel extra data was needed and they were happy to rely on their own surrogate information based purely on climate conditions.

By October a group of representatives from various hunting organisations (Conservation and Hunting Alliance of South Australia) had come to the conclusion that if we depended on the Department to collate data, we'd be screwed over yet again and, for the third year running, be denied a quail season. This became a 'line in the sand' moment as we decided to get out there and gather the data ourselves.

I set about doing some research into different survey methods to estimate quail abundance and, after a few 'virtual' online meetings, we agreed on a couple of methods. With those methods established I quickly put together survey instructions and data sheets ready to be distributed, and then followed a concerted team effort by the group to make contact with as many landholders as we could to identify willing participants to conduct surveys.

'Drive counts' were mainly conducted by volunteers, with or without gundogs, walking paddocks and taking note of the area (ha) covered to allow for density calculations. Harvest counts were conducted when paddocks were being stripped and harvester operators would count flushing quail. This particular method provided an exhaustive census of a known area of habitat/paddock.

With the SA duck and quail season-setting meetings fast approaching, I scrambled to enter the incoming data into spreadsheets ready for analysis. With harvest season held up due to weather conditions it was clear I'd only have time to prepare a preliminary report for the meeting then complete a final report early in the new year.

With limited lead-up time the group was

able to collate quail abundance data from more than 100 private properties, a truly commendable effort from all involved. While I was awaiting that data to flow through, I set about writing as much as I could for a report before any results were available and included a review of the current status of stubble quail and their diet and habitat use. I obtained recent information about habitat and climatic conditions then prepared sections on quail presence and abundance in SA (what we found), and estimating quail populations and hunting risk.

When I finally decided to pause data entry, we had survey returns from 108 private properties covering 8333 hectares. A total of 16,024 birds were counted which provided an average statewide density of 1.35 quail per hectare. This allowed us to estimate the stubble quail population to be between 6-17 million ( $\bar{x}$ =12,002,606; 95%CI) in South Australia's agricultural areas alone. With an annual average recreational harvest of around 5000 quail in SA, this represents only about 0.04 per cent of the population. Internationally accepted sustainable harvest rates range from 10-20 per cent of the population and if that's not sustainable hunting then I'm not sure what is!

But all this work paid off and we've dragged quail hunting in South Australia back from the brink, hunters now able to enjoy a return to quail hunting with a 20-bird bag thanks to the hard work of a determined few who drew that line in the sand.

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## The importance of handloading cartridges

Prior to the invention of the metallic cartridge case, shooters had to carry all the items required to load their firearm (black powder, projectiles, caps, lubricant etc) on their person or in a small container. If using a percussion firearm, the correct weight or volume of black powder was inserted into the barrel via the muzzle, then the projectile or lead shot placed on top of it and, after a percussion cap was placed on the nipple on the barrel, the gun was ready to fire. Percussion was the last form of ignition to be used before the metallic cartridge case was introduced and prior to this many forms of ignition were used including matchlock, wheel-lock, flintlock etc, some of which were both complicated and expensive to attach to the barrel.

When the metallic cartridge case was introduced in the mid-1800s the cost of using them was substantial as, being rimfire, they weren't reloadable and only factory loaded cartridges were available. By the 1870s Boxer-primed centrefire cartridge cases which could be easily reloaded had arrived and offered big advantages over both muzzleloading and percussion firearms and soon became very popular. The cost of factory loaded ammunition was still com-

paratively high and this led to a demand for handloading tools.

The Ideal Manufacturing Company, now called Lyman, was one of the first to offer good quality low-cost tools to assemble reusable cartridges and firearm manufacturers like Marlin and Winchester soon followed by offering tools to reload the cartridges they sold. Most popular of these was the hand-held tong-type tool and there were many variations, some with a built-in bullet mould so the complete operation of making a ready-to-use reloaded cartridge could be completed from one lightweight, compact tool which could be carried in a saddlebag. So practical and popular is this type of tool that Lyman, almost 150 years after its introduction, still offers its Model 310 tool for sale which, complete with its own set of dies, is a descendant of the original Ideal model.

Smokeless powder, which had been around for some time, became more widely used after 1892 when the US Military introduced the .30-40 Krag rifle into service and other manufacturers followed including Winchester, which released its Model 1894 in .30-30 Winchester the following year - and the slow transition from black to smokeless powder began.

Over the coming decades the handloading of cartridges grew in popularity but as people became more settled, portable tools were less important and bench-mounted presses, now being produced by a number of manufacturers, began selling well. These bench-mounted presses offered the greater leverage required to full-length size the host of larger cartridges being brought out by firearm and cartridge manufacturers, while the toolmakers who specialised in making the dies designed stronger ones with a  $\frac{7}{8}$ " x 14 thread, which became the industry standard.

As the popularity of reloading cartridges has grown, a whole new range of manufacturers has come into existence to make the many items shooters want including bullet moulds, projectiles, cartridge cases, powder, bullet pullers, reloading manuals, benchrests, telescopic sights, electronic chronographs and electronic scales. Add to this the plethora of earmuffs, footwear, camouflage clothing, rifle cases, recreational vehicles and petrol that shooters buy each year and you appreciate just what an important role the handloading of cartridges plays.



## AUSTRALIAN WOMEN'S SHOOTER

- We test our custom-built AWS Tikka .243 WIN rifle put together by Beretta Australia
- Fun for all at our SSAA SA Girls with Guns – Try Shooting Day
- Highest sporting accolade awarded to Paralympic shooting great
- Aussie Outback Supplies rifle bag a real winner!
- Victoria's Women on Target events schedule



Issue 14 inside  
this month's  
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**SIFA**

**Q** I've been dabbling in the shooting sports for some years and am fairly competent with a rifle or shotgun but my weakness in both disciplines is that when I miss once, I'll often miss the next shot also. I can have a run of perfect 10s then shoot back-to-back sevens or hit the first 15 in a round of Five-Stand Sporting clean miss the whole next stand and still end up with a score of 20/25. Is there any advice you can offer to stop me repeating my mistakes?

**Joey Bartlett, NSW**

**A** Joey you're certainly not unique as what you're describing is a classic case of 'little man in the head' syndrome, a topic I've touched on several times during the past two decades in this column. Any shooter who says they've never suffered from it at some stage is either lying or haven't shot enough targets yet to be introduced formally to this 'little man'. Wait for it as you'll meet him soon enough (maybe it's 'her' for women shooters).

The distinguishing feature of this little guy in your head is he only ever wakes up and starts talking when you suddenly find yourself under pressure. If you're alone at the range just shooting practice for fun then he has no interest in playing with you - this guy only wakes up when your heart starts to beat a little faster. He awakens to a faster heart-rate like you awake each morning to your bedside alarm - pressure and stress are his alarm.

I used to think these inner voices were there to help but they're only alive to dis-

tract you either by creating doubt or, even worse, giving you a massive shot of over confidence, thereby convincing you there's no longer any need to prepare yourself with a solid pre-shot routine as you're now so good the shotgun or rifle will simply do all the work for you without any mental effort on your behalf.

That'll pretty much end your day and as soon as you miss enough to lose the bet or take you out of contention for any prizes, the little guy disappears and leaves you in peace. His work is done and you won't hear from him again until the next time you set yourself a goal and are well on your way to achieving it (he tends to get louder the closer you are to that goal).

The only way I know to train yourself in dealing with this phenomenon is to tackle it head-on. Put yourself under pressure at every available opportunity so you wake up and have the man in your head speak to you every time you have a firearm under your control. Coping with pressure is the only way to succeed in this sport and the longer you avoid it the less chance you'll ever have of defeating these inner demons.

It's irrelevant what level you're currently competing at as once you decide to improve you need to be exposed to stronger competition which brings more pressure as you'll be required to be a more accurate shot. Whether it's an Olympic final or the shoot-off for a ham at the club Christmas event, once people are watching you and keeping score there's an inner desire to do well and this in turn builds stress.

The more times you practise a simple pre-shot training routine which can subsequently be applied to competition the better you'll become. If you follow this hard and fast procedure the little man in your head starts to feel as though he's talking to you from the other side of the door instead of barking instructions directly into your ear.

Everyone must develop their own pre-shot game but trust me, this is as important as gun-fit when the shoot-offs begin. Try to make it simple - for shotgun shooting, between four and eight seconds before you call for the target to be released is ideal and try to use it every single time you practise as in a very short time it'll become second nature.

If you watch any of the great tennis players serve, you'll see they bounce the ball pretty much the same number of times before they throw it in the air and belt it over the net at sometimes frightening speed. Great golfers do the same before every shot and are in essence just going through a pre-shot routine no differently than any top marksman. Give it a go and good luck with it.

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# Got a question - ask our TOP SHOTS?

• John Dunn • Paul Miller • Greg Riemer • Geoff Smith • Barry Wilmot

• Rod Pascoe

email: [edit@ssaa.org.au](mailto:edit@ssaa.org.au)



**Q** I enclose photos of my .320 calibre rimfire revolver in its original blue fabric-lined lockable rosewood case. The printed label says 'James Beattie & Son, 205 Regent Street, London' and the set includes a German silver-capped glass oil bottle, an ebony/brass cleaning rod and ebony turn screw. The gun has London proof marks (crown over 'P' and crown over 'V') on the cylinder and barrel. Can you offer any information about the gun and perhaps suggest what it might be worth?  
**John W. Thompson, via email**

**A** Thanks for the pictures of your beautiful old revolver John. James Beattie is recorded (on an auction site) as an English gunsmith working at Marylebone Street, London from 1832-1835 then with Henry Beattie at 205 & 223 Regent Street, London

in 1847 and on his own at 205 Regent Street between 1848 and 1864.

Between 1864 and 1879 James Beattie & Son are recorded at the same premises then from 1881-1894 James Beattie & Co are recorded at 104 Queen Victoria Street, London, meaning Beattie's working life spanned from flintlock through the early years of percussion right up to the adoption of centrefire cartridge-firing guns. As a rimfire model your revolver would have been made between 1860 when the cartridge



appeared and 1881 when the business moved to Queen Victoria Street.

An interesting aside is the handwritten note on the box label - 320 decimal cartridge - which would've made more sense back then when people were less informed about measurements and calibres were often expressed as 'gauges' (ie, balls per pound of lead, which in this case would have been roughly 149 gauge!) Similar cased revolvers from this period have sold for between \$3000 and \$4000 at auction here in Australia, but realising a good price always requires an interested buyer to be participating.

**Geoff Smith**

**Q** I have a .17 HMR I've been shooting bunnies with for the past couple of years. It's an accurate rifle but barrel fouling has always been a problem after about 40 shots and I've found it doesn't work too well on foxes and feral cats. I'm thinking of buying a .22 Magnum to replace it - which cartridge is the better of the two?

**Charlie Wheeler, via email**

**A** Both cartridges are good performers but it's really a case of horses for courses. The .17 HMR is a wonderful rabbit cartridge, capable of taking bunnies out to almost as far as you can see them. That said, it was originally designed for shooting American woodchucks so even rabbits are possibly pushing the cartridge's limits. I've always felt a little under-gunned when whistling foxes and consequently no longer own a .17 HMR.

The .22 WMR is a much better cartridge for foxes and cats, though like the .22 Long Rifle some testing work is required to find the brand/bullet weight best suited to whatever rifle you decide to buy. Ruger and CZ both make excellent rifles for the cartridge.



I've owned and used a Savage .410/.22 WMR combination gun for many years and fitted with a Karl Kahles 2 S2 scope it has accounted for more rabbits, foxes and cats than I can remember. I've also used it for shooting pigs in traps and meat goats and consider it one of the most useful firearms I've ever owned. In my opinion and experience the .22 WMR is a much more consistent performer than the .17HMR for larger small game and would suggest that's the way to go.

**John Dunn**

**Q** I'm looking at buying a new .223 rifle as my wife isn't bothered by their recoil and low noise - but we're both left-handed shooters. I like the BLR to match my Winchester 9422M but am also looking at the Tikka, though it has two different twist rates (the BLR has a 1-in-12" twist while the Tikka also has a faster 1-in-8 as well as 1-in-12).

I'd be only shooting thin-skinned animals to a maximum of 300m so which would be more suitable? Would the 1-in-8 rate be too much for light (55gr) projectiles and would I need to step up to heavier pills with the faster Tikka twist rate? I like the BLR's versatility with quick follow-up shots but maybe the Tikka would be better over distance with its longer barrel. They're similarly priced so there'd be no compromise. Any advice appreciated.

**Tony McDougall, Qld**

**A** We lefty's must stick together Tony so here's my advice. From your question you seem on top of the issues regarding normal and fast-twist barrels. The reality is 1-in-12" twist barrels were designed to stabilise the earlier standard weight 22 calibre projectiles up to about 55 grains and it's only relatively recently shooters started experimenting with longer, heavier calibre bullets and found the faster twist was needed to stabilise these. My 1-in-8" barrel 220 Swift stabilises all projectiles from 40gr to 80gr equally well up to maximum velocities.

The Browning BLR and Tikka rifles are both excellent firearms made for different purposes. The BLR always seemed to me an ideal bigger game rifle in larger calibres/cartridges like 243 Win and 308 Win. It has a very smooth operating lever action and high rate of fire and is perfect for closer-range hunting where swift follow-up shots may be an advantage on one or more fast-departing game or feral animals. I was always surprised to see it offered in 223 but see no reason why it shouldn't make a great light cartridge/closer range firearm.

The Tikka 223 with a fast-twist barrel would be my choice if you want to stretch out to 300m as you can reload and accurately shoot heavier game projectiles like the exceptional Swift Scirocco 75gr which gives you around 811 ft-lb of energy at 300yd compared to 591 ft-lb with a 55gr Nosler Ballistic Tip. That's a huge difference (about 30 per cent) especially when in my opinion you're stretching the 223 to humanely despatch game every time out to 300 yards or so.

Yet that's not to take anything away from the excellent 223 as it is Australia's biggest-selling centrefire cartridge. As Dirty Harry said, you just need to know your limitations! Great to hear you and your wife enjoy shooting together - long may it continue.

**Paul Miller**

**Q** I'm loading 6.5x55mm Swedish ammunition using various combinations of Australian powders with 140gr Hornady SSTs and 139gr Lapua OTM Scenar bullets in my Tikka T3x, best effort so far being five shots into a 55mm circle at 300m. I'd now like to achieve a really good group from Hornady 147gr ELD (Extremely Low Drag) Match projectiles but as ADI has not yet tested that projectile there's no data available. Could you please suggest the powders and case overall length (COL) most likely to shoot a good group.

**Geoff Pickering, Qld.**

**A** You've highlighted a problem with most reloading data. Powder manufacturers only list a random selection of bullets to use with their propellants and bullet makers only list a handful of powders to use with their projectiles - and in your case neither ADI nor Hornady can tell you what you want to know.

You don't mention the powder charge you're currently using with the lighter projectiles but assuming you want to stick with ADI powders, you could work from the ADI data which *is* available. There are figures for the Sierra 142gr MatchKing projectile so I suggest you simply extrapolate the figures of that load, remembering the *heavier* the bullet the *lighter* the powder charge you use. For example, where the data suggests starting with 39 grains of AR2209, I'd cautiously begin with a load of 36 grains using the 147gr bullet and work up from there at point-three of a grain increments.

ADI lists a number of rifle powders suitable for the Swede and if it's of any reassurance, everyone I know who uses 6.5x55mm Swedish ammo in modern actions for target work uses AR2209 powder - except me. I've had success with mild target loads out to 500m using ADI's BenchMark 8208 powder - not one of the powders they list.

As far as COL goes there are a number of ways to establish where the projectile touches the lands of the rifling and then decide if you want to seat the bullet to that depth or set it into the case further to create a gap or 'jump' in the throat of the chamber. Alternatively you can work from what you currently have with the 140gr SSTs but remember the shape of the ogive of the bullet will vary from bullet to bullet, therefore the point at which it touches the lands will also be different. And be careful to start your load development from a mild powder charge and work it up slowly while watching for pressure signs.

**Rod Pascoe**



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Two large lumps from the monobloc and solid trapezoid bites ensure the Invictus 1 is super-strong in the action when coupled with its wider receiver.

# One in a million

Caesar Guerini's Invictus is a shotgun for the ages as John McDougall discovered

Caesar Guerini is based in Brescia, the home of shotgunning in Italy and are principal owners of Fabarm, also in the Brescia region, with parent company Caesar Guerini fast becoming widely accepted in the highly competitive US market in both hunting and the clay target sports. Available for several years in Australia and having recently changed distributors, Caesar Guerini shotguns are increasingly finding favour with shooters and hunters who see their sporting arms as practical works of art.

The Invictus model is no exception and the one on review is touted to be good for in excess of one million rounds being put through it. The gun features a unique action jointing design that's easy to upgrade and certain to impress those who seek such a firearm with just as much focus on

performance, whether in the field or on the clay target range.

The Invictus 1 Sporter will make many shooters think seriously about owning one of these fine boxlock shotguns and with style and performance for less than \$10,000, the Caesar Guerini Invictus has achieved significant success in European competition since 2013.

## Barrels

Measuring 810mm (32") these are impeccably blued in a lustrous deep finish that's absolutely faultless. They're fitted with a Trap barrel front sight featuring a white bead and brass mid sight to facilitate perfect alignment with correct gun mounting. With over-bored barrels at 0.732" and 125mm forcing cones, the Invictus 1 Sporter was supplied with eight 82mm Maxus choke

tubes from Skeet through to Full Choke, each one having a knurled collar and identification cited twice, one about the bottom of the collar in full and another abbreviated on the collar for ease of identification.

The barrels are perfectly chrome lined and when assembled to the action and stock the gun was sensational and felt and balanced as good as it looked. Unlike other shotguns the barrels weren't just inletted into the monobloc to accept the trunnions in the receiver, as Caesar Guerini have designed a wonderfully clever Invictus cam which can be replaced at any time, simple but effective for ensuring longevity of the gun.

I don't doubt claims the Invictus models with their camming system of jointing could possibly last beyond the one million shots they reckon could be fired. Such innovation is sheer brilliance and if the gun does



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require tightening at some stage during its life, the Invictus cams are easily replaced without the need to make major adjustments to the monobloc.

When putting the barrel set to the receiver it was obvious the tolerances were fine as the barrels had to be perfectly aligned. There was no sloppiness in the monobloc and the gun snapped shut. There are two sizeable lumps to the rear of the barrel set monobloc and these are complemented by the Invictus block fitted to the floor of the receiver, ensuring a superb bearing surface to support the rearward lumps (the Invictus block is replaceable should re-jointing ever be needed).

Large trapezoid bites cut into the rearward lumps also ensure the Invictus will wear gently over those 'one million rounds', jewel polishing about the monobloc appreciated for retaining fine lubricants with the heavy-duty ejectors perfectly timed to throw empty shells well clear of the chamber for swift reloading.

### Receiver

This is striking, purposely made wider than most guns with the finish and engraving

so elegant. Being a grade one gun in the Invictus bracket it's anything but basic with the better grade models looking even better - all for an increase in price above the starting model.

Faultless flourishing scrolls about the receiver and other engraving is just enough without being over the top for the grade one option, the finish a matte silver nitride which makes the gun pleasing to the eye. The receiver sideplates are removable and could easily be replaced with custom engraved plates if desired.

Inside the receiver floor is the Invictus block, coloured gold and attached to the receiver floor by two screws and added to the two rearward lumps and trapezoid bites to lock the gun tightly and securely. I've not seen a more dedicated action for claimed longevity in a boxlock shotgun so yes, the Invictus name is appropriate for the inherent feel from this Caesar Guerini model.

I felt the triggerguard could have been marginally larger to accommodate those who prefer to shoot with gloves but otherwise its shape is acceptable for most. An adjustable triggerfoot is ideal for shooters



with longer or shorter fingers and for a gun in its price range such attention to detail is well appreciated (the adjustment tool is supplied). Trigger pulls were firm and released at a relaxed 4lb for each barrel.

### Stock and fore-end

Supplied with walnut timber featuring beautiful grain structure and hand-finished with stock oil, the Caesar Guerini Invictus Grade 1 is a stunning sporting arm to look at. Chequering on the fore-end and pistol grip is generous, hand-cut to perfection and contained by a single-line border. I enjoyed the forward release catch on the fore-end rather than a traditional lever latch on the underside and the fact it's adjustable for wear is even better (a special tool for this is supplied).

Inletting of a metal teardrop on the underside of the fore-end is a novel touch though I'd have been happy with plain wood. This is where the aesthetics of the gun come into play, one of the distinguishing features of Caesar Guerini in the design of all of their firearms. The Trap style of the fore-end for a Sporter could easily be replaced with a tulip or Schnabel



The impressive Caesar Guerini Invictus 1 Sporter with 810mm barrels, walnut stock and fore-end woodwork.



format as I believe this is an option but all's well and the fore-end is extremely secure to grip.

The stock is excellent and it was nice to see an adjustable comb piece supplied as standard as no two shooters are the same. This Dynamic Tuning System of adjustable stock comb is well appreciated as with a production gun the manufacturer has to cater to all shapes and sizes. An adjustable comb piece allows for this and being provided with the gun from the factory can mean a saving of \$450 to \$650. The stock measured a 387mm length-of-pull, allowing the shooter the option of having it shortened by a gunsmith if necessary.

I was pleased to see a recoil pad fitted as this gun is proofed for high performance steel shot loadings (at 1320 Bar) and with Remington Nitro Steel travelling at up to 1700fps, it's comforting to know if these loads are used for waterfowling then all will be well on your shoulder. The stock comes with a spanner for its removal along with the tool kit for fore-end, comb piece and triggerfoot adjustments.

#### In the field

Shooting the Caesar Guerini was an absolute pleasure. The 32" barrels took some getting used to but when targets were hit with the Maxus chokes they were absolutely destroyed. I found the barrels a little difficult moving on close marks but that was more my problem, whereas long-range



John gladly takes the Caesar Guerini Invictus 1 Sporter for a test shot at Frankston Australia Gun Club.



Engraving about the receiver of the Invictus 1 is tastefully completed.



Eight chokes from Skeet through to Full are contained in a handy case along with a tightening tool.

steady shots were a delight as target after target disappeared in a puff of smoke.

I highly recommend this gun for the discerning shooter and it only enhances the reputation of other Caesar Guerini firearms I've reviewed previously. The Invictus 1 though, with its innovative jointing system and numerous other features, will surely attract a great deal of attention from Australian hunters and competition clay target shooters - a superb gun with one million shots not beyond expectation. ●



The Invictus block is held in the floor of the receiver by two screws and enhances the locking of the action by securing the rearward lumps with a larger bearing surface.

## SPECIFICATIONS

**Maker:** Caesar Guerini, Brescia, Italy.

**Distributor:** SH Shooting, Victoria - 0412 300 011, [caesargueriniaustralia.com.au](mailto:caesargueriniaustralia.com.au), email [sales@shshooting.com](mailto:sales@shshooting.com)

**Overall length:** 1255mm (49<sup>3</sup>/<sub>8</sub>"

**Overall weight:** 3.87kg (8lb 9oz)

**Barrel length:** 810mm (32")

**Barrel weight:** 1.51kg (3lb 5oz)

**Chamber and bore sizes:** 70mm (2<sup>3</sup>/<sub>4</sub>"), 0.732" for both barrels

**Proofing:** 1320 Bar (suited to high performance steel shot loads)

**Forcing cones:** 127mm (5")

**Chokes:** Skeet (0.728"), Cylinder (0.733"), Improved Cylinder (0.723"), Light Modified (0.719"), Modified (0.713"), Improved Modified (0.708"), Light Full (0.704"), Full (0.700")

**Trigger pulls:** Both barrels 1.81kg (4lb)

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**Recommended retail price:** \$9500



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**My most challenging hunt**

# Seconds *from death*

Veteran hunter Ted Mitchell relives his scariest moment



The monster bull that could have taken Ted's life.



# He was probably heavier than the buggy...



Matt and Ted with the first buffalo bull.



Dragging the huge bull from the waterhole.

As usual, the long haul to the NT wore us out - more than three days on the road makes you realise just what a huge country we live in. After arriving at my mate Gary's home, Todd and I unloaded our gear and settled in for a relaxing evening before the following day's hunt. Morning arrived as my head hit the pillow - or so it seemed - and we packed our hunting kit in the truck for a couple of days 'bush'. The buggy was moved into a trailer and before long we met Gary's son

Matt to embark on another 250km drive to the property we'd be hunting.

After talking to the property owner we set off to cross the river and drive about another 40km into the property. Worryingly, where Gary had waded in to check the depth of the crossing, the owner spotted a 14ft crocodile in the very same spot the following week - just goes to show you can't afford to be complacent where water is concerned in the Top End.

Arriving at a suitable site we set up a

rough camp and were ready to head off in groups of two in different directions, Todd and Gary in the ute while Matt and I relied on the side-by-side. Matt drives it like a one-eyed, half-blind racing driver and we were soon miles away from camp and luckily still in one piece. But he did spot a good bull buffalo and quickly pulled up the buggy. Getting myself ready and ensuring a solid lean, a single shot from my .358 Mitchell Express dropped the bull on the spot.



## Seconds from death

But surprisingly he somehow managed to haul himself upright and stagger a few metres into a small dam. Manoeuvring the buggy to where he lay dead in the water, he took some pulling out of the hole as we had to tie a snatch strap to him and use the buggy to winch him on to dry land. He was probably heavier than the buggy but eventually we had him set up and a few photos were taken before the backstraps were put on ice in the esky. On reflection it was exhausting work and we worked up a good sweat in the process.

After a much-needed thirst quencher we were on our way again, this time looking for pigs, the latter soon spotted on an escarpment and leaving the side-by-side, we began a slow stalk towards them. Matt was about 40m behind me when we crossed an old dry creek bed and I sneaked up to a spot where it was easy to look down on where they were standing.

As I raised the rifle to my eye and focused on the pigs in the scope, unknown to me Matt was whispering: "Big bull buffalo watching you." Being nearly as deaf as a post I didn't hear a word and as my rifle was levelling toward the pigs he said a bit louder: "The buffalo's pawing the ground Ted, he looks crazy, he's going to bulldoze you!" Still with nothing heard and the cross-hairs on a pig's shoulder, my finger squeezed the trigger and sent a shot which dropped the pig in its tracks. That's when I finally heard Matt screaming: "Big bull buffalo coming at you Ted."

On firing, my hand automatically worked the bolt to chamber a fresh round and having now heard Matt's screams, I spun around to be confronted by a massive bull buffalo bearing down on me about 30m away, head lowered and glaring eyes fixed on me. Having fortunately chambered a round, I swivelled and put the cross-hairs



on his shoulder. A swift shot was fired at his right shoulder, hoping to break it and turn him as I'd no time to even think of a head shot. As the bullet struck he veered slightly and as a second shot, fired in what seemed a millisecond also hit him, he spun further and my third dropped him on the spot - three shots as fast as I could chamber and fire them. It was over in seconds but those few seconds will live with me forever, as anyone who's ever experienced an enormous bull buffalo charging them and having to shoot it at 15m will testify, it was more akin to a big angry bus, hell-bent in flattening me.

Matt ran over and said: "Hell, Ted, I was trying to tell you he was watching you and pawing the ground - I knew straight away he was one real cranky buffalo." By now

the adrenalin was surging through me and I was shaking like never before to the point it took more than 10 minutes before I'd calmed down enough to turn my camera on.

Talk about your most challenging hunt? To be staring down a huge bull buffalo charging at such close range and for no apparent reason, then be able to turn and hit him where I wanted within a couple of seconds is arguably my biggest shooting achievement. Matt told me: "I was going to call you on the walkie-talkie or throw a rock but then he started running, so I just had to yell."

All that can be said in the wash-up is I'm so thankful I was calm enough to do what I did and what was necessary to save myself and stop the charge. Luckily the shakes came later. A bit of time was spent on photography before harvesting his massive backstraps, a mammoth job in itself just carrying them to the buggy.

The drive back to camp was fairly uneventful other than having to hang on a fair bit, as tracks were non-existent and we had to make our own. Once in camp we heard how Todd and Gary had taken a couple of boars and during the next day or two I managed another boar myself. The Northern Territory is a big, beautiful place but there are many dangers which can trip up the unwary and had it not been for Matt's timely intervention, that could well have been the last hunt I ever undertook. But looking back it was a great trip with some fine trophies and wonderful memories of days spent with two NT legends, Matt and Gary. ●





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# Targets, socks and salt

Shooting on a budget - Bob Boland finds a way

While zeroing a rifle using cardboard I was fed up walking 50m up and 50m back every few shots. I don't have a spotting scope so this resulted in me buying some splatter targets, the problem being they're not exactly cheap. Yes I could have ordered them online but didn't want to wait and prefer to support my local gunshop.

Then I did some research on DIY targets. You can use almost anything you want as a target so long as it's safe, the main concern being ricochets. If shooting at a hard target that's not paper, cardboard or timber it's vital the rounds can't bounce back and as such, steel plates should be hardened and tilted while soft steel will be deformed and deformations could result in ricochets.

While shooting steel is fun it's not a great way to zero as there's no tracking where a missed shot lands, which brings us back to splatter targets. Further research showed a number of people making them by applying packing tape to cardboard then spray-painting them, which produces a reasonably low-priced splatter target but the tape method struck me as slow and tedious.



Disposable plates - the inspiration struck at a friend's barbeque.





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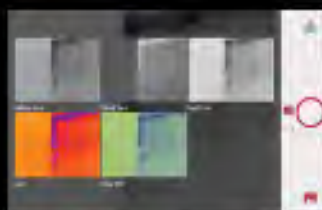
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## Shooting on a budget

After some thought I wondered if contact (as used for covering books) might be a better solution. Testing revealed there's basically inexpensive thin contact which isn't much better than cardboard while the clear thick stuff hasn't enough contrast to make an effective splatter target. There didn't seem to be any coloured thick contact available so it was back to the drawing board.

Then at a friend's barbecue inspiration struck - or rather was handed to me - in the form of a disposable plastic plate, not one of those flimsy things from my childhood but a thicker version. After a swift coat of spray paint I was behind the .22 again and bingo! The holes created a splatter which was clearly visible.

The problem now was that shop-bought splatter targets have grids/bullseyes, so I experimented with spray painting over an assortment of different meshes to form a grid pattern but it wasn't good enough. So I resorted to the tried and tested sticker path and while stickers aren't particularly 'splashy', they do provide a great point of aim, come in assorted sizes and can be stacked for a multi-ring effect.

I also like using stickers on steel plates as after a few rounds the plates become a bland grey. Initially I used spray paint but that needed drying time and I found stickers a cheap alternative. Additionally, stickers on steel allow for paper caps from toy cap guns to be placed behind the sticker to make a bullseye more spectacular and if you want lines or grids, these can be done with a permanent marker.

### Spider targets

In my quest for effective targets I've been experimenting with golf balls. Most golfers have buckets of used balls which they're happy to give away and if, like me, you shoot rabbits for the table, a golf ball and rabbit's head are roughly the same size. Now I realise that for .22 benchrest shooters with custom rigs, a golf ball at 50m is simply too easy and if that's you then just increase the range.

The problem irrespective of distance is if you shoot a golf ball it goes flying. One answer is to have a backstop but even then there's too much chasing balls for my liking as they're likely to bounce back out. I'd been eyeing commercially available spider targets with a number of small steel targets radiating from a central join so they roll when shot. While I weld, not all shooters do and buying a welder just to make a target seems excessive so I had to find a non-weld method.

My solution was reo, a steel mesh used





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## Shooting on a budget

to strengthen slabs which is low-cost or even free if you can scrounge some from a concreter. Cut it so there's a cross shape which can easily be bent, ideally in a vice though by hand it is possible to form a four-legged spider. To make targets at the end of the legs I simply drilled and glued on old golf balls. I experimented with epoxy and super glue both costing just a few dollars and of the two, super glue was easier to use and I was able to make two 'spiders' from each tube.

Testing with subsonic Winchester hollow-points at 25m I wanted to see how soon the balls would disintegrate which was fun and the results surprising. I expected the rounds to do significant damage and while hits were visible on the ball, most rounds didn't break the outer cover and none penetrated the ball. One of the epoxied balls did detach but re-gluing is straightforward.

### Steel targets

An obvious limitation of golf-spider targets is they're unsuitable for higher calibre rounds. As mentioned, steel is a clear and fun solution but it should be hardened and pivot to significantly reduce any chance of ricochet. There are various commercially available options which are great but come with a 'commercial' price tag. You could

make a swinging hardened steel target but unless you have the skills and tools to do so this wouldn't be cost effective.

A simpler solution is to use the curved end of a leaf spring. These can be bought cheaply at a wrecking yard, are made of hardened steel and if you find one with a curved end it's easy to hang from a length of chain.

### Gun sock

Over time many of us find secure storage becoming 'snug' which can make accessing firearms challenging and significantly increases the risk of damage, particularly to stocks and scopes. Thankfully there are proprietary gun socks with anti-corrosion coatings but assuming you keep your storage area dry and ideally have moisture-trapping crystals, corrosion shouldn't be a problem. So the primary issue is scratches and dents and a bargain way to minimise this is to buy Tubigrip from a chemist which is available in varying sizes, is cut-rate and provides a good level of protection.

### Worth its salt

One disadvantage of a Tubigrip gun sock is lack of anti-corrosion coating. There are commercial moisture-trapping crystals which can be dried and reused but there's

an even more economical option - salt. The reason rice is often put in salt shakers is to stop the salt absorbing moisture. Yes you could also use rice but it can go mouldy or be eaten by insects such as weevils. Salt is a very inexpensive choice for gun rooms as pool salt is low-priced and can also be used for salting skins to store in preparation for tanning.

### Rear bags

During a .22 night shoot at the range I borrowed a commercial adjustable front rest and rear bag but was unhappy with the performance of both. The front rest tended to 'rise' if I put any forward pressure on the butt and the rear rest needed 'packed' to be high enough. Looking at the gear other shooters had I realised the significance of weight - the superior gear was heavier and further research established even the cheap (lightweight) front and rear rests weren't so cheap. Indeed even the rest and rear bag I didn't like cost more than \$200.

I then came across the concept of a sock filled with popcorn (uncooked) which can be squeezed to give varying elevation as a rear bag, which at the bench I wanted to be solid. I worked on making an adjustable front rest in the shed using a barbell weight, 3/4" steel legs and threaded rod but ended up having to replace the rod (the nut wasn't tight enough) with parts from an adjustable old chair. Eventually I produced a great front rest but it was a pain and my advice would be to buy one.

For the rear bag I had a seamstress friend use an old baby blanket from which she quickly made up a rest and even attached a handle (for maximum stability she sewed a computer mouse pad to the base). The question then was what to fill it with. I considered sand (great weight and free) but I was hesitant about it leaking, popcorn or rice risked weevils and rodents and beanbag beans are too soft.

Then I remembered I'd been collecting .22 shells as I was planning to try some casting. These were great in terms of size, cost and longevity but weren't heavy enough so I needed something to go with them. The range again provided the solution as I simply collected spent projectiles from the backstop. As they were lead, I double bagged and then wrapped the bag in tape and the lead in the midst of the .22 shells provided significant weight. Indeed using empty .22 shells and 'range lead' would be a good way to fill even a commercial rear bag and a mouse pad can easily be glued to the base for extra stability. ●

**Pool salt can be used to control humidity and is very cost-effective.**





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# DON'T BREAK the bank

The name Stoeger is probably more familiar to shotgunners yet the Turkish firm has been making 9mm pistols since the 1980s, predominately for the US market. But as Senior Correspondent Rod Pascoe reveals, some models of these economical pistols are now available here.

Previously there were six options in Stoeger's STR-9 stable of handguns, all unavailable to Australian sporting shooters due to barrel length and magazine capacity requirements in this country. These readily affordable pistols are recoil-operated, polymer-framed, striker-fired self-loaders which come in either compact or sub-compact sizes primarily for the home-protection and self-defence market, another reason they've not been seen here.

Now a seventh offering, the STR-9FA, solves that problem with three options meeting Australian regulations: a standard open sight model and two red dot optical-ready (RDO) versions, one available in two-tone tungsten and one in FDE (flat dark earth) finish. Beretta Australia, local distributor for Stoeger firearms, gave *Australian Shooter* the chance to try one.

One of the largest segments of the US

firearms market is the sub-\$400 9mm pistol sector, made up of local and foreign manufacturers. And the competition is fierce with each trying to outdo the others on price while at the same time striving to maintain a level of quality and attempting to come up with features - ergonomic, cosmetic and practical - to steal a march on rivals.

This burgeoning division has evolved for a couple of reasons, one being the increasing uptake of handguns by US citizens (mainly women for self-protection) aided by allowing concealed-carry in almost every state. The other factor is patents which protected the Austrian-made Glock so well up until now have expired. A similar thing happened when patents for the Colt AR platform ran out and everyone began making either complete AR-15 rifles or aftermarket parts for them. While many manufacturers are jumping on this bandwagon, some are finding it difficult to keep

pace with competitors who've found ways of saving a dollar or two somewhere on the production line but that's marketing for you.

The review firearm is pistol-club friendly, firing 9mm Luger cartridges from a 121mm barrel and housing a 10-round magazine. Furthermore, it has the option of being fitted with reflex optical sights making it more appealing to the action or practical-style competitions enjoying rapid growth at many clubs. Additionally, the STR-9 is listed on the IPSC Production Division list for approved handguns.

## First impressions

The plastic padded case is tightly packed with accessories and gadgets some manufacturers tend to skimp on which could be part of a ploy to differentiate this pistol from the others by value-adding with extra enticements. Along with the two magazines is a cartridge loading tool (extra magazines



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## Don't break the bank

are available at a reasonable \$60). Four machined steel adaptor plates which accept a wide array of popular brands of reflex dot sights are included along with a cleaning rod that will take a patch or cloth and one brass and one nylon bristle brush, a padlock, Allen key, small, medium and large backstrap inserts, a bottle of oil, instruction manual and holster.

The holster is designed to fit 2" duty belts whereas most competition belts are 1½" wide though I'm sure some clever modification can make them suit. But first check the holster specifications in the rule book for what is and what's not allowed for your particular competition.

After trying all three grip backstraps I settled on the one supplied on the pistol - the medium size gave the best hold in my hand and my thumb easily reached the magazine release. Additionally, length of pull between the hand and trigger finger was ideal with the medium backstrap while the grip angle promotes a high handhold and the finger grooves are also heavily textured for improved control during recoil.

The web of the thumb and trigger finger fit comfortably close to the bore line but not in the way of the recoiling slide. The magazine catch is reversible for left-handers and again the manual gives a full description of the process (the slide release lever is only available on the left of the frame). There's a three-slot rail on the underside of the frame for accessories and atop the slide is a metal insert to fill the cut-out when no optical sight is fitted. The two screws holding this blank in place are also used to secure one of the four supplied red dot adaptor plates.

The optical sight is not *co-witnessed*, meaning the reflex sight blocks the shooter's vision of the open sights should the optical sight fail. The fixed steel sights use the three white dot principle and both front and rear are drift-adjustable in dovetails for windage only (an adjustable rear sight is available as an option). In the top of the slide is a visual loaded chamber indicator - with a small window machined out of the slide and a corresponding cut-out in the rear of the chamber you can see the rim of the round sitting in the chamber.

It takes some effort to rack the slide but there are deep diagonal serrations on the front and rear which give a good grip. The magazine ejected smoothly and after reading the manual for the correct take-down procedure, I stripped the pistol to basic cleaning condition and removed the recoil spring and barrel from the slide. Reading the manual is essential as slide removal differs from gun-to-gun and damage can occur if not done properly.

Contents of the box.



Choice of three backstraps.



Top of the slide showing rear sight and cut-out for optical sight.



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## Don't break the bank

The only negative I found was having to use the points of two screwdrivers to prise the take-down tabs to allow removal of the slide. Apart from the heavy spring the tabs themselves sit almost flush with the frame, a simple problem but one that could be easily fixed on the production line (I think they want to keep the gun as low profile as possible to avoid the tabs snagging on clothing in concealed-carry mode).

After eventually field stripping the pistol I lubricated the contact surfaces between frame and slide as well as the recoil spring assembly and wiped out the bore for later testing at the range. The recoil spring is of the flat wire type and held captive on a stainless rod guide.

### At the range

For something different I decided to use only factory ammunition to test the STR-9FA as I figured the likely customer for this gun will be either a pistol club or new shooter who'll have access to factory loads initially.

I fired a mix of brands - Sellier & Bellot, American Eagle and Geco - three with copper jacketed and two with lead round-nose projectiles of 115 and 124-grain bullet weights. Departing from my normal testing routine I thought I'd duplicate competition conditions and shoot several timed sequences from the Service Pistol and WA1500 matches rather than groups from a fixed rest. Everything was shot with open sights from a standing unsupported position and drawing from a competition holster, not the holster provided. I repeated some of the same sequences using a Leupold DeltaPoint reflex sight, again with a mix of ammo types.

The magazines were simple to load with or without the loading tool provided, the slide racked normally and took up the first round easily. Texturing on the STR-9's

grips is rough enough to keep the gun from moving in the hand but not rough enough to punish it. Yet some of the factory loads were quite a handful, especially those with the lighter 115gr bullets but generally the gun handled recoil well despite its light weight.

Muzzle jump was controllable and the white dot open sights were clear and easy to pick up quickly for follow-up shots. The trigger was surprisingly good for a budget gun, one thing which has certainly improved in striker-fired handguns since the Glocks of 40 years ago. The trigger breaks at around 5½lb and has a fairly long take-up for the first shot and a crisp let-off, unlike the spongy creep in early Glocks. After the first shot the trigger has a short reset for fast follow-ups.

The size of all groups using open sights proved reasonable at 10 and 25 yards despite fall of shot printing in different places on the target depending on brand of ammo and bullet type (some windage adjustment will fix this once the desired load is found). There's a fully adjustable rear sight available as an accessory retailing for just over \$100 but one wasn't available for this review.

Groups using the red dot were marginally better and landed in the same place on the target as those fired with open sights. Shooting offhand showed up my ability (or lack of) but the exercise better represented a real-world practical shooting environment. The point was more to do with testing the gun's functioning as well as the mechanics of fast magazine changes, access to slide release and sight picture acquisition.

The magazine release was easy to locate and reloading unsighted wasn't an issue, fast repeated fire showing no signs of any feeding or extracting and ejecting problems. The exterior mounted extractor isn't as big as on some other brands but does its job well, leaving the fired brass in a neat pile. This applied to all brands and types of ammo and the slide always stayed locked open after the last shot was fired.

### Summary

The Stoeger STR-9FA is a value-for-money handgun for the first-time pistol buyer or someone not considering competing at the top level and would also make an economical club gun for come-and-try shooters and new members. Apart from the problem with the take-down tabs in the frame it otherwise appears well made, reliable and reasonably accurate - and at around \$720 for the RDO version you can't argue with the price. ●



## SPECIFICATIONS

**Make:** Stoeger

**Model:** STR-9FA

**Action/operation:** Striker-fired, short recoil, cam-operated, tilt-barrel, locked breech self-loading

**Ammunition:** 9mm Luger (Parabellum), 9x19mm

**Barrel length:** 121mm

**Length:** 204mm

**Width:** 30mm

**Height:** 142mm

**Sight radius:** 176mm

**Sights:** White dot open sights dovetailed into slide. Four reflex sight adaptor plates included

**Weight unloaded plus empty magazine:** 750g

**Frame:** Fibre glass reinforced polymer with steel inserts

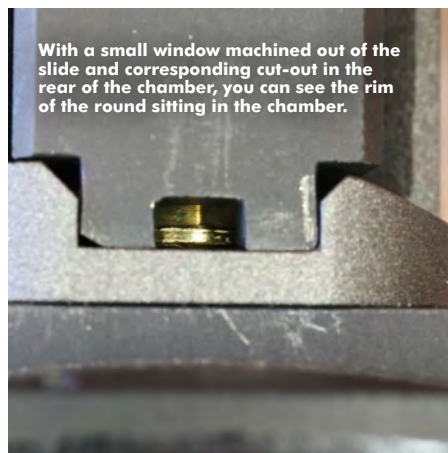
**Barrel:** One-piece steel with black nitride finish

**Slide:** Steel with black nitride finish

**Safety:** Trigger safety, loaded chamber indicator, firing pin block and out of battery safety

**RRP:** STR-9FA open sights \$650, STR-9FA RDO \$720

**Distributor:** Beretta Australia





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# Remington Beals: Nearly but not quite

Senior correspondent John Dunn



Remington Beals rifle - a sliding barrel breech-loading single-shot rimfire which never really made it.

When it comes to single-shot rifles I admit I'm a bit of a sad case. The darned things have fascinated me since I saw my first Stevens Little Scout way back in the mid-1960s and since then I've owned, used and traded more than my share of different makes and models. They still grab my attention, especially when I come across one I haven't seen before.

That's what happened at the Greengrass Antique and Modern Arms Expo at Penrith, New South Wales a few years back. I hadn't even walked the first row of tables when a different-looking rifle caught my eye. I didn't have to read the tag threaded through the finger lever to identify it as, though I'd never seen one before, I'd read enough books on single-shot rifles to know what it was. What followed was inevitable.

Within minutes a deal had been struck, much to the amusement of fellow single-shot enthusiast Peter Spurgin who took great delight in reminding me I 'don't really collect single-shot rifles any more'. He's right, I don't but have always found it hard to walk away from interesting firearms and that's the Remington Beals in more ways than one.

## The rifle

On January 30, 1866 Fordyce Beals of New Haven, Connecticut was issued patent #52258 for what would become known as the 'Remington Beals' or 'Beals Patent' rifle, the first single-shot breechloading rifle to bear the Remington name. The early rifles had an iron frame while those that came later were brass, barrels either full octagonal or part octagonal/part round. The .32 and .38 Long rimfire cartridges were

the standard chamberings and sights were a folding leaf rear sight and simple brass blade fore sight. No forearm was fitted and the buttstock was fashioned from walnut with a curved steel buttplate.

The action had an under-lever sliding barrel system, pushing the under lever down causing the barrel to slide forward away from the stationary breech. After a cartridge is inserted the lever is lifted back against the wrist of the stock which pulls the barrel back against the stationary or standing breech, leaving the rifle ready to be cocked and fired.

Beals didn't design the sliding barrel system which had been around for at least a decade (if not more) before his rifle, with variations of the theme used in breech-loading percussion and some other early rimfire cartridge arms. A few years earlier on January 22, 1859 Christian Sharps had been issued British patent #207 for a lever-actuated sliding barrel four-barrel pistol. Three days later he was issued American patent #22753 for the same system with minor variations and while the lever was never used on the Sharps four-barrel pistols, it was in the Sharps & Hankins Model 1862 .52 rimfire carbine.

The Beals patent of 1866 was issued for the extraction system his rifle used, the third attempt he'd had at getting it right with similar patents issued on June 28, 1864 (#43284) and February 7, 1865 (#46207). In his patent description Beals wrote of his system "... my invention consists of forming a notch on the face of the hammer so as to hook on to the rim of the cartridge or shell to firmly hold the shell or cartridge so the barrel may be moved forward, leaving the cartridge locked solely by the hammer until the barrel has been moved so far forward as to clear the shell or cartridge, when said shell or cartridge will of its own gravity fall there from."



The hook on the nose of the hammer was designed to ride over the top of the rim of the cartridge and hold it, so becoming an extractor when the action was opened.



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## Remington Beals: Nearly but not quite

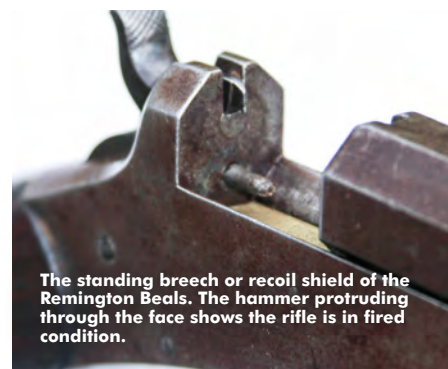
The application goes on to describe the function of a pin in the face of the breech face which helped guide and steady the barrel against the standing breech, and a rod or linkage connecting the under-lever and hammer which was designed to move the hammer into the half-cock or safe position as the breech was closed. Sadly none of these 'improvements' were, individually or jointly, enough to make the Beals patent a success. A hook on the nose of the hammer *wasn't* a reliable method of extraction and the linkage designed to set the hammer at half-cock was flimsy and apt to go out of order, as was the pin to align the breech with the face of the receiver.

When looking at the action's design, consideration must be given to the historical context of the times. The American Civil War was barely over but the facility and reliability of breechloading firearms and the then-new rimfire ammunition had shown the way forward. The days of muzzleloading firearms were numbered and everyone wanted a piece of the breechloading bandwagon before it bolted, Remington no doubt viewing the Beals patent as a chance to become a part of that rush to the future. To some extent it was but it never achieved the popularity or reliability the later Remington rolling block rifles would enjoy.

Frank de Haas in *Single Shot Rifles and Actions* describes the Beals patent rifle as



The action opened just far enough to allow a cartridge to be inserted.



The standing breech or recoil shield of the Remington Beals. The hammer protruding through the face shows the rifle is in fired condition.

the 'black sheep' of Remington's single-shot family and, in more ways than one, he was right. Realistically it wasn't a good design - it may have been strong enough to contain those early rimfire cartridges but with centrefire ammunition on the horizon and the much stronger rolling block actions close at its heels, longevity was never going to be a strong point of the Beals. This was confirmed by James J. Grant in his *Boy's Single Shot Rifles* when he wrote of the Beals "no breech loading system in which the barrel slides . . . away from a stationary breech has ever been successful".

Though dates vary between different reference sources and authorities, Roy Marcot records in *Remington: America's Oldest Gunmaker, The Official Authorized History of Remington Arms Company* that the Remington Beals was only in production

for six years from 1866 to 1872, during which time fewer than 900 rifles were made so examples can be hard to find. A notable example still in existence and on display in the NRA Firearms Museum is a factory-engraved rifle which belonged to Annie Oakley. It's not known if she ever used it in her shooting shows but the historical connection is there and adds to the aura of what otherwise seems to have been regarded as a fairly ordinary firearm.

Unfortunately my example of the Beals shows its age and isn't in particularly good condition. The lever/half-cock hammer linkage is missing and while I'm sure I could make a replacement, there's no point as ammunition is no longer available except as individual collectable rounds at collectors' prices which, depending on headstamp, can be anywhere from \$5 to



Component parts of the Beals patent action.



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## Remington Beals: Nearly but not quite

\$50 each! The full octagonal barrel is 71cm and chambered for the .38 Long rimfire cartridge, the rear sight a folding leaf as proscribed (one leaf broken off), while the fore sight appears to be the remnants of what was once a Beach's combination sight.

On the plus side it does have an iron frame which is less common than the later, brass-framed variation. There are no markings on the rifle except the number '69' stamped on the bottom flat of the barrel and on some other component parts. De Haas records a similar, unmarked Beals patent rifle in *Single-Shot Rifles and Actions*, also noting it was probably early production. Markings on the later models were: 'BEALS PATENT JUNE 28 1864, E. REMINGTON & SONS. ILION. N.Y.' or 'BEALS PATENT JUNE 28, 1864. JAN 30, 1866, E. REMINGTON & SONS ILION. N.Y.'

The walnut buttstock is secured by wood-screws through the top and bottom tangs and in terms of style it teeters on the edge of being 'perch belly', an expression used to describe the stock on the Remington No.2 rolling block which arrived almost a decade later in 1873. Interestingly the hammer, trigger and finger lever still show evidence of colour case-hardening which would seem to indicate the Beals was a well-made rifle, even if its design was essentially poor. Though never a great success the Remington Beals was an important early link in the development of single-shot breechloading rifles, an uncommon firearm that's interesting, unusual and not something you find every day.

### .38 Long rimfire cartridge

Most references date the introduction of the .38 Long rimfire at around 1865 but no-one in particular is credited with its arrival. Both the Crittenden and Tibbals Manufacturing Company and CD Leet are known to have made the ammunition from 1864 to 1866 and thereafter came many other manufacturers.

The cartridge was primarily loaded with black powder and examples include loads by

the Phoenix Metallic Cartridge Company (with a P headstamp), Winchester (H), Remington (U), Dominion (D), United States Cartridge Company (US) and American Cartridge Company (A). They're also known to have been made by the Peters Cartridge Company and there are quite a few variations with no headstamps in cartridge collecting circles. Shot cartridges were also made and I have a wooden sabot which carries a Remington headstamp.

According to Frank C. Barnes in *Cartridges of the World*, US companies stopped loading the ammunition in the late 1920s at which time it was being loaded

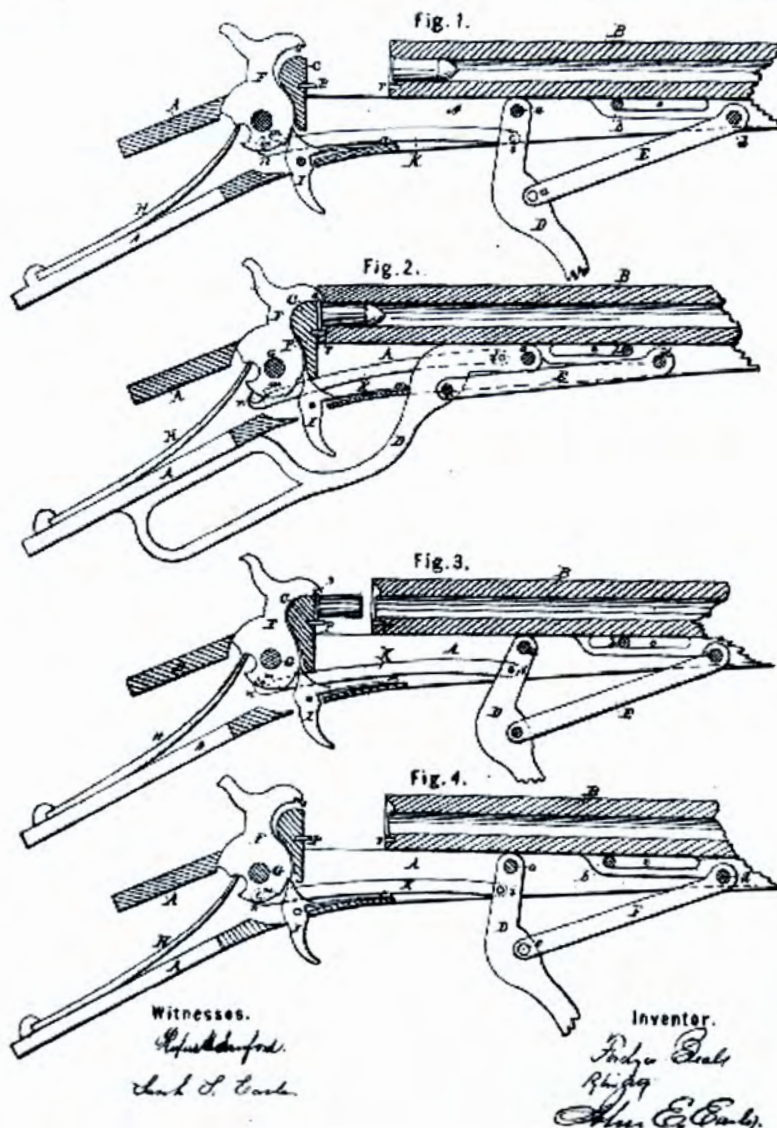
with Lesmok, rather than black powder, and had outlived its usefulness though it did last longer than the .38 Long centrefire version made from around 1875 to 1900. The British referred to its version of the cartridge as the .380 Long.

Though it was used in handguns the .38 Long appears to have been primarily a rifle cartridge. Apart from the Beals rifle and rimfire conversions of the percussion Remington revolving rifle made from 1866 to 1879, the .38 Long was used in a range of single-shots including Ethan Allen, Ballard, Stevens, Remington rolling blocks and Wesson. ●

### F. BEALS. Breech-loading Fire-arm.

No. 52,258.

Patented Jan. 30, 1866.



A standard .38 rimfire cartridge and wooden sabot shot load with a modern .22LR for comparison, both rounds having a 'U' headstamp from Remington.

Original drawings for the Beals patent. No rifles with an enclosed finger loop as shown are known to exist.





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SFP9L-SF OR



Optic not included

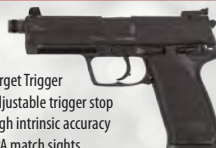
- Fully pre-cocked SA-Striker Fire Trigger
- Special Forces SF-Trigger
- Paddle or Push Button magazine release
- Exchangeable charging supports
- Luminescent open sights
- Interchangeable back straps and grip shells
- Trigger, firing pin and disassembly safety
- Long-Slide (127 mm/5" barrel with extended slide)
- Impact and drop-resistant as specified by TR and AC/225 D/14

P30L-SD



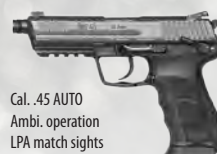
- SA/DA Trigger
- Adjustable LPA match sights
- Paddle magazine release, ambidextrous
- Interchangeable back straps and grip shells
- Thumb operated hammer decocker
- Picatinny under-rail
- Impact and drop-resistant as specified by TR and AC/225 D/14

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Target Trigger  
Adjustable trigger stop  
High intrinsic accuracy  
LPA match sights

HK45 Tactical



Cal. .45 AUTO  
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FEATURES
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ADJUSTABLE POWER
WALNUT STOCK
AMBI. STOCK
MAG CAPACITY
CAL. .22 - 10
CAL. .25 - 9

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AIR SPEED.  
SEMI AUTO PCP



FEATURES	MAG CAPACITY
PRESSURE GAUGE	CAL. .177 - 12
CARBON FIBRE TANK	CAL. .22 - 10
ADJUSTABLE POWER	CAL. .25 - 9
SOFT TOUCH STOCK	CAL. .30 - 7
AMBI. STOCK	

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This type of rimfire bolt has its extractors held in place with small pivot pins with internal springs to tension the extractors.



# Keep it clean!

To prevent rimfire malfunctions, John Hill advocates regular firearms maintenance

I've seen rifles - and a few shotguns - malfunction simply because they needed a thorough clean. This applies particularly to rimfires of the .22

Long Rifle variety which fire bullets with a grease or wax coating and if this lubricant is allowed to accumulate in large quantities it can cause trouble. The .22LR bullets are treated with a heavy grease or wax to prevent the barrel from leading up, which usually occurs immediately in front of the chamber and once a build-up starts to form, every passing bullet adds to the deposit until the rifle's accuracy suffers.

Greasing lead bullets reduces a barrel's tendency to leading but doesn't completely eliminate the problem. This grease coating on Long Rifle ammunition also forms a protective layer on the inside of the bore and is the reason many shooters claim .22 rimfires should never be cleaned as it

removes this protective veneer. Recently I had a well-worn old Lithgow Model 12 in for a head-spacing washer to be fitted to its bolt. The rifle was given a comprehensive check which included the trigger mechanism and cleaning the barrel - the bore was fouled with a heavy deposit of lead and no-one had bothered to clean the old girl for years.

As stated, leading usually forms immediately in front of the chamber and in this rifle there was plenty of it. The lead was easily removed with a bronze bristle brush and bore solvent and the barrel actually came up well and was in remarkably good condition for a 60-year-old rifle with several owners. Whether lead, copper or powder fouling, rifle barrels need to be cleaned - grease or no grease.

There are several areas where accumulation of bullet lubricant can be a worry around the extractor slots (those recesses

at the breech end of the barrel), around and under the extractors and in the magazine. While bullet lubricants are relatively soft, deposits left in a rifle for years can become compacted to such an extent the dried grease clogs up operation of the action and magazine. The usual consequence is for extraction to eventually fail, which results in the spent cartridge case remaining in the chamber instead of being withdrawn and ejected as would normally occur.

If the magazine becomes clogged and locks up this will lead to misfeeding. Tube magazines in particular are prone to this when blocked with an accumulation of old bullet lubricant and powder residue but simple routine cleaning will prevent this. So let's clean a hypothetical bolt-action rimfire rifle step-by-step so it operates smoothly instead of malfunctioning due to grease and powder fouling.



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## Keep it clean!

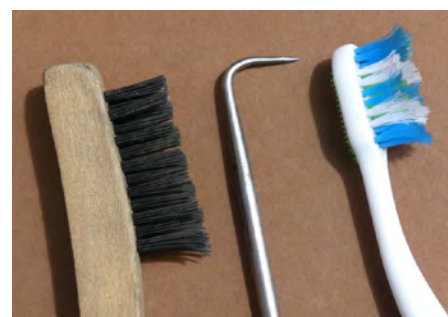
Rimfire rifle barrels need cleaning occasionally and require the usual bristle brush, solvent and cleaning rod treatment.



The main items to concentrate on are the extractors and recesses or slots in the barrel they fit into as when the extractor slots become fouled, unwanted deposits have a tendency to spread the extractors, thus lessening their grip on the case rim. Carefully removing these with a pointed tool of some sort (an engineer's scribe works well) allows the extractors to function and have a better grip on the case rim.

A pointed tool along with an old toothbrush will soon clear the extractor slots of accumulated gunk.

Next on the list is the extractor(s) and generally speaking there are two main types, first the single claw as found in old BSA Sportsman rifles and other single claw rimfires, the second the twin or double extractors common on most modern bolt-action rimfires. Close inspection of these



Cleaning tools help when removing compacted grease and powder residue from the extractor slots.

If you have access to compressed air it will help with cleaning of assembled extractors.



'twin extractors' reveals only one of them is an extractor (usually the right-hand one unless the rifle's a left-handed model). The left one only supports the case as it's withdrawn from the chamber and is designed to function, in conjunction with the ejector, as the case is expelled to one side of the opening breech but for the sake of convenience both will be referred to as 'extractors.'

If the extractors are in need of cleaning, perhaps the whole bolt requires cleaning





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## Keep it clean!



Tube magazines can be dangerous when fouled with grease and powder residue. They dismantle at the knurled grip.

and lubricating and when this is the case, it must be completely dismantled though some rifle bolts necessitate the use of special tools (better designed ones can be dismantled without tools). Those bolts where the extractors are held in place with a spring clip are easiest to remove and clean - just don't lose the clip! If the extractors are held in place with pins and have internal springs to tension them, then cleaning in situ is the way to go. Using a bowl of two-stroke mower fuel and a toothbrush will clean and lubricate these pinned extractors if they're not dismantled and a blast of compressed air helps. This method can also apply to the spring clip type if the clip presents hitches with removal.

Moving on to magazines and the box or clip type are less trouble than tube magazines though both can malfunction when clogged. It's easy to dismantle some box magazines even if it entails springing the bottom cover a little to gain access. If a magazine looks as though it'll come apart then that's the best way to clean it and even if it resists it can still be serviced reasonably well while fully assembled. Simply poking a piece of rag in the open end with a screwdriver will also do the job of cleaning any rubbish from the magazine, all that's involved is the magazine follower is free to travel without fouling on bullet lubricant and powder residue.

Manufacturers now make some magazines (both rimfire and centrefire) out of

plastic rather than traditional steel for purely economic reasons and plastic ones should be handled with care as they can break if subjected to rough treatment. The metal in a steel magazine can be sprung or will bend whereas plastic may crack or even shatter if forced apart. Many rifle actions in use today are 100 years or more old yet their well-made steel magazines still feed ammunition smoothly - will plastic prove as durable?

Tube magazines can be an obstacle when bunged up with dried grease and the possibility of a live cartridge being stuck in the tube when the rifle's thought to be unloaded is a good reason to keep the muzzle pointed in a safe direction. I know of one bullet hole in a ceiling due to a stuck round which suddenly found its way from the tube magazine into the chamber while cycling the action. I also know of a girl who was shot through a closed door by a rifle in another room which had a supposedly 'empty' tube magazine so, for those two reasons alone, I've always had a high level of respect for any rifle with that type of magazine. They can be dangerous in a totally unexpected way.

The best way to clean tube magazines is to completely dismantle the whole assembly which is often held together by a single pin (they can also be threaded and pinned). The knurled grip on the end of the tube is where it all comes apart but if that presents a drawback, the tube can still be cleaned reasonably well without having to strip the magazine to



Cleaning dust and grease from inside magazines is best done when they're dismantled though some magazines may not be easily taken apart.

its individual parts. When cleaning an assembled tube magazine it's necessary to have a .22 calibre slotted tip or cleaning loop with a piece of rag threaded through the loop, which must also be fitted to a cleaning rod. Forcing the loop into the end of the tube the follower protrudes from will give the rag access to where the grease is and this method is fairly effective at cleaning the inside of the magazine tube. If the tube is badly fouled with old grease the rag may need dipped in a solvent of some type to dissolve any accumulated dry bullet lubricant.

I remember when self-loading shotguns were commonplace but since 1996 these are no longer available to most Aussie shooters. Self-loading shotguns also have tube magazines and a Franchi I once worked on had a misfeeding hindrance but instead of grease being the cause it was powder fouling, resulting in the magazine follower binding up inside the tube. Once the fouling was cleaned from the magazine tube and the follower free to move again, the Franchi no longer had a feeding problem.

If buying a new rifle it's unlikely you'll be troubled by any of these issues, at least not for a while, as it's the older type of rifle, the family heirloom handed down from father to son that's a likely candidate for gooey extractors and a bunged-up tube magazine.

In conclusion, remember rifles are mechanical devices and call for lubrication and some form of simple maintenance to keep them in good working order. This amounts to little more than a few drops of oil or a dab of grease to keep the working parts free from dirt, dust, grass and other foreign bodies and in the case of .22LR rimfires that also includes grease around the chamber, extractors and in the magazine. ●



Maintaining a tube magazine without dismantling it requires some barrel cleaning equipment.



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### REACTION CHAMFER

2. Boosted expansion

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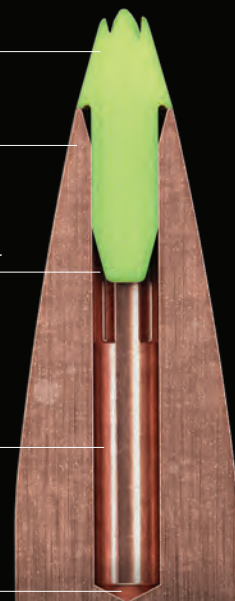
3. Fast expansion to critical diameter

### EXPANSION SURFACE

4. Controlled expansion for optimized diameter

### CAVITY WALL

5. Stopping expansion, eliminating overexpansion and energy loss



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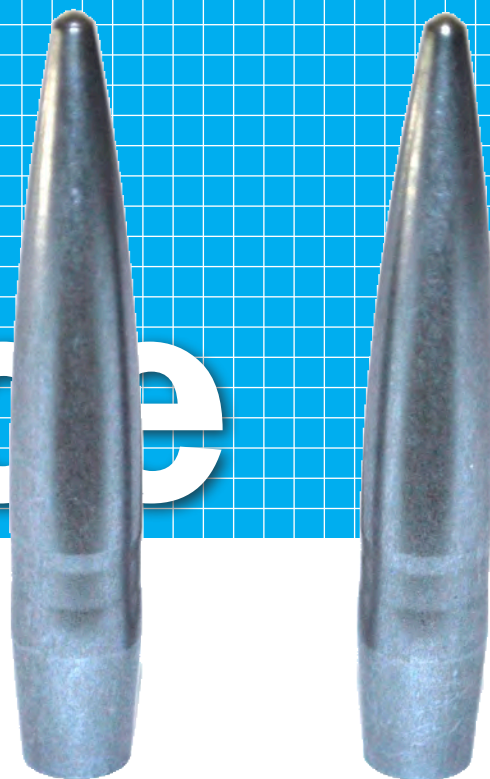
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# Science

## of long range stability

Steve Hurt



Despite the attractive appearance of these 215 Ball Bearing Tip (BBT) hunting bullets, expansion on game can only be guaranteed at velocities above 1600 fps.

In this age of rapid scientific advancement it's sometimes difficult to keep abreast of the most current developments, even in our own areas of expertise and ballistic research technology is certainly no exception. Indeed, much of the research and development of recent years is tipping previous paradigms on their heads and challenging how we think about things altogether, long-range bullet stability being a classic example.

I've previously written on how it's possible to calculate a bullet's likely stability at launch within the context of the bullet's length, barrel twist and weight relationship - in a specific range of environmental conditions. The Miller formulae (there are three versions) will allow you to choose the correct bullet to get you on the money at launch but - and it's a huge but - how will that bullet perform at extended range? Is it possible to calculate? The short answer is yes but it requires a level of information few shooters have access to so let me explain.

Before we start though, we must define the term 'extended range'. In his books *Modern Advancements in Long Range Shooting* (Vol.1 and 2) Brian Litz defines long range as 'when a bullet has to engage

the transonic zone to reach the target' - that is, between 1339 and 893 feet per second (fps) at the avionic standard of 15 degrees C and 1013mb of air pressure. This definition of long range is helpful but is limited as there are a number of additional criteria we may need to consider. Now if we're only shooting at paper or modern electronic targets we could leave the Litz definition right there and it would be perfectly acceptable. Hunters, however, have a problem.

The challenge every hunter faces is there are very, very few bullets which will expand at velocities below 1600fps and, depending on the cartridge driving it and the intended target, also deliver the energy required for terminal effectiveness on medium-sized game. Specialty bullets which expand at subsonic velocities can't generally be relied on supersonically without risk of failure at short range, or even in the barrel of modern centrefire cartridge rifles.

The limiting factors of expansion velocity and sufficient energy delivery pull hunters up a long way short of transonic engagement, so extended range application for an ethical hunter is limited to the 1600fps or faster benchmark, where most bullets which were stable at launch are likely to remain so.

Hunting bullet manufacturers consider accuracy and terminal performance as their major objectives, not transonic performance as this product group wasn't designed to punch holes in paper at 'long range'. Once a hunting bullet's velocity falls below its designed expansion velocity/range, performance of any description beyond that limit is no longer relevant. Besides this there are design conflicts for the bullet manufacturer. The attributes which enhance terminal performance are often in conflict with transonic target accuracy but that's for another time.

### Determining long-range stability

There are two ways to determine the suitability of a particular bullet for long-range application, just as there are for load development. The first is trial and error and we're all familiar with that one. The second is the scientific approach as the primary value of science is to reliably predict outcomes. When theoretical mathematics and observed outcomes are the same, it's reasonable to assume the science is sound. If they don't agree there's either something wrong with the theory, the maths or perhaps the advertised claims but not the outcome.



# HUNTSMAN OPTICS THUNDER

TQ50PRO | TH35 | TH25 | TE25 | TE19C



At the heart of the Thunder is one of the most sensitive sensors available on the market, detecting even the smallest temperature differences. The sensor (NETD Rating = <35mK) and high quality objective lens configuration provide you with a focus system that is able to achieve crystal clear images and enhanced detection distances in some of the most challenging environments.

A simple to use interface makes the Thunders series intuitive and practical. Combine this feature packed thermal with the HIK software and you have an unbeatable package that performs well above its price point.

The Thunder is designed as a multi use device. You can use it as a permanent scope on your rifle, a Clipon to your existing scope (additional Lens System required) or as a monocular.

The THunder thermal imaging scope can capture snapshots, record videos, and set parameters via the **HIKMICRO Sight App** once connected to your phone via hotspot. Search **HIKMICRO Sight App** on the App Store(iOS System) or Google Play™ (Android System) to download.

## SPECIFICATIONS

MODEL	SENSOR	FOCAL	MAG	FOV	RANGE	MEMORY	BATTERY	WEIGHT
TQ50	640 × 512, 12 μm, NETD < 35mK	50mm, F1.0	2.6 - 20.8, x8	8.7° × 7.0°	2600m	16GB (460,000)	Up to 4h	390g
TH35	384 × 288, 17 μm, NETD < 35mK	35mm, F1.0	2.08 - 16.64, x8	10.0° × 8.0°	1200m			
TH25		25mm, F1.0	1.5 - 12.0, x8	14.9° × 11.2°	900m			
TE25	256 × 192, 12 μm, NETD < 35mK	25mm, F1.0	3.25 - 26, x8	7.0° × 5.2°	1200m			
TE19C		19mm, F1.0	2.47 - 19.76, x8	9.2° × 6.9°	900m			

## FEATURES

Pixel interval: 12 μm  
 Detector sensitivity: 35 mK  
 50HZ refresh rate  
 High Shock resistance 750 g/1ms  
 Digital zoom: 1x, 2x, 4x, 8x  
 F1.0 Aperture  
 Capture Snapshots & store on thermal  
 Capture videos & store on thermal

Wi-Fi – Hotspot – real time sharing or transfer videos/images  
 IP67 protection  
 3 year warranty  
 Static target ranging system  
 Built-in memory: 16 GB  
 Battery runtime 4hours approx (replaceable 2x CR123a)

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### MULTIPLE CROSSHAIRS

4 crosshair shapes and 3 colors allow users to personalize to their needs.



### HIGH THERMAL RESOLUTION

A top end resolution of 640 x 512 and a high sensitivity detector (less than 35mK NETD) gives a clear picture of the target. Class leading lens with F1.0 rating to ensure the most detail is captured and delivered. You will not go wrong with this unit.



### WI-FI ENABLED

Supports **WiFi Hotspot** through the mobile app to have the same view as the camera itself. Users can also access digital zoom or video recording on their mobile or tablet.



### OCULAR LENS

An OLED display (1024×768 resolution) gives a great view, massively enhancing user experience.



### PICTURE-IN-PICTURE

The scope can zoom in to the central part of the live view and show that section as a separate picture in the view, so users can see the detail.



### REPLACEABLE BATTERIES

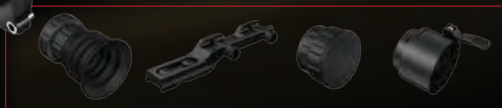
Two CR123A/3.0 V batteries are included in the package box, which can be installed and replaced in the field.

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### ACCESSORIES



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## Science of long-range stability



**Keyholing is the result of insufficient bullet stability and can occur at various distances for various reasons - bullet too long for rifle barrel twist resulting in insufficient spin stabilisation, poor manufacturing tolerances or bullet design/application limitations. Then there's environmental factors.**

For a bullet to survive the transonic zone it must have certain attributes and each one has to be perfectly balanced within the total package. The Miller formulae are a great start in determining a bullet's stability at launch but these simple formulae don't accurately reflect the dynamic changes in behaviour of a bullet in flight. A more complex application of the maths is required, especially at the inversion of pressures applied to a bullet around the sound barrier. Test pilots in the early days of trying to break the sound barrier found this out the hard way and, sadly for some, at the cost of their lives.

From our understanding of the Miller formulae we know a bullet should be launched with a stability factor of at least 1.5, but at no point throughout the entire flight path should a bullet's stability fall below 1.0 (where the bullet will tumble) and the Miller numbers don't accurately reflect results at the transonic intersection.

For this we need a more sophisticated program and a layman's version can be found on the JBM website. The problem is these calculations are only as good as the data input and unless the shooter knows the exact dimensions of a bullet's meplat, compound ogive radius and length, total length and boat tail proportions, accurately expressed in calibres, the shooter is none the wiser.

So where to from here? The takeaway message is that in reality, long range bullets designed to engage the transonic zone are most likely to be target bullets rather than hunting bullets - and even then they're a specialty subset within the target group. If this is your game then it's imperative you follow the barrel twist recommendations of the bullet manufacturer and *check the actual specifications of your barrel*. It's

**Appearances can be deceiving. All four of these Outer Edge 308 Target projectiles are demonstrably transonically stable when used in the recommended barrel twist.**  
**From left: 150gr, 155gr Rebated Boat-Tail (RBT), 198 and 215gr target projectiles, not recommended for hunting.**



**From left: 2 x 308 HP hunting projectiles and 2 x 308 target projectiles. All four from the Outer Edge range weigh 150 grains but here the diversion in design objectives becomes more apparent.**



**This 338 Outer Edge target projectile struck a Bissalloy target well and truly inside the transonic zone. For a target bullet to expand like this means it struck the target exactly point first without cant or yaw, the definition of stability.**



often a shock and disappointment to many customers to find their 10" twist barrel as specified turned out to be a 10.5" twist when measured and yes, the balance can be that fine, meaning the difference between success and disappointment. If you find yourself in this unfortunate position there's little choice but to use a slightly shorter

bullet or change your barrel for a faster twist edition.

There's always more to learn and I don't make any claim as to having the whole picture so if there are any questions or comments which might advance the science of this conversation (pointing to the evidence), I'd love to hear them. ●





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Leupold Mark 5HD 5-25x56 FFP 35mm  
Non-illuminated Reticle  
TMR..... Was \$3380 Just \$2910  
H59..... Was \$3890 Just \$3345  
TREMOR3..... Was \$3890 Just \$3345  
Impact 60 MOA..... Was \$3380 Just \$2910  
Illuminated Reticle  
TREMOR3..... Was \$4750 Just \$4070



Leupold Mark 5 HD 7-35x56 FFP 35mm  
Non-Illuminated Reticle  
TMR..... Was \$3890 Just \$3345  
TREMOR3..... Was \$4390 Just \$3775  
H59..... Was \$4390 Just \$3775

Illuminated Reticle

TREMOR3..... Was \$5230 Just \$4490

### Mark 3HD



Leupold Mark 3 HD 6-18x50  
SFP TMR Reticle..... Was \$1205 Just \$940



Leupold Mark 3 HD 8-24x50  
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### Deltapoint

Leupold Deltapoint  
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3 MOA Dot

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### Freedom RDS

Leupold Freedom  
RDS 1 MOA Dot  
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### VX-3HD



Leupold VX-3HD 1.5-5x20  
ZL Duplex..... Was \$860 Just \$720

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Long Range Duplex..... Was \$540 Just \$449



Leupold VX-Freedom 4-12x40  
CDS Duplex..... Was \$630 Just \$520

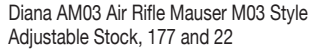
### Binoculars

Leupold BX-2 Alpine  
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10x42..... Was \$450 Just \$395



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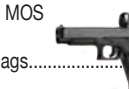
Glock 17A Gen 5 9mm, cased with 2 mags  
Back Strap kit for all Hand Sizes..... \$1100



Glock 34 9mm  
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Glock 34 Gen 5 MOS  
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# Invasive species an ongoing nightmare

**John Maxwell**

Introduced pest animals and plants have already wiped out some of Australia's native species and, despite years of efforts at eradication, the situation has only deteriorated as they now pose a threat to our unique wildlife greater than climate change. A new report by Australia's peak scientific research organisation CSIRO and the Centre for Invasive Species Solutions (CISS) warns now is the time for urgent national action.

"Plagues of pests are not a distant problem to worry about tomorrow - they're here now," the report says. "While current strategies have slowed some impacts, the challenge is for all Australians to work together to come up with new ways to stop the harm caused by invasive species."

The report considers the big picture and doesn't advocate any particular control measures. "By working together and investing in innovative technology and management approaches, we can ensure Australia's extraordinary, irreplaceable native animals and plants can survive for future generations to treasure," it says.

Invasive species are a problem for many nations but have been especially devastating for Australia, causing the extinction of 29 mammal species, five breeds of frog and four bird species while others teeter on the brink. So what's to be done? A problem of this magnitude requires a multi-strand approach and there would certainly be a role for recreational hunters in dealing with some introduced pests including feral pigs and cats, foxes and, of course, rabbits.

The European rabbit now infests two-thirds of Australia and is ranked as the single biggest menace to threatened native species, costing on average \$216 million a year in lost farm production. That's followed by feral cats, numbering up to 6.3

million depending on environmental conditions. Cats kill more than 456 million native mammals, 272 million birds, 92 million frogs and 446 million reptiles each year and cats gone wild have contributed to the extinction of 27 native species and threaten the survival of 124 more.

Feral pigs number up to 23.5 million and inhabit 45 per cent of Australia, costing more than \$100 million a year in crop damage and control measures. Then there's cane toads which have invaded more than a million square kilometres of Australia and continue to advance up to 60 kilometres a year in Western Australia.

And there are many more - European carp and fire ants, weeds such as lantana, blackberry and prickly acacia and pathogens including myrtle rust and chytrid fungus. These pests haven't found their way here of their own accord - all arrived through human agency - example rabbits and cane toads and they'll be helped along by climate change. Cats revel in post-bushfire conditions to prey on natives which have lost their sheltering greenery. Rabbits feast on green shoots while cane toad spread is aided by warmer climates.

Australia has enjoyed significant victories in some areas with border controls having been completely successful in keeping out many pests and stock diseases such as foot and mouth and African swine fever. Either could be spread by ferals and the cost would be enormous - up to \$50 billion in 10 years for foot and mouth alone. An outbreak of foot and mouth disease would be devastating for our farm sector and since it's highly contagious it could easily spread into feral populations such as pigs, requiring an immediate national response.

The report says there are two possible futures for Australia in dealing with invasive

species: business as usual (and the problem just gets worse) or concerted action.

"Australia is a world leader in developing pest and weed solutions such as biocontrol agents and baits," the report says. "We now need to take advantage of new genetic and digital technologies to create solutions for the 21st century that can find and manage invasive species more cheaply, easily and quickly. These new technologies have the potential to be game changers in how we tackle pests and weeds in the future."

That includes advanced technology to detect, track and trace, including drones and satellite systems with automated systems using artificial intelligence and machine learning being able to detect and track incursions. Australia is at the forefront of biological controls with new genetic techniques offering fresh opportunities, for example, by making all the offspring of a particular species the same sex.

The report doesn't say so in as many words, except by implication in some of the case studies cited, but lethal control measures seem to be an accepted, useful and in some circumstances vital solution for feral animals. Other than by those on the very fringe, that seems to be pretty much accepted.

We all know about the Greens and their views on legally owned guns and hunting but in its political party rankings ahead of the 2019 federal election, the Greens-aligned anti-hunting Invasive Species Council rated the Greens above the Coalition and Labor, primarily for their comprehensive plan. Ranked right at the bottom were the Animal Justice Party and the Shooters, Fishers and Farmers Party.

The latter may not have thought too hard about the need for a comprehensive policy on invasives but they're left in the





shade by the Animal Justice Party which countenances no lethal control measures for any animal species, even mice in plague proportions. "Poisoning mice is cruel and ineffective in the long-term," says the Party's position statement while advocating research on non-lethal fertility control.

Unsurprisingly the group wants duck hunting banned forthwith and is calling for an inquiry into cruelty aspects on any use of shotguns in killing animals. "We are confident the scientific evidence will lead such an enquiry to recommend a ban on the use of shotguns for the killing of any animal," it says, adding that invasive species didn't ask to be introduced to Australia and should not be punished just for existing.

"The AJP recognises there's no simple solution to controlling the impact of introduced species but believes only non-lethal, humane, effective and species-specific methods are acceptable," its policy says. The group has two MPs in the NSW upper house, elected in 2015 and 2019, and one in the Victorian upper house, elected in 2018.

Putting that in perspective the Shooters, Fishers and Farmers Party has three MPs in the NSW Legislative Assembly, two in the NSW Legislative Council and one in the Victorian Legislative Council. As the former executive director of Animal

## The European rabbit now infests two-thirds of Australia and is ranked as the single biggest menace to threatened native species



Liberation, NSW Animal Justice Party MP Mark Pearson has some strong views on hunting and hunters.

"Those who engage in this blood sport represent only one per cent of Australians and perhaps not coincidentally the same percentage of people with a psychopathic disorder found in the general population," he told NSW parliament. That's pretty close to calling all hunters psychopaths. "The trajectory of current statistics shows

that within a generation, hunting will be perceived as a deviant activity," he added.

The AJP advocates a wholly non-animal diet as does Mr Pearson who, curiously, in 2017 was busted enjoying a fish dish in a Sydney Japanese restaurant. He fessed up to what is totally contrary to the party's fish policy which says: "Eating fish, whether farmed or wild, is incompatible with AJP's advocacy of a plant-based diet." Oops! ●

An advertisement for Smith &amp; Wesson and Grycol International. The background is a dark, textured surface with several handguns. A Smith &amp; Wesson Performance Center handgun is prominently displayed in the center. To its left is a Smith &amp; Wesson SW22 Victory handgun. To its right is a Grycol handgun. The Smith &amp; Wesson logo is in the top left corner. The Grycol International logo and website address (www.grycol.com.au) are in the bottom center. Social media icons for Facebook and Instagram are also present.





# Leica virgin

German giant offers new entry-level scope which impressed Con Kapralos

**L**eica Sport Optics, a subsidiary of the much-lauded Leica Camera based in Wetzlar, Germany has been at the forefront of optics designed specifically for the shooting and hunting sports for more than a century. The German giant, which produces the world's best photographic cameras, can be relied on for riflescopes, rangefinders, binoculars and so much more. Naturally their top-shelf optics are made 'in-house' and command top dollar but having said that, once you experience their sport optics you'll certainly appreciate the image quality that comes with the marque.

Yet Leica in their wisdom know they must cater to different price-points (and markets) without skimping on quality and regarding their riflescope line, the Magnus is the premium top-tier model made in Germany. Now they've introduced a new 'premium entry-level' riflescope variation based on a six-times magnification range but priced below the Magnus without cutting corners when it comes to quality.

Enter the Amplus 6 series of hunting riflescopes, assembled in Portugal but using all the best componentry and glass lenses sourced from the parent company in Germany. The fact the Amplus 6 is assembled outside Germany (lower labour costs in Portugal) makes the category a readily affordable option for hunters and shooters.

The Amplus 6 is offered in 1-6x24, 3-18x44, 2.5-15x50 and 2.5-15x56, all models based on a six-times magnification range and having illuminated reticles as denoted by an 'i' after the model specification.

Leica Sport Optics Australia sent *Australian Shooter* an Amplus 6 scope for review in the 2.5-15x56i specification, the item arriving in the customary silver carton with that renowned red Leica emblem - a sign of quality within. The scope was supplied with a product warranty certificate, user manual and lens cleaning cloth though one noticeable downside was the absence of any sort of lens covers, be those bikini-style or a neoprene scope sock. I'd have thought that on a riflescope of this quality a lens cover would have been standard and this will be something to follow up with Leica's Australian agency.

## Up close

The Leica Amplus 6 in 2.5-15x56i is a full-sized riflescope by today's standards, measuring 380mm and weighing 730 grams, the main body made from a single piece of aircraft-grade aluminium and finished in a lovely satin black. The main tube is of 30mm diameter with the objective bell housing flaring out to 65.1mm and ocular housing at the other end measuring 44mm wide x 80mm long. The objective bell houses the 56mm objective lens and also

accommodates a front lens filter thread (M62x0.6mm) which accepts Leica lens filters if desired. At the opposite end the ocular housing contains the magnification selector ring and an adjustable dioptre/reticle focus ring, the magnification selector ring well finished and moved from the 2.5-15x settings smoothly (likewise the diopter adjustment). Eye relief is >90mm, spot-on for a riflescope suited to even the heaviest recoiling calibres.

Heading to the middle and the Amplus 6 has been designed with the hunter in mind. The windage and elevation turrets are excellent in format and function, the elevation dial of an exposed plan and adjusted by simply lifting up the dial and tapping in your adjustment with a click value of 0.1 Mrad (1cm). Once done, the dial is simply locked in place by pressing down. This scope also has a zero-stop feature as you'd expect on a top-quality optic, the windage dial honed in the standard manner with an aluminium cap protecting a dial underneath with the same click value adjustment as the elevation (0.1 Mrad).

Adjacent to the elevation/windage turrets is a combined assembly consisting of a parallax and illumination dials, the parallax dial closest to the main turret housing and permits adjustment from 20m to infinity. The illumination dial sits next to the parallax dial and contains 10 illumination





DAS WESENTLICHE.



LEICA CALONOX VIEW

# Leica Calonox

## The Thermal Camera.



LEICA CALONOX SIGHT

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Safari Firearms, Ph: 02 9740 9760 | Tamworth Firearms, Ph: 02 6761 3308 QLD Hall's Firearms Townsville, Ph: 07 4772 1605

Hall's Firearms Rockhampton, Ph: 07 4922 6447 | Queensland Gun Exchange, Ph: 07 3393 0933

WA Claremont Firearms, Ph: 08 9494 1423 TAS Sports Hut, Ph: 03 6331 7090





The Leica Amplus 6 in 2.5-15x56i as reviewed.

settings with an 'off' position between each setting. A single CR2032 battery powers illumination and sits in the illumination dial body for easy access.

Internally the Amplus 6 shares the precision and build quality of the top-tier Magnus models with all glass lenses sourced from the parent plant in Germany. Lens elements are precisely ground, polished and fully multi-coated with Leica's patented AquaDura, which results in greater than 90 per cent light transmission. Field of view is superb at 14.8-2.5m at 100m and the exit pupil at 11.6-3.7mm throughout the magnification range. Glass quality is outstanding, all images crisp from edge to edge with minimal colour fringing and distortion, yet this scope excelled at lowlight, no doubt attributed to the 56mm objective lens diameter and quality lens coatings.

The reticle, in the L-4a, is in the second focal plane and the best choice when it comes to a hunting reticle. The dot in the centre is the illuminated element and is fine so as not to impede your view of the target (vertical and horizontal stadia are in the standard L-4a guise). This reticle is also available in the Amplus 6 with BDC (hold-over) graduations as such, which will be appreciated by many hunters who

prefer hold-over points rather than spinning turrets. At 100m reticle adjustment is 180cm x 180cm which is excellent for a hunting optic.

The Amplus 6 in 2.5-15x56 uses the best sealing technology when it comes to being shock-proof and waterproof (up to 4m), is nitrogen purged and filled and comes with a 10-year warranty on optics and housing and two-year electronics cover.

## Out and about

The Amplus 6 in 2.5-15x56i was fitted to a custom Howa M1500 in 6.5 Creedmoor and tested at the same time with Leica's new Calonox Sight thermal imager. Aside from use with the Calonox Sight, the Amplus 6 was terrific out to 300m at the range and on a sunny day, images were clear without any problems from the bright sunlight. The riflescope was easy to dial in for a zero point-of-impact at 100m and the zero-stop simple to adjust once set. A tracking test was also carried out and repeatability and precision of the elevation and windage adjustments was perfect.

The scope was also used on several trips into the field where its optical clarity shone through. While many scopes will look 'light and bright' when the sun is out, using the

Amplus 6 in early morning and late evening its light gathering attributes excelled. Where other premium quality riflescopes would have given up 10-15 minutes earlier, the Amplus 6 provided that extra edge when it came to identifying quarry species in rapidly-fading light.

## Overview

Leica are marketing the Amplus 6 as a 'premium, entry-level optic' based on a six-times magnification range and don't hide the fact it's assembled in Portugal using components sourced from their parent company. The scope reviewed offered an insight to this new Leica model and is highly recommended for hunters who value quality optics and the performance attributes that come with them. The review item has an RRP of \$2590 and while some may feel that's expensive, when compared to the best riflescopes which are predominately European in origin, the Amplus 6 comes across as a pleasure to use and is big on performance. More at [au.leica-camera.com](http://au.leica-camera.com) ●



The illumination and parallax adjustment dials sit next to each other but work independently.

## SPECIFICATIONS

**Manufacturer:** Leica, Germany  
**Model:** Amplus 6 2.5-15x56i (reviewed) also available in 1.6-24i, 3-18x44i, 2.5-15x50i  
**Main tube diameter:** 30mm  
**Front lens diameter:** 56mm  
**Magnification:** 2.5-15x, zoom: 6x  
**Field of view at 100m:** 14.8-2.5m (minimum up to maximum magnification)  
**Eye relief:** >90mm  
**Exit pupil:** 11.6-3.7mm  
**Parallax-free:** 20m to infinityWW  
**Lens coatings:** AquaDura  
**Transmission:** >90 per cent  
**Focal plane reticle:** Second  
**Reticle:** L-4a, L-4a with BDC  
**Reticle illumination:** Dot (10 levels)  
**Click value:** 1cm/0.1 Mrad  
**Length:** 380mm, weight: 730 grams  
**Battery:** CR2032  
**Warranty:** 10 years (two years electronics)



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# Fire away!

To any new shooter, instructors will tell you the only way to improve is practice, practice, practice, including dry-firing when away from the range - they call it 'homework'. Now, as Senior Correspondent Rod Pascoe found, homework is no longer a chore thanks to the latest training aid.

**D**ry-firing - or any practice not involving ammunition - is a valuable way to master the shooting basics of firearm control including stance, grip, trigger release, breathing and sight alignment. It also highlights where you're going wrong without firing a live round and anticipating the subsequent noise and recoil.

This form of practice was done in conjunction with someone watching you and picking up any faults to make sure you weren't developing bad habits. Now, thanks to advances in technology, a simple device can be fitted to a pistol, rifle, shotgun and even an archery bow which tracks your movement leading up to and after release of the shot. And it's not just for home

use - you can also use it for live-fire at the range.

Mantis X10 is the latest in miniature electronics which senses movement of the firearm and transmits a signal to your smart phone or tablet for immediate feedback and analysis. Not only is the shot given a score in terms of consistency, all information from each shot is also displayed on your smart device screen, recorded and analysed by the app and highlights faults in the shooter's technique and suggests, with text and pictures, how to overcome them. *Australian Shooter* leapt at the chance to put the X10 through its paces.

While electronic training devices have been around for some time, I've seen nothing as portable, versatile and intuitive



The comprehensive set-up.

as the Mantis system. The app I downloaded was specifically for rifle and pistol and there are versions available for shotguns and archery (for this review I used it in pistol mode). Starting out is simple - charge the sensor using the supplied USB cable and download the free Mantis X app, available for iOS, Android and Kindle Fire. Fit the Mantis sensor to your firearm using one of the provided Picatinny adaptors or directly to the accessory rail on the firearm.

If your firearm doesn't have a rail there are a couple of options. There are range-compatible MagRail adaptors available from [mantisx.com](http://mantisx.com) which fit the base plates of most brands of pistol magazines, alternatively there are other adaptors available from Mantis and various online retailers for



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## Fire away!



Another adaptor suits riflescopes or the barrels of rifles and revolvers.

fitting to rifle barrels or scopes, shotguns and archery equipment. The performance tracking signal from the sensor is the same regardless of where on the firearm the sensor is mounted.

Open the app and you're prompted to connect to your phone and, from there, all information is presented to lead you into the introduction course which walks you through the first Open Training drill and shows how to navigate the Train screen. The Mantis X app contains a number of training drills to help develop more precise shooting in different situations, some drills timed while others let you shoot at your own pace. Some may focus on reaction time, speed and shooting with different hands while others concentrate on reloading and holster draw.

When you feel confident and comfortable enough you can go to the menu and start a Basic Marksmanship course which introduces you to a series of drills to achieve a level of shooting proficiency and, after time and practice, move on to the Advanced and Elite-level courses. At the bottom of the screen are four buttons to access the Training page, a history of recorded sessions, a Groups page for social media hook-up and the Settings page. Settings in the app are defaulted to dry-firing with a pistol, having the sensor mounted under the handgun frame and using your right hand.

There are four different views in the app which show important information to help

you understand your performance in each session along with suggestions on how to improve shooting technique. The first screen (List view) shows the score and time of each shot along with a summary of average score and time. The Spider screen shows the direction and amount of trigger movement during release of the shot, this one also showing possible faults in your technique which may be causing the firearm to move.

The Movement chart depicts movement of the firearm before and after shot release and finally the Trace view screen tracks the firearm's movement. The blue section traces movement while holding on the target, yellow shows the last eighth of a second before the shot is fired and the red section shows recoil after firing (obviously recoil will be more aggressive in live-fire mode).

As a separate function the RecoilMeter drill allows you to fire a number of shots, analyse recoil of each and provide a summary of the string of shots, parameters measured being angular rise of the muzzle, time taken to recover from recoil and return the gun to the target and recoil angle (left or right) that the gun moved as it recoiled upwards. There's also a trace of the actual firearm movement as it rises and comes down again to the target and I found another use for the RecoilMeter when developing loads and seeing how much, or little, movement there is using a mix of different bullet weights and velocities.

Another great feature for pistol shooters is the Holster Draw Analysis drill. A diagnostic screen shows a breakdown of your draw in terms of time taken from the beep to when your hand grips the gun, followed by the time the pistol is drawn and rotated to the horizontal for firing and the time from reaching that firing position to taking the shot. A second screen shows traces from all shots in the session overlaid on top of each other to highlight consistency in the path of the draws and show any variation or wobble. The mantisx.com website links to a number of well-made and informative



The smart sensor fits neatly on an accessory rail.

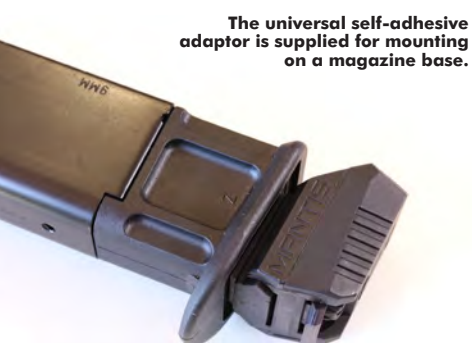
YouTube videos and, while waiting for your Mantis X10 device to arrive, I recommend viewing them all to fully understand the features, accessories and functions of the complete system.

### Summary

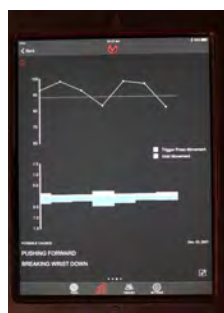
The Mantis X10 has far too many features to outline here and what I've covered merely scratches the surface. There are so many ways this system can benefit shooters and while the analysis of faults in technique are pretty spot on, I feel the suggested remedies only tell part of the story. The Mantis or any similar training aid doesn't replace having someone observe shooters going through their routine, reminding them about stance and breathing for example.

My only reservation - and there is only one - is not in the system itself but in the way it could potentially be used. I fear new shooters may believe the aid is a replacement for face-to-face training sessions and relying on the device to train on their own could, in turn, lead to developing bad habits. While no substitute for training with an instructor, all historical data can be reviewed by your trainer at any time.

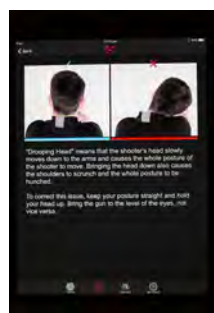
The social media potential of the app is a great feature and can be used for holding group sessions where performance and skills can be shared and, as someone suggested, dry-fire competitions. This is one of the best gadgets I've seen arrive on the shooting scene but the real bonus for me is it renewed my interest in dry-fire training and working on correcting all the faults highlighted by the Mantis X10 Shooting Performance System. ●



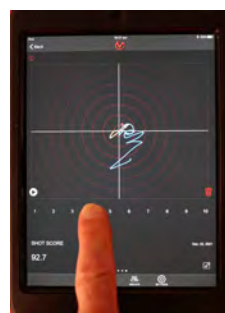
The universal self-adhesive adaptor is supplied for mounting on a magazine base.



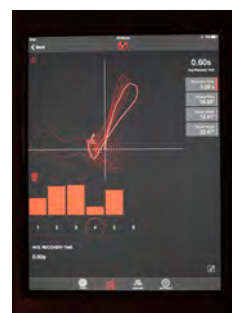
Movement chart.



Screen showing a possible fault and remedy.



Trace view.



The RecoilMeter.





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# Vegemite pass marks!

David Crofts is a fan of Browning's versatile B525 SL shotgun

**T**he Browning Arms Company and the many types of firearms they produce under the Browning banner are well known in this country, having been imported for many years and during that time sporting shooters have used them successfully for targets and hunting. The Browning shotgun under review here is the B525 Sporter Laminate, a fairly recent addition to their stable being, I believe, introduced to the European/UK market in early 2019.

The B525 is one of the latest variants of the original Browning Superposed with the standard type of deep action produced in Japan by Miroku Firearms for Browning. Around 60 years ago Miroku modified John Moses Browning's original design of the Superposed to allow easier use of a more

automated method of manufacture, the biggest and most noticeable difference to those who use them being the fore-end is detachable and not captive as on the Superposed. Initially Browning were none too happy about the Japanese imitation of the Superposed and sent a delegation to Japan to meet with Miroku, the outcome being a working partnership between the two ever since.

A significant amount of hand finishing still goes into Browning products made by Miroku, including jointing of the barrels, barrel regulation and chequering of the woodwork on all their over-and-under shotguns, including this one. The gun is imported by local distributor Winchester Australia whose website at time of writing had the RRP of the B525 SL as \$5220,

thought doubtless a web search will throw up some retailers advertising them for quite a bit less.

The gun is supplied with four Invector Plus Midas chokes, a choke key, three Allen keys, manufacturer's documentation, trigger lock, automatic safety conversion bar and a Browning hard case. I first saw one of these guns while on holiday in the UK in late 2019 and John, the gunshop owner who showed it to me, described it as a Marmite gun - meaning something you either love or hate (if you haven't heard of Marmite, it's the UK version of Vegemite).

#### Barrels

On the model tested these are 30" (762mm) with 32" available, 3" chambered, back-bored with Vector Pro forcing cones and



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## Browning's versatile B525 SL shotgun

have Invector Plus Midas extended multi-chokes as standard. The chokes supplied with the gun are Cylinder, Improved Cylinder, Modified and Improved Modified.

The barrels are fitted with a 10mm tramline-type parallel rib with a white mid bead and green hi-viz pipe-type front bead (other hi-viz type coloured plastic rod/pipes are available after market). The barrels are hand-regulated in the factory for point of impact testing and when I used the gun on the pattern board at my local club, results revealed the top and bottom barrels shared the same point of impact.

The barrels are monobloc in construction and joining of the tubes to the monobloc is so well done you have to look closely to find the actual spot where they meet. The exterior of the barrels is finished superbly with a dark gloss blue/black and no indication of rivelling or unevenness.

The interior of the tubes is highly polished to a mirror-type finish and chrome plated. The barrels weigh in at 1503 grams, good for 30" barrels fitted to a Sporter and this lighter weight compared to those usually fitted to a Trap gun can be a significant benefit in a model intended for use in a Field/Sporter role. When the B525 SL are sold in Europe they all go through CIP Superior Steel Shot Proofing in Liege, Belgium which is handy for a sporting shooter who wants to use the B525 SL for hunting ducks too, as they're safe to use with high performance steel shot cartridges.

### Action

The action design is of the classic, proven Browning/Miroku trapdoor type with

full-width hinge pin and sliding locking bolt which engages into a slot machined into the monobloc beneath the chamber of the bottom barrel, the action powered by coil springs as are the ejectors. Design of the Browning action, due to positioning of the hinge pin and locking bolt, means the receiver has a slightly higher profile when viewed from the side than a Beretta or Perazzi bifurcated-type action. The action is a matte satin/French grey-type finish with minimal embellishment, just the Browning 'Buckmark' logo on the fore-end iron, triggerguard and 'B525 SL' engraved on the action, both with a black fill.

The metal-to-metal fit and finish of this particular gun is excellent and of high quality. The trigger is a three-position adjustable (using the Allen key provided) and has a matte grey finish to match the action. Only one trigger blade is supplied, the narrow Olympic type. Barrel selection is obtained the usual way on a Browning via positioning of the safety catch left or right prior to pushing the safety to the 'off' position. Trigger pulls are good straight out the box, averaging 3.75lb for the bottom barrel and 4lb for the top though these can be adjusted by a competent gunsmith if needed.

### Woodwork

The Sporter Laminate variant of the B525 has timber furniture made from a grey (salt and pepper) laminate hardwood which I understand is sourced from Scandinavia and the wood-to-metal fit is, as with the metal-to-metal, excellent. Stock shapes are generally good with a fairly open radius pistol grip and no palmswell (ideal for Sporting



The broken B525 SL blends in nicely against a gum tree at the range.



Close up of the laminate Schnabel fore-end.



Browning hard case, accessories and paperwork.





The brushed steel action, minimal engraving and what Browning calls the Olympic-type adjustable trigger blade.



Front sight in view.

Clays and game), a slight right-hand cast and length to centre of 375mm. It includes a Browning Inflex 2 recoil pad with different length pads and spacers available to adjust stock length. The stock is fully adaptable vertically and horizontally, being equipped with the Browning Pro-fit adjustable system, so in theory there should be no problem with gun fit for most shooters.

The fore-end is of the classic Browning/Miroku Schnabel type usually fixed to game and sporter models and the laminate furniture has a waterproof lacquer finish. Note the laminate material has the benefits of increased strength so shouldn't swell or warp with heat or moisture. And with the extra weight of the material the B525 SL should handle punchier shot shells, such as heavy field loads, far more comfortably.

## Shooting impressions

The B525 SL felt good in the hands, weighing 3.75kg and balancing at 60mm from the breech face, the balance point just on the muzzle side of the hinge pin which to me felt close to ideal for a Sporting Clays gun with 30" barrels. As someone who prefers a nicely-figured walnut stock I was initially hesitant as to whether I'd like the laminate furniture, though it did grow on me and I believe this model, with the extra weight of the laminate, does have some improved handling characteristics over the B525 standard Sporter.

Using the gun at my club on Skeet, Trap and 5-Stand layouts I was impressed by its handling characteristics and versatility and also noticeable was the low-felt recoil, even with 1350fps 28-gram High Performance

target loads. I managed to achieve some good scores in testing and the consistent patterns produced by the Invector Plus Midas Chokes broke the clay targets I connected with in a satisfying way.

## Summary

The B525 SL is an excellent product which offers good value, especially considering the longevity you can expect. Not only is this a great Sporting Clays shotgun, it will also handle up to 3" (76mm) heavy, high performance steel loads which potentially makes it a great option for the duck hunter too. This is a shotgun which handles superbly, has Browning's reputation of reliability and should last a long time. So I suppose in Australia we could call the B525 SL a Vegemite gun - well I love Vegemite and if I was after a new Sporting Clays shotgun the B525 SL, despite its unusual and non-traditional appearance, would be high on the menu. ●



Buttpate at close quarters.

## Specifications

**Make:** Browning  
**Model:** B525 SL (Sporter Laminate)  
**Barrel length:** 30" (32" also available)  
**Chamber:** 70mm and 76mm  
**Chokes:** Invector Plus Midas (four included)  
**Stock length:** 375mm  
**Weight:** 3.75kg  
**Warranty:** Three years



# Small hog BIG DEAL

Trevor Vivian

Aussie hunters have access to what is arguably the best hog deer in the world, our population disease-free and found in high densities. Hog deer were initially released in Australia at Wilsons Promontory in 1866 by the Victorian Acclimatisation Society and that free-range herd gradually spread its geographical footprint to include the southernmost part of Victoria's Gippsland region, taking in Snake Island and Sunday Island.

To shoot a free-range hog deer typically requires scouting of their habitat for several months before the season opens. I simply didn't have enough time available, given work commitments, to undertake this approach and accordingly booked a guided free-range hunt on privately-owned land. Just travelling to Victoria from Canberra proved challenging due to uncertainty surrounding COVID-19 restrictions, though thankfully I was able to transit through the border check points without any dramas.



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## Small hog - big deal

On arrival at the property it was a pleasant surprise to discover we'd been provided comfortable accommodation which included a private bathroom with catering also thrown in as part of the deal. On unpacking the gear my first priority was to undertake a reconnaissance of the terrain I'd be hunting, which I found to be predominately coastal swamp areas backing on to thick tea trees that stabilise the dunes leading up to the beach.

As it was the day before the season opened I used this time to familiarise myself with key landmarks such as the beach, swampy flats and game trails used between the feeding grounds and bedding areas. We startled a superb stag that was bedded down in the bracken and sadly he'd lost his right eye fighting other stags to maintain his position as the dominant male.

When hunting this property you have a choice of either spot and stalk or using the tree stands to sit and wait. Favourable weather was forecast for the next few days and my guide, Neil Page, was keen to take full advantage while it lasted as hog deer don't like wet or windy conditions and are quite difficult, if not impossible to locate in bad weather. The previous week had been windy and the deer had spent most of the daylight hours hidden beneath the bracken.

Hog deer are nocturnal grazers but will also nibble at dawn and dusk if undisturbed. Accordingly, at the start of opening day we planned to be at the tree stand shortly after daybreak to maximise our chances of seeing a stag return from the swamp area to bed up under the bracken for the day.

These diminutive creatures are

**Coastal swamp area viewed from the tree stand.**



surprisingly tough and the property owners' preference is for shooters to use a calibre of at least 30-06 (I'd originally planned to use my Kimba in .243). With that in mind I took along my standard deer rifle, a Sako 85 Hunter Stainless 30-06 mounted with a Leupold VX3L 3.5-10x50mm variable scope with illuminated reticle. I also brought a supply of my handloaded Woodleigh 150-grain Weldcore soft-nose protected point bullets so all in all I had more than enough gun to do the job.

Just after first light on opening day of the season we climbed the ladder into a tree stand and from our elevated position had a commanding view. We could clearly scan the coastal swamp area and, more importantly, the wind was in our favour. The hog deer had been grazing all night and as the sun rose they started meandering back to the bracken in small groups of two to three, often with stags and hinds returning together. When travelling at anything more



**A hind partially camouflaged in the bush.**

than a walk, their heads are often hung low, which enables them to duck under trees and branches rather than jumping over them (one of the advantages of being small). Apparently they derived their name as a hog deer from their running style which

**Beach land which fronts the property.**





is similar to that of a pig. Seeing deer for several daylight hours in the morning typically only happens where there's limited hunting pressure which reinforced my decision to opt for a guided free-range hunt on privately owned land. In state forests, hog deer are almost exclusively nocturnal and seek refuge under the bracken during daylight, making a successful hunt extremely challenging.

We sat and waited for several hours and watched about 15 deer walk past the tree stand, all within shooting range and totally oblivious to our presence. Given this was opening day and the best stag we'd seen all morning had no more than 13" antlers, I decided to hold off from taking one at this early stage, a difficult decision as it's always a toss-up around what to do as subsequent days could be windy and you may have passed up your only chance.

With the tree stand not producing the desired results we started walking and glassing the full length of the property and when a reasonable stag was spotted out on the swampy flats slightly more than a kilometre away, the stalk was officially 'on'. We were able to use the tree line to mask our approach and close the distance but from a little more than 400m out there was little cover apart from one dead tree. We positioned this directly between us and the stag and silently crept closer, effectively allowing us to cross open ground undetected.

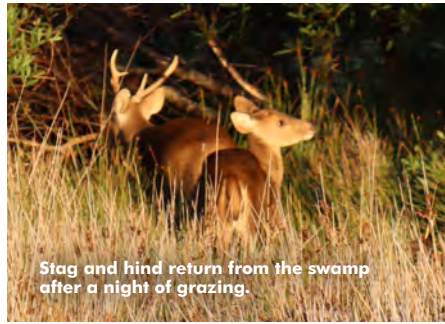
This was working well until a hind's prying eyes spotted us. She stared us down, becoming increasingly agitated and raising her tail to alert other deer to a potential danger. As soon as she caught a whiff of our scent she was off and bolted towards the stag which meant she had to run straight past us, proving her instinct to protect the stag far outweighed her flight response to put as much ground as possible between herself and us.

At this stage we were about 130m out and with the hind running towards the stag I knew my chance to take the shot was now or never. I already had my rifle resting on the shooting sticks and ever so gently squeezed the trigger, my first-time effort a good one as the stag dropped on the spot after what proved to be a double lung shot. We spent some time just admiring the stag and giving deserved respect to what was truly the trophy of a lifetime, taken on the opening day of the season making it extra special.

I was keen to take the cape and antlers straight away to Cam Johnson at Wildthings Taxidermy, so I detoured past his place on my way back to Canberra. Cam's a



A battle-scarred one-eyed stag.



Stag and hind return from the swamp after a night of grazing.



Stag spotted from the tree stand.

true professional who specialises in hog deer and won't cut corners to ensure your trophy mount looks 'alive'. He typically mounts around 20-25 hog deer per season and indicated he has a soft spot for hunting and mounting this species, so much so he bought a house near some hog deer habitat so he can hunt them by just walking out the front door.

The head was 98¾ Douglas score points (with 15" antlers) being just outside the Australian Deer Association's Top 50 which currently starts at around 104 Douglas score points. It's still a truly representative head well worthy of being mounted and will have me reminiscing about the hunt for years to come.

Thanks are due to Neil Page and Corrie De Visser of Hog Deer Hunting Australia for their excellent guiding, great meals and comfortable accommodation and probably the best recommendation I can give is I've lodged a request for another hunt as soon as a spot becomes available. ●



Mounted head.





# Wildcat makeover for Martini Cadet

**Keith Pratt**

**P**reviously I've explored the intricacies of building a .223/25 wildcat on a Tikka Model 55 action, so this time I'll build a 25 PPC wildcat on a Martini Cadet action, my goal being to compare two very similar cartridges - one of long, slim configuration and the other of the short, fat variety. Quite frankly I didn't know what to expect but being the intrepid rifle experimenter I am, the project went ahead regardless.

It might be argued it's impossible to compare a strong, relatively modern bolt-action rifle like the Tikka with something from a bygone era but I could build two identical Tikka rifles and they may not perform the same. What it amounts to is the short, fat PPC cartridge will need to do something special to come out on top or even hold its own in a somewhat inferior rifle.

#### **Rimless extraction**

Martini Cadet rifles were never designed to extract rimless cartridges such as the 7.62x39 and its offspring the 6mm PPC. Their extractor consists of a simple

U-shaped device which fits behind the cartridge rim and is actuated by the downward motion of the falling block. Gunsmith Allan Swan, who re-chambered my rifle to 25 PPC from .256 Winchester Magnum, makes rimless extractors in-house but I didn't use one.

Instead I had Allan cut the chamber with a rim groove and bought some neoprene O-rings of the correct size to slip into the rim groove of the PPC cartridge to facilitate extraction which is perfect, and I believe the idea of cheap 'tailor-made' rimless ammunition may appeal to owners of .222 rimmed rifles. For an effective hunting rifle the idea is great but if I was building a replica rook rifle with fiddleback walnut stock, an open pistol grip and 25 lines to the inch chequering, I'd definitely fit one of Allan's extractors as it adds value to your investment.

#### **Chamber bulges**

Before we start to load our Martini to a safe and sustainable level there's another issue which needs to be addressed and that's

chamber bulges. I've experienced two and, once it happens, extraction becomes impossible. Both rifles had Sportco barrels and were originally chambered in 25/20 WCF and re-chambered to .256 Winchester Magnum and though it took me a while to fathom why the chambers bulged, eventually I worked it out.

When Sportco cut its barrel threads, the thread stopped abruptly and there was a section of unsupported steel before the barrel proper, presumably to make head spacing easy - a perfectly satisfactory arrangement for a .22 Hornet or 25/20. Then I come along and ream the chamber out to .256 Winchester Magnum and leave just 3.5mm thickness of unsupported steel in a band around the centre of the chamber - no wonder the chambers bulged! The moral of the story is Martini barrel threads need to be very tight with little or no wasting to provide head space.

#### **Reloading the 25 PPC**

A set of secondhand Hornady 6mm PPC dies were bought and given the same



**The two wildcat rifles under test - the Tikka Model 55 has a Hakko 3.5-12x50 IR scope.**



treatment as the 223/25 dies in my earlier experiment. A batch of new Norma 6mm PPC brass was sourced from the internet and some PMC 7.62x39 brass with large rifle primer pockets was given to me by a friend, so I was ready to start reloading. Reforming the 7.62x39 brass to 25 PPC wasn't difficult. A 7mm-08 die was used for the intermediary, the die had the insides removed and was screwed into the reloading press with the plunger from my 44-calibre gas check seater placed in the shell-holder. The lubricated case necks were then formed to 7mm and subsequently .257.

It may have been interesting to compare the accuracy of large rifle primer cases with small rifle primer cases, but I ran into difficulty due to the enormous weight difference between the Norma brass and PMC cases of a full 18.5 grains. I'll build loads for both but believe it would be academic as to which gives best accuracy (one day I might find some lighter 7.62x39 brass).

**The long, slim cartridge gave better velocity for the amount of powder burned.**



**O-rings from the hydraulic shop gave excellent extraction in the Martini Cadet.**





## Wildcat makeover for Martini Cadet

### Comparing the two wildcats

A case full of Win 748 powder in a new Norma case holds three grains more powder than a 223/25 ADI case, therefore an equivalent load in the Martini should give less pressure and velocity but the Martini has a 3" longer barrel (25" as opposed to 22" for the Tikka), so result would be interesting.

### Chronograph testing

I followed my usual practice of starting from well below max, using the chronograph and closely checking for speed and pressure. Safe sensible speeds for the 25 PPC are as follows: 70g Sierra Blitz - 3090fps; 75g Sierra Varminter - 2875fps; 90g Sierra HPBT Game King - 2687fps; 87g Sierra Varminter - 2750fps; 117g Hornady Spitzer BT - 2509fps.

The closeness of bullet speeds between the 223/25 wildcat and 25 PPC isn't surprising as both cartridges are similar in capacity. What is surprising is in terms of bullet speed for powder burned the long, slim cartridge wins hands down. With 70g Sierra Blitz an extra 3g weight of ADI2207 powder is needed to obtain the same speed out of the 25 PPC even with the 3" longer barrel of the Martini. The 117g Hornadys require an extra 1.5g of 2206H powder for slightly less velocity than the 223/25.

### In defence of the PPC wildcat

The short PPC case may use more fuel than a longer cartridge but it demonstrated a certain magical property I call progression, or the ability to release its energy in such a way that it's gentle on both cartridge cases and the rifle mechanism. This allowed me to achieve close to bolt-action performance with easy extraction and good case life out of a rifle known to cause case failures and extraction problems.

### Benchrest testing

Accuracy was not instantaneous as happened in the 223/25 test but with a little tuning, accuracy in excess of most requirements was available with consistent .6" three-shot 100m groups and from a number of load combinations. No bullet speed was sacrificed to achieve this refinement, just an adjustment to the overall length of the loaded rounds, the 117g Hornadys being the exception as they simply wouldn't give accuracy in this rifle - targets shot with them looked as if they'd been hit with buckshot.

### What's wrong with 117g bullets?

Careful examination of the barrels in both rifles revealed a slight variation in



Comparison of small rifle primer pocket and large rifle primer pocket.

twist rate, even though both barrels were nominally one-in-10 turn. The difference was enough for one barrel to give fine accuracy while the other (from a different maker) wouldn't stabilise long, slim 117g Hornady boat-tails, so my advice to anyone building one of these rifles would be to go to a one-in-8 twist rate to avoid stability problems.

### Conclusion

The facts are set out as clearly as I can present them for your own interpretation. If I was building a project rifle and it had a .223 Remington bolt face, I wouldn't spend money having it altered to accept a PPC wildcat and if building a rifle on a Martini Cadet action, I'd go to one of the PPC derivatives for good performance and ease of extraction.

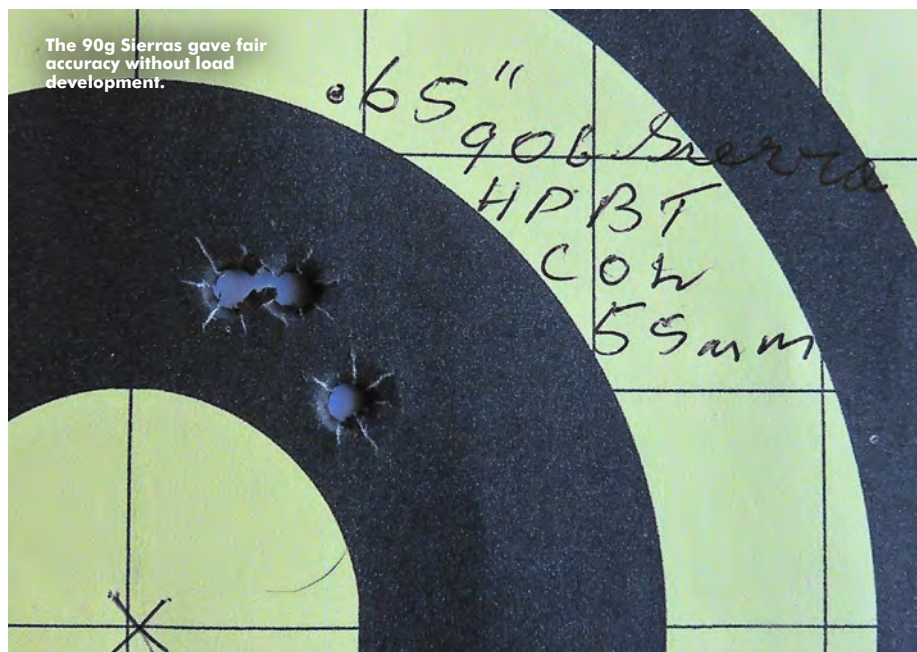
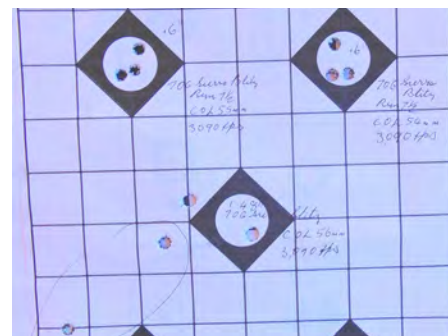
### Word of warning

All custom rifles must be built on actions which are in mint condition and carefully checked by a competent gunsmith. A zero tolerance attitude must be adopted with regard to fair wear and tear and with this approach our sport will remain safe and enjoyable. ●

The two shots bottom left are 117g Hornady boat-tails which failed to stabilise in 25 PPC.



The reformed 7.62x39 case on the left is 18.5g heavier than Norma brass.





## Adventure Cooking: Fire to Fork

Assistant editor Dave Rose

**D**o you ever feel peckish during an Outback trek? Then Harry Fisher has good news. His latest book - *Adventure Cooking: Fire to Fork* - has food for thought on how to rustle up recipes for hungry adventurers after a strength-sapping day in the wild. But this isn't your run-of-the-mill eggs on toast and is a long way from the baked beans stodge dished up in *Blazing Saddles*.

No, Harry offers a host of delicious recipes, some of which wouldn't be out of place in a fancy restaurant yet are simple enough for any part-time cook to attempt on outdoor manoeuvres - and it's all to do with fire. Harry uses flames as the core of his preparations which have seen him operate as a creative foodie thanks to his love of cooking and passion for the Outback.

The book opens with Harry explaining how this project began almost by accident, his initial career path involving what he describes as "going to work in the city as a big-shot accountant". But weekend escapes to the country saw him take on most of the cooking duties and impressing his mates with the way he never seemed to use the same ingredients twice. One thing led to another and from YouTube and Instagram

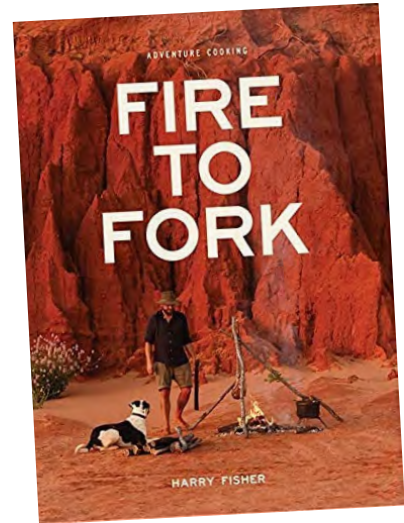
origins the *Fire to Fork* concept blossomed.

To begin with, Harry explains the basics of lighting a fire in the wild followed by tips on how to initiate and vary the respective degrees of heat. Then he takes us through his cooking gear before touching on camp kitchens and what comprises his mobile pantry. From there it's into the recipes with a total of six sections from side dishes to desserts and drinks, interspersed with quick meals, meat, chicken and seafood.

Every entry features a prologue on his choice along with the ingredients and gear needed for each recipe. Occasionally you'll find a page expanding on preferred cooking methods such as how best to cook a steak or prepare fish or crabs, basic stuff for some but Harry wants you to do things properly.

Some of his descriptions and reasoning come across as tongue-in-cheek and almost self-deprecating, yet his down-to-earth approach is easy to warm to. For instance, his summing up of garlic scallops sets the scene perfectly as he enthuses: "The classic combination of fresh seafood, garlic and crusty bread. It works so bloody well, especially with something cold in hand while looking over the water."

That encapsulates Harry's happy-go-lucky



but meticulous manner which puts quality at the top of the agenda, so if you fancy hitching your trailer and including grub that'll make bush meal breaks on the road anything but boring, delve into these *Fire to Fork* offerings - there's certainly plenty to choose from. ●

• *Adventure Cooking: Fire to Fork* by Harry Fisher, Exploring Eden Media, RRP \$44.95, available from [onlineshop.ssaa.org.au](http://onlineshop.ssaa.org.au)

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# Turn up the heat

## Mark van den Boogaart finds the new Steiner thermal optic passes all the tests

I received a request to review the new Steiner Nighthunter H35 thermal optic and, having just evaluated the Burris BTH 35 thermal monocular, was looking forward to contrasting the two units. To be clear this isn't a comparison test, it was simply helpful to have both items together for a better understating of their respective place in the thermal optic market, a market that's growing fast. Why? Well in recent years thermal optics have morphed from specialist hunting gear to something offered by both new and existing brands and manufacturers.

Out of the box and on the test bench the Nighthunter H35 features a 35mm manually focused front objective and fine-tuned adjustable eyepiece fitted with an offset eyecup which can be rotated to suit either left or right eye viewing. Physically the H35 is 232mm long, 70mm x 72mm wide and weighs 695 grams which makes it longer, slightly wider and noticeably heavier than the Burris BTH 35.

The extra weight doesn't limit its use as a hand-held option, in fact it does have a steady feel when holding it to your eye and it seems Steiner understood these differences and have optioned their offering to suit. Whereas the Burris is supplied with a neoprene drawstring-style bag and strap,

the Steiner comes with a padded neck strap and substantial case, similar to a binocular chest rig though longer and designed to be carried on a belt.

The straightforward ambidextrous controls on the Nighthunter follow the standard thermal monocular layout. Being a Steiner, it feels well-built and makes use of a heavy rubberised armour outer shell, typical of many of their optical products. Through the controls you can access the brightness and adjustable colour palette which includes white hot, black hot, adjustable red hot, iron and blue hot in either standard or picture-and-picture mode. In searching for game the NETD (Noise Equivalent Temperature Difference less than 50mK) helps identify heat sources and follow them through the hot track function.

Optically the H35 has a base magnification of 2x which provides a wide field of view further complemented by the digital zoom. In conjunction with the stadiametric rangefinder, Steiner claims you can detect a red deer stag (based on the image used on the specifications sheet) out to 3200m, obtain recognition at 825m and clearly identify the stag at 400m. Personally, I was able to clearly identify red deer at 350m with the H35.

Once found, you can capture and store

still and video images of game via the internal 16GB of memory. These can then be downloaded by a USB-C connection or streamed through the Steiner Connect App though it's worth mentioning the H35 will capture still and video images but is not primarily a camera and does have its limitations. Powering it all is an inbuilt 6000mAh battery charged via the supplied lead and while Steiner states a 4½-hour run time for the battery, I found it was closer to five hours during testing.

Delving a little deeper, the Nighthunter H35 makes use of a Steiner proprietary approach to thermal optics, something they call Quantum Vision. In short, Quantum Vision brings together the 640 x 512 at 12µm resolution thermal sensor with a high-quality 1280 x 960 LCOS display and some smart software to produce an exceptional viewed image. While Quantum Vision is subject to a level of sales hype, for me there was little doubt the H35 demonstrated a much higher level of optical performance and optical clarity than the similar Burris specifications.

Switching from test bench to Brisbane Valley, the H35 was able to detect deer, cattle and kangaroos in pre-dawn light and looking to give the unit an extra test, I took it on a family road trip to far western





The 25mm front objective of the Steiner Nighthunter H35 features a large, easy-to-use focus ring.

Switched for right eye viewing.



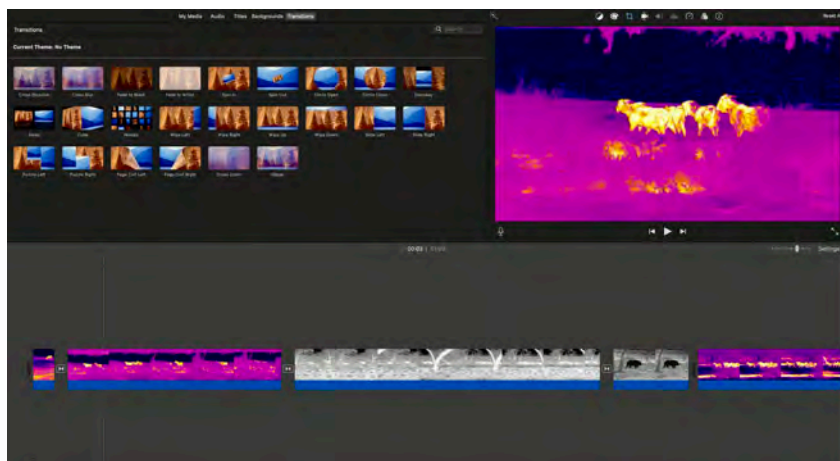
Queensland. Along the way through the H35 we viewed game animals, including a feral pig skulking around a sheep yard and a mob of goats cutting through a campsite.

Throughout the testing process, images and video were taken 'on the go' and often from an unsupported position. I believe the Nighthunter is capable of even better-quality output if used in conjunction with a suitable rest or mount such as a tripod, though even in its unsupported hand-held position the H35 was capable of great optical performance along with good quality image and video content.

Steiner have certainly delivered a top shelf contender for the consumer-focused thermal optics market. Incorporating a quality build, high-end components and some innovative technical savvy, the Steiner Nighthunter 35 is a powerful hand-held thermal unit. Well suited to longer field use and dedicated thermal observation and hunting, if you're in the market for something along these lines, the Steiner Nighthunter H35 is well worth consideration. ●



The H35s substantial carry case.



Video grabs of game animals.



# Viva Italia!

Bronze Wing shells get the job done, writes John McDougall



In a bid to provide us with the very best there is Bronze Wing Australia have gone to the home of shotshell manufacture - Italy - to procure the finest components available, their latest Nobel Glasgow Italy range being absolutely superb both on performance and price.

There are several loadings in this bracket from 365m/sec (1200fps) in their Featherweight Down-the-Line (DTL) loads to high velocity 405m/sec (1325fps) Stealth Stingray Sporting Clays loads and several others in between to cater to everyone. This cartridge selection from Italy, like the Australian loadings, is assembled in Reifenhäuser disposable cases and for this reason are very affordable.

## Featherweight

This is a low recoil DTL Trap load where long breaks are experienced and shooter comfort as well as performance are paramount. Loaded in 28 grams of shot travelling at 365m/sec (1200fps), these loads were found to be devastating on DTL targets as well as close Sporting Clay targets and thanks to their reduced velocity were comfortable to shoot.

Loaded with 427 grains of shot (27.72

grams) and propelled by Vectan powder, this load is an excellent choice for the DTL Trap shooter or Sporting Clays beginner. Shot hardness is good with around four per cent antimony and the patterns produced during testing were sensational. An impressive load, the Featherweight is assembled in a blue transparent case for colour-coded recognition.

## Stealth

Travelling at 375m/sec (1225fps) these are a step up from the Featherweight in shot velocity but just as potent in performance. I used these for close Sporting Clays targets with a great deal of success as clay after clay was absolutely destroyed. Shot weight is 28 grams precisely and the load propelled by a grey/green Vectan powder, again the case colour-coded transparent blue for ease of identification.

This load is well suited to DTL Trap shooting when a little more power is required, the patterns being excellent and down-range results highly impressive. Shot antimony is a healthy four per cent, turning targets to dust with the shot pattern completely covering the target. A pleasant and comfortable load to shoot, posting

above average performance while comfortable on the shoulder with regard to recoil.

## Super Stealth

Moving to the next level in velocity at 390m/sec (1275fps) the Super Stealth was loaded into a red transparent case. Shot weight measured a little under the advertised 28 grams at 27.2 but the results from this load on clay targets during Sporting Clays rounds was formidable. I was most enthralled as targets were completely demolished, not cracked into one or two pieces but undeniably wrecked.

Comfortable to the shoulder with respect to recoil and devastating downrange the Super Stealth loads were exceptional, demonstrating the reason why Bronze Wing cartridges are finding popularity among dedicated competition shooters in the various clay target disciplines. Loaded with four per cent antimony lead for hard-hitting performance, the load is propelled by another Vectan propellant in a green/grey and pink colouring. The Super Stealth loading is assembled into a red translucent case.

## Stealth Stingray

This is fastest of all of the Nobel Glasgow



Italy loads for clay target shooting. Measuring the shot load found them to be slightly over 28 grams at 28.22 on my RCBS electronic scales with 25.7 grams of Vectan grey/green propellant pushing the load along at 405m/sec (1325fps). These were sensational on distant targets out to 50m and smooth to shoot when compared to the Australian 'Terminator' load by Bronze Wing (currently out of production due to propellant supply issues).

### Conclusion

Each of the Nobel Glasgow Italy options performed extremely well, in fact beyond my expectations. Priced at around \$105 for a slab of 250 rounds (10 boxes each holding 25 cartridges) the Italians have put together highly proven loads for Bronze Wing Australia. Loaded with single-base Vectan propellants, the company also sells a temperature control case to store cartridges in a constant temperature for enhanced performance.

Along with hearing protection, Bronze Wing also offer a host of other accessories for the clay target shooter including bulk shot in 10kg bags for those who like to reload their own shells. Considering you can pay up to \$140 for a slab of similar ammunition, at \$105 these shells surely offer more 'bang for your buck' and several top Aussie shooters are currently using Bronze Wing cartridges to good effect internationally. ●



Super Stealth



Bronze Wing's cartridge conditioning tank maintains constant temperature, important with single-base loads.

## SPECIFICATIONS

**Nobel Glasgow Italy shotshells are imported by Bronze Wing Australia of Maryborough, Victoria.**

### Featherweight

**Velocity:** 365m/sec (1200fps)

**Shot load:** 27.72 grams (28 grams)

**Propellant:** 19.7 grains Vectan single-base powder, olive green in colour

**Shot hardness:** Four per cent antimony with lead

### Stealth

**Velocity:** 375m/sec (1225fps)

**Shot load:** 28 grams

**Propellant:** 21.1 grains Vectan single base powder, green/grey in colour

**Shot hardness:** Four per cent antimony with lead

### Super Stealth

**Velocity:** 390m/sec (1275fps)

**Shot load:** 27.2 grams (28 grams)

**Propellant:** 21.2 grains Vectan single-base propellant, green/grey/pink in colour

**Shot hardness:** Four per cent antimony with lead

### Stealth Stingray

**Velocity:** 405m/sec (1325fps)

**Shot load:** 28.22grams (28 grams)

**Propellant:** 25.7 grains Vectan single-base propellant, green/grey in colour

**Shot hardness:** Four per cent antimony with lead

## Advertorial

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GME is the only Australian manufacturer of emergency beacons and has been designing, engineering and supplying personal locator beacons (PLBs) for more than 30 years, during which time they've been used to save hundreds of lives around the world. So it's with pride that GME recently announced their all-new Australian-made 406MHz GPS Personal Locator Beacon the **MT610G** - their most compact and lightweight design ever - to complement their market-leading range of emergency beacon products.

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No shots were fired  
until everything was  
fully explained.



# Action stations!

The SSAA is on the front foot when it comes to helping educate in the control of wild deer, as John Denman discovered

As a much younger hunter, there was a time when being able to hunt deer meant membership of a rather exclusive group. I doubt there were secret handshakes involved but those who knew where the deer could be found were sworn to secrecy and that group was almost impossible to penetrate. Now of course it's completely different as there are deer almost everywhere.

It's no secret that wild deer are becoming just as much a problem for small landholders as they are for the grazing and cropping communities in regional Australia. We're hearing more and more about herds of deer invading the suburbs and, in some cases, even finding their way on to coastal beaches. As much as we hunters like to be able to go out and chase deer, the fact remains that in many places they've become a real pest.

To the non-hunting community they're an attractive animal, something you might identify with a Christmas card or a Disney movie, yet the reality is starkly different. Stags which are ready to mate can be

aggressive to anyone or anything they perceive as a threat and can become a danger at night on our roads. For drivers, colliding with a deer will usually do more damage to their car than hitting a wallaby, as deer can grow to a pretty good size.

A chance meeting at the annual rural Primex show brought together Rachel Hughes, Project Officer for Deer Management from Tweed Shire Council, and John Remyne, SSAA member and Past Senior Vice-President of the SSAA Northern Rivers Branch. Tweed Shire had secured a grant to help control wild deer in the area from Tweed South to Byron Bay, the funded project carrying the overly-long title of Department of Agriculture, Water and Environment under the Communities Combating Pest and Weed Impacts During Drought Program - Biosecurity Management of Pests and Weeds - Round 2.

Rachel was looking for a venue to train local landholders and John suggested the SSAA range at Casino so, once the branch committee had approved use of the range, the project was up and running. The branch

was to provide Range Officers and help out in any other way possible, with the course to be taken by Stuart Boyd-Law. His operation is a highly professional one with Stuart himself being an accomplished hunter and bushman with decades of experience in a variety of animal control methods.

The course was open to anyone with an interest in pest animal control, including people drawn to maintaining plant diversity in Northern NSW. The first thing to be tackled was the theory (or non-shooting part) and here Stuart gave an excellent discourse on how to identify deer by species, signs to look for including rub marks on trees by stags, identify droppings and tracks. Habitat requirements are also important and even the sounds deer make during the rut (breeding season).

Stuart has run numerous courses like this and his presentation was backed up by visual displays and hands-on aspects including deer skins which landowners not familiar with the animals can use to identify the species they see. After lunch the group moved from the presentation room to the





rifle range. SSAA Northern Rivers maintains both the pistol range and 300m rifle range at its shooting complex just outside Casino, the rifle range housing 12 benches which meant plenty of room for course participants to move around.

Stuart then addressed the use of firearms and, as only a few participants had ever handled a rifle, Range Officers provided hi-vis vests marked on the back with a large 'P650' so the wearer can immediately be identified as a novice shooter (each P650 shooter was supervised by a range officer). Stuart started by explaining the workings of a bolt-action rifle, in this case a .22 rimfire which was used by most of the participants. He showed how the action worked, correct loading of the magazine and provided rests rather than having novices fire rifles unsupported. A few centrefire rifles were also available but not until shooters had used a rimfire. Targets were set out at ranges varying from 25m to 100m, most of the rimfire rifles being fired only at 25-50m.

By the end of the course everyone agreed it was time well spent, an added bonus

being those who'd never fired a rifle before discovering how enjoyable it can be, not to mention safe when done correctly. Both Stuart and Rachel were greatly encouraged by the success of the course which ran over four days with a different group each time, Stuart having capped each session at 12 people so everyone had the chance of one-to-one time if needed - and to keep groups as compact as possible.

This was an ideal set-up for all concerned - a liaison which benefitted those running the course, a location which wasn't

weather affected and proof the SSAA can partner with local government agencies to bring about a useful end result. There is a website at [feraldeeralert.com.au](http://feraldeeralert.com.au) and while this is mainly aimed at the Northern Rivers areas, it could be applied to any other affected areas along the NSW coast. Also worth checking out is the National Feral Deer Action Plan. Rachel Hughes has been working closely with the National Feral Deer Co-ordinator, Annelise Wiebkin, throughout the project. ●





Charging indicator light changes from red to green on completion.

I am constantly amazed at today's advances in lighting technology. It seems there's no end to the ever-increasing lighting power available in torches of ever shrinking size - at the same time with increased battery life. With that in mind and as if to do nothing but reinforce my amazement, I received a couple of the latest review items from Powa Beam.

First up is the Powa Beam Comet X1, a pocket torch which although diminutive in size punches well above its weight for power and features. At 23mm in body diameter and just 128mm long, it's made of aircraft grade aluminum in a matte black finish and is fitted with a handy clip for positive pocket retention.

The main power button is on the end cap and has two raised ears to protect from accidental activation, one ear having two small holes drilled for attachment of a supplied lanyard should it be required. The centre section of the main tube body is neatly knurled for grip and steps up to

26mm diameter at the head and bezel. The head on one side includes a mode button which is slightly recessed while on the other side is a Type USB-C charging port sealed with a rubber grommet and O-ring.

The unit is powered by a supplied single 3.7V 18650 (2600 mAh) lithium-ion battery, lighting up an Osram P9 LED providing an incredible 1300 lumens on maximum setting. The torch is programable with six distinct modes controlled by the mode switch and, once turned on, a quick press on the switch will cycle through the following settings: Firefly, producing just 1 LM of output and a run time of an astonishing 20 days. Low, providing 80 LM for 15 hours run time. Medium, a generous 200 LM for 5.5 hours. High, a bright 550 LM for 4.2 hours. Turbo, a blinding and maximum 1300 LM for 2.7 hours and lastly, if you then hold the mode button down for a long press you have Strobe, the same blinding 1300 LM strobing for a potential 1.9 hours.

To recharge the unit it comes supplied

with a Type USB-C charging cable which neatly plugs into the side port on the head unit with the other end plugging into any viable USB charging source. The mode button is backlit and glows red as both a low voltage and battery charging indicator, turning blue once the battery is fully charged. As an additional feature, when recharging the unit it can be used as a night light allowing Firefly, Low and Medium modes (only) while still on charge.

If need be and as noted in the supplied owner's manual, the unit can also be powered using two CR123A-type batteries but performance and function is reduced to remind you these nonchargeable batteries are being used in a rechargeable torch and recharging such batteries should not be attempted in the unit.

Other interesting stats and specifications include a 200-plus metre beam throw. There's reverse polarity protection against improper battery installation as well as a double-coated glass lens to give maximum



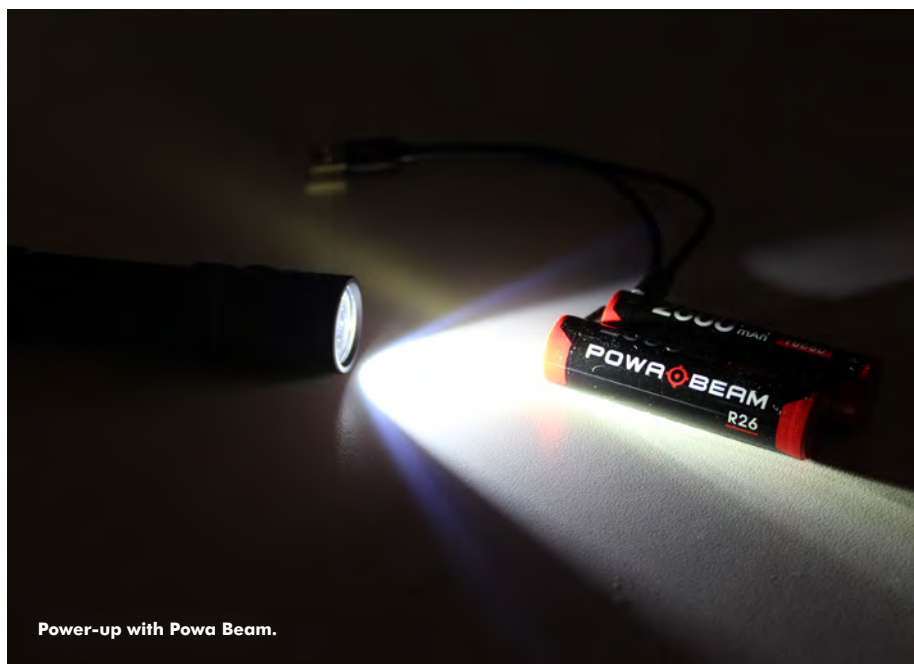
# See the light

Powa Beam's latest torch and batteries illuminated Daniel O'Dea

optical transfer function (OTF) brightness and beam distance (tempered glass resists scratching or breaking on impact should the torch be dropped or struck). Lastly it's deemed waterproof to IPX8 standard, which means it's submersible up to two metres and comes with a limited lifetime warranty.

The complete package arrives boxed with battery installed, the charging cable and an envelope including user manual, lanyard, both spare O-rings and a charging port grommet. A small battery isolation tab protects the charge while the unit's in pre-sale storage and needs removing to get it going, a small swing tag on the belt clip a reminder of this. At just 76.2 grams the Powa Beam Comet X1 would make a great little utility torch or even EDC (every day carry) for those who find themselves in regular need of an auxiliary light source.

Also sent for review was a sample of Powa Beam's branded lithium-ion 3.7V 18650 direct rechargeable batteries, available in both 2600 mAh and 3400 mAh



Power-up with Powa Beam.

## See the light



Powa Beam Comet X1 comes with 2600 mAh 18650 battery installed.



The Powa Beam Comet X1 with the torch, 2600 mAh 18650 battery (installed), charging cable, lanyard, spare O-rings, grommet and user manual.

capacity and coded R-26 and R-34 respectively. I was familiar with the company's standard 18650 rechargeable batteries as I'd used them in other Powa Beam products such as the Meteor S1 Hunting Kit I reviewed for the December 2020 issue of *Australian Shooter*. I've also used their batteries in several other non-Powa Beam lighting products with great results and always found them long-lasting and reliable.

What's interesting about these newer batteries is they're directly rechargeable. Whereas 18650 Powa Beam batteries have to be charged in either a standard lithium charger or compatible port charging torch (as with the Comet X1 as mentioned), these batteries do away with all that and have a direct micro-USB charging port on the battery itself. All you need is a Type USB-C charging cable which Powa Beam also have for sale.

It really couldn't be easier and theoretically as long as you have the cable you should never be caught short for a recharge ever again. Let's face it, USB ports are almost as common as wall sockets these days. They're everywhere - in your car, on your radio, TV, phone charger, computer, DVD player - you name the device and it's just as likely to have one of these ports. Assuming it's powered up and regardless of what the donor unit is, all you need to do is plug the cable into it, the other end into the battery and Bob's your uncle.

Both the R-26 (3.7V 9.62 Wh) and R-34



Any standard (powered) USB port can be used for recharging.

(3.7V 12.58 Wh) batteries are LG Cell with an internal PCB (protection circuit board) to prevent under-voltage at 2.8V and over-voltage at 4.25V and both have a recharge life of up to 500-plus cycles. Likewise they're identical in size at 18mm in diameter and 69mm long. When charging, a glowing red light at the head of the battery forward of the charging port indicates a positive charging connection which turns green when it reaches full charge. The R-26 has an approximate 2.5-hour charge time while the R-34 takes a little longer at around three hours. Both have a maximum charge rate of 1A and it's also worth noting you can power-up either via direct micro-USB into battery or by using a standard lithium charger.

Over several months I used these batteries in a few different branded torches and was happy with both their performance and ease of recharging. Powa Beam torches, batteries and more are available from your Powa Beam stockist. More at [powabeam.com.au](http://powabeam.com.au) ●

R-26 and R-34 18650 batteries can be boosted via direct battery port or conventional charger.



## SPECIFICATIONS

### R-34

**3400 mAh capacity; LG Cell 3.7V 12.58 Wh (watt-hour); internal PCB (protection circuit board) prevents under-voltage at 2.8V and over-voltage at 4.25V; recharge up to 500-plus cycles; red and green charging indicator; charge either via direct micro USB into battery or standard lithium charger; max charge rate 1A; approximately 3-hour charge time; dimensions: 18mm (D) 69mm (L).**

### R-26

**2600 mAh capacity; LG Cell 3.7V 9.62 Wh; internal PCB (protection circuit board) prevents under-voltage at 2.8V and over-voltage at 4.25V; recharge up to 500-plus cycles; red and green charging indicator; charge either via direct micro-USB into battery or standard lithium charger; max charge rate 1A; approximately 2.5-hour charge time; dimensions: 18mm (D) 69mm (L).**



## National

### SSAA Benchrest Rimfire National Championships

April 7-10, 2022 (practice April 5-6)  
SSAA Springsure branch, Qld  
Program: April 7 light rimfire; April 8 heavy rimfire; April 9-10 IRB. Nominations: LR \$60, HR \$60, IRB \$60 a day (juniors half-price). Facilities: Clubhouse, toilets, showers, BBQ, camping on range. Contact: Gavin Marshall 0438 759 162 or David McKillop 0409 724 053 david.mckillop@gmail.com. See National website for full event details.

### Benchrest Group National Championships

April 14-18, 2022  
Springsure Sporting Shooters' Club, Springsure, Qld  
Program: See National website for full event details.  
Contact: Gavin Marshall 0438 759 162.

### SSAA Muzzleloading and Black Powder Cartridge National Championships

April 15-18, 2022  
SSAA Para, Rifle Range Road, Greenwith, SA  
Program: See National website for full event details.  
Contact: Frank Verdini 0431 975 425.

## Qld

### SSAA (Qld) Long Range Precision State Championships

May 27-29, 2022  
Captains Mountain Complex, Qld  
Program: See National website for full event details.  
Contact: luna@ssaaqld.org.au

### Queensland NRA Pistol Metallic Silhouette Postal Shoots

All (SSAA) Qld branches with approval to shoot Postal Metallic Silhouette Program: Shoot 1: February 1-May 31; Shoot 2: April 1-July 31; Shoot 3: May 1-August 31; Shoot 4: August 1-November 30. See National website for full event details. Contact: Hazel Bozic (07)4128 0467 or pms@ssaaqld.org.au

## NSW

### SSAA (NSW) Benchrest Score State Championships

March 5-8, 2022  
Dairyville Range, Coffs Harbour, NSW  
Program: See National website for full event details.  
Contact: Ian Thompson 0499 212 260.

### SSAA (NSW) Rimfire and IRB Benchrest State Championships

June 10-13, 2022  
Seaham Range, Seaham, NSW  
Program: See National website for full event details.  
Contact: Kim Cosstick 0429 335 389 or kimcosstick@hotmail.com

### SSAA (NSW) Benchrest State Championships

June 30-July 3, 2022  
Dairyville Range, Coffs Harbour, NSW  
Program: See National website for full event details.  
Contact: Ian Thompson: 0499 212 260 or isp\_projectiles@yahoo.com.au

### SSAA National Event Cancellation/Postponement Policy

SSAA National championship events may be subject to border controls and other COVID-19 impacts. In addition to general border closures, many states and territories may prohibit persons from known COVID hotspots. An event may be postponed or cancelled at any time by SSAA National, SSAA State Office or club directive. It is recommended competitors consider any potential COVID-19 impacts on travel, accommodation plans and insurances etc. SSAA National will not be liable for reimbursement to competitors for any costs associated with a postponed or cancelled SSAA National championship event for any reason, including COVID-19. Competitors planning to attend an event should consider options for free cancellation or refund of travel and accommodation costs where available.

## WA

### SSAA (WA) Steel Challenge State Championships

March 19, 2022  
Kukerin Practical Pistol Club, WA  
Program: See National website for full event details.  
Contact: Steve Marris 0427 183 299 Kukerin@ssaawa.org.au or Paul Fitzgerald 0407 773 286 president@ssaawa.org.au

## Tas

### SSAA (Tas) Lever Action Silhouette State Championships

March 12-14, 2022  
Westbury Shooting Club, Westbury, Tasmania  
Program: See National website for full event details.  
Contact: Ian Collins 0417 531 184.

## FIREARMS LAWYER

Get help from 4-time Olympic shooter and lawyer, Glenn Kable

Get the right legal advice!  
Available Australia-wide.

Having spent a lifetime around the sport, I have an intimate knowledge of the workings of all the bodies affecting the decision-making process, whether it is police or courts, local councils or governments, clubs or associations.

For a no-obligation assessment, phone 0407 962 200 or email glenn@hartmann.net.au mail@hartmann.net.au

## SSAA Member Alert

Please be aware that state and territory police firearms registries regularly cross-check firearm licences and your member status. To support your genuine reason and keep your firearms licence and to make sure that SSAA can support you, make sure you renew your SSAA membership.

Don't be a mug!



Get your name in to win a rare  
**SSAA COFFEE MUG**

[ssaa.org.au/our-media/competition](http://ssaa.org.au/our-media/competition)

## BATHURST ARMS FAIR



March 2022

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### SSAA Sports Umbrella

The automatic opening SSAA Sports Umbrella has eight strong 190T showerproof polyester panels and eight windproof 76cm ribs. It has a fibreglass shaft with a soft EVA hand grip.

**\$39.95**



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### SSAA Magnum Shooting Glasses

Comes with three interchangeable lenses, visit our online shop for all the details.

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### Trigg the Koala

Trigg measures 32cm in length, is fully machine washable and is made from 100 per cent polyester fibre.

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### SSAA Card Holder **\$24.95**

The SSAA Card Holder is a slim, lightweight and stylish leather-look wallet, it features four licensed-sized card holder slots, two large slots and a clear slot.



### Outback Survival by Bob Cooper

*Outback Survival* covers what you need to do, and how, to survive in the great Australian outdoors. The 230-pages take you through every aspect of a survival situation from bush tucker and bushcraft to off-road driving and survival kits.

**\$32.95**



### SSAA Traditional Logo Belt Buckle

The SSAA Traditional Logo Pewter Belt Buckle measures approximately 8cm x 6cm, comes with protective pouch and care Instructions – just add your favourite belt!

**\$39.95**



### Ceramic Kitchen Knife Set

The SSAA ceramic blade kitchen knife set comes presented in a gift box. The set of two knives stay razor sharp, are non-corrosive and reduce food oxidation. Suitable for cutting boneless meat, vegetables, fruit and bread.

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### SSAA Multi Tool

The SSAA Multi Tool, with stainless steel handles, comes with 11 functional tools in one handy unit.

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### The Jumbunna Collection Volume II: More stories from the bush by John Dunn

John Dunn's second volume picks up where *The Jumbunna Collection* left off back in 2000. The monthly anecdotes travel down the years until the latter part of 2020 and one of the joys is you don't have to read it from cover to cover, just can pick and choose any tale you fancy.

**\$35.00**



### Adventure Cooking: Fire to Fork by Harry Fisher

Harry's first cookbook, *Adventure Cooking - Fire To Fork* combines everything he knows about cooking over an open flame with over 60 of his favourite bush recipes, desserts and cocktails.

**\$44.95**





## Field to Fork - Second Helpings

Welcome to our latest showcase of Australia's diverse, sustainable and environmentally friendly offerings in *Field to Fork – Second Helpings*.

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## SSAA Stubby Holders

Keep them cold with a SSAA stubby holder.

**\$7.25 each**

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This great little oven cooks with just a couple of barbecue heat beads. Simply light the heat beads, fill the meat tray with water (so the meat doesn't dry out) and come back later for a delicious roast. Once the roast is done, cook a damper for dessert.

You can use the Cobb as a barbecue, smoker or stove.

Comes with carry-bag.

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**SPECIAL**  
Free SSAA's Cooks  
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\$19.95 with every  
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## Glow-in-the-dark Fishing Knives

When you are on the water instead of in the bush, you can't go wrong with the new SSAA SICUT Fishing Knife Pack, with glow in the dark knife handles!

The SICUT Fishing Knife Pack is designed in Australia for use in Australia's harsh conditions. The SICUT Fishing Knife Pack comes with a heavy-duty, four-pocket canvas wrap and contains:

- Pull sharpener, which is ergonomically designed to keep your knives sharp
- 6" curved boning knife, with glow-in-the-dark knife handle
- 8" semi-flex curved fillet knife, with glow-in-the-dark knife handle
- 12" slicing knife, with glow-in-the-dark knife handle

**\$124.95**

See full details online



## First Aid Kit

An absolute must-have for home and the car. You never know when the next little emergency might strike – BE PREPARED!

This well equipped bag will make an important addition for the next hunting or camping trip.

**Small \$44.95 Large \$69.95**



## Australian Shooter Binder

Keep all your magazines safe and in one spot.

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## SSAA Bullet Case Pen

The SSAA Bullet Case Pen has been crafted from a part form bullet case.

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## SSAA Bush Kettle

These custom-made bush kettles run on a few twigs and leaves and will boil water in less than 10 minutes. Simply take a handful of twigs/leaves and the kindling then place under the kettle and light it - the clever design directs heat into the kettle to boil the water.

The kettle can be used with gas stoves and has a stainless construction.

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## SSAA Camping Lantern

This lantern is lightweight and ultrabright, with 450 lumens. Simply pull the SSAA Pop Up Camping Lantern upwards to turn on and push closed to turn it off. When you want overhead light, use the metal 'arms' to easily hang it. Runs on three AA batteries.

**\$24.95**

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IT'S EASY!**



**onlineshop.ssaa.org.au**  
**or call 02 8805 3900**  
**for phone orders**

# SSAA MEMBERSHIP APPLICATION

ABN 95 050 209 688

SSAA Membership Office, PO Box 282, Plumpton, NSW 2761

Phone 02 8805 3900 Fax 02 9832 9377 Email [membership@ssaa.org.au](mailto:membership@ssaa.org.au)

NEW ☐ RENEWAL ☐ Have you been a member before? Yes/No

Membership No.

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Title (PLEASE CIRCLE) Mr Miss Ms Mrs or ..... Preferred SSAA Branch

First name

Middle name

Last name

Residential address

Town/suburb State Postcode

Postal address

Town/suburb State Postcode

(IF DIFFERENT FROM ABOVE)

Phone (Mobile) (Home)

Email

Date of birth Male ☐ Female ☐ Member referral number if applicable

☐ Tick to subscribe to the FREE SSAA National E-newsletter via email

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Each membership category (apart from Family Member) includes 11 issues of the Australian Shooter magazine per year.

### Add four issues of the Hunter magazine per year

☐ \$95

☐ \$125

**Adult** (over 18 years)



Includes \$35 insurance premium for SSAA Member Firearms Insurance for 12 months, or until next membership renewal.

☐ \$130

☐ \$160

**Additional Family Member** (No magazine) Applies to each over 18 residing at the same address as a full-subscription **Adult** member.



Includes \$35 insurance premium for SSAA Member Firearms Insurance for 12 months, or until next membership renewal.

☐ \$72

☐ \$102

☐ \$107

☐ \$137

**Pensioner** Available on production or photocopy of both sides of your Australian Concession Card.



Includes \$35 insurance premium for SSAA Member Firearms Insurance for 12 months, or until next membership renewal.

☐ \$72

☐ \$102

☐ \$107

☐ \$137

☐ \$475

**5-year Adult** Contact SSAA for firearms insurance information.

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☐ \$180

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**Overseas** Available to members living overseas.

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☐ \$57

**Junior** (under 18 years) Parent's or guardian's signature



additional person

Supporting Adult member No.

**SIGN UP ONLINE**



[ssaa.org.au](http://ssaa.org.au)

**PLEASE READ AND SIGN**

This application is made in full recognition of the Associations' requirement for responsible and ethical behaviour. I undertake to do all in my power to preserve the good image of the sport and the Associations. I understand that members breaking the Code of Conduct and/or Social Media Policies may be subject to suspension or expulsion. Both can be found at [ssaa.org.au/code](http://ssaa.org.au/code)

SIGNATURE:.....

DATE:.....

Refund Policy: Subject to Australian law, membership fees are not refundable, nor can they be transferred.

Members join a SSAA state or territory branch. The information you provide on this form will be disclosed to the state or territory branch of the SSAA to which your membership application relates. A copy of SSAA Inc's privacy policy can be found at [ssaa.org.au/privacy](http://ssaa.org.au/privacy). You can obtain access to your personal information by writing to: SSAA, PO Box 2520, Unley SA 5061.

## ATTENTION NSW & ACT MEMBERS

Complete this section ONLY if you wish to use your membership of the SSAA to support your Genuine Reason for having a firearms licence. Register your SSAA activities by marking one or more of the following boxes:

- ☐ TARGET SHOOTING (longarms only)
- ☐ HUNTING (club membership)
- ☐ COLLECTING
- ☐ HUNTING OTHER (R licence, property owner/permission)

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March 2022

☐ **TICK IF TAKING OUT SSAA MEMBER FIREARMS INSURANCE.** I understand that the Policy Wording, Financial Services Guide, the Lloyd's Complaint Policy and SSAAIB FAQs regarding SSAA Firearms Insurance are on [www.ssaib.com.au](http://www.ssaib.com.au) for my reference.

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Enclosed is payment for the amount of \$.....

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Card number

Expiry date Signature.....

Cheques payable to the Sporting Shooters' Association of Australia Inc.

I also wish to donate the following amount to the SSAA \$.....



# Enter and win

Simply write your full name, address and contact number on a piece of paper and place it inside an envelope and send to:

(Name of competition)  
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Competitions close March 31, 2022



Or enter online  
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RRP \$110

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RRP \$36.95

Kindly donated by GlowShot Targets  
[glowshottargets.com.au](http://glowshottargets.com.au)



## Winners!

### Australian Shooter December 2021

**Best Shots Mug**  
Fred Hutchins, Vic

**I of 5 The Jumbunna Collection,  
by John Dunn (Signed book)**  
Chris Meek, Vic

Laurence Smith, Qld

Chi Lam, NSW

Jonathan Ford, Qld

Tod Edwards, Qld

**Winchester Prize Pack**  
Brian Skewes, Vic

**Junior Prize –  
GlowShot 10 adhesive  
DayGlow Splatter Targets 50 pack**  
Jayden Desmond, Qld

**Australian Women's Shooter 13 –  
Women's Infinity Sage Leggings  
and 90L Coffin Gear Bag**  
Dianne Duncan, VIC 3640

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## Once smitten, twice shy . . . but that's hunting

**E**merging from the gloom along the edge of the bush a fallow buck ambled into the paddock, feeding on lush and bone-building spring grass as he walked. He wasn't a big animal, a long yearling at best with spindly, velvet-covered spike antlers but that didn't matter. At the end of a second locked-out-by-COVID winter in a row he was a very welcome meat animal.

As I watched him through binoculars, something moved in the timber behind him and a quick change of focus revealed a sambar stag slowly walking towards the edge of the bush, his careful approach reflecting the wariness that species is noted for. He was only visible for a few seconds before vanishing among shadowy trees. For several long minutes I searched the bush-edge carefully and when I found him again he was clear of the timber, feeding around the face of a hill on almost the same line of travel as the fallow before him. With the rifle resting on a log in front of me I put the scope on his shoulder and cocked the hammer, waiting for him to turn broadside.

That's when it all went to pieces. If I hadn't had to wait I'd have been fine but the longer I watched him the more excited I became. His body was huge and when he dropped his head to feed, the tips of his antlers seemed to reach almost as high as his shoulders. I was looking at the biggest sambar stag I'd ever seen - and I knew it. The red dot reticule was dancing, refusing to settle, my heart pounding and the blood rushing in my ears. My mouth was dry and I felt myself trembling so took a couple of deep breaths, exhaled slowly and willed myself to calm down. It seemed to work and when everything steadied, I stroked the trigger.



**Challenging: A sambar stag like this is more than capable of giving even an experienced hunter the shakes.**

The rifle made an inordinate amount of noise in the basin, the echo rattling around the face of the mountain. The stag lifted his head and surveyed the scene with ears swivelling, clearly unscathed and wondering where all the noise was coming from. He walked up the face towards the bush then stopped to look again. My second shot had no effect either, then he was gone, back to the shadowy bush. The dog looked at me disdainfully, unable to say what she was thinking but letting me know anyway as she stood up and shook herself, turned and headed for the truck.

At first light next day I was standing exactly where the stag had been when I fired. The marks where he'd jumped at the shot were pressed into the ground but there was no blood or hair to suggest my bullet

had connected. It was the same where I fired the second shot and in some ways that was a relief as it seemed to indicate both had missed, not at all unlikely given the state I'd been in. That said, I showed the marks to Dixie and we began following them.

Initial tracking was easy until the ground became drier the higher we climbed. There were multiple deer trails, numerous marks and several times we were forced to back up and confirm we were still on the right tracks. For two hard hours and around a kilometre and a half the line of travel was consistently uphill and in the end that's what convinced me I'd missed. Wounded animals seldom choose to climb mountains - they're far more likely to head downhill.

Where the marks petered out on a ferny bench we finally ran out of sign, the dog eyeing me forlornly with her tongue lolling. I took a drink from the bottle in my pack, she had a drink from my cap then we began edging our way back to open country, following a narrow deer trail which angled steeply downwards and threatened to tip me off the mountain in places. I was glad when we hit the bottom.

Now and again my good lady tells me I'm getting too old to be climbing mountains. Sometimes I have to agree and for a while now I've made a point of only working the easier country in areas I hunt. It's not as physical as it used to be but my enjoyment of the hunt remains undiminished and if I still shake when I find a good stag, I surely can't be too old to go hunting!





RRP \$5950\*

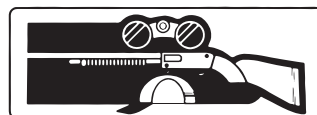


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